Calming John Bartram's Passion: Sweden's Scientific Certification Of Philadelphia's Botanist

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In 1769, Sweden’s Royal Academy of Sciences unanimously elected to membership a foreigner, John Bartram, of Kingsessing, Pennsylvania. With obvious pleasure, the Swedish cleric Carl Magnus Wrangel immediately wrote to his friend to break the news. Bartram showed his gratification at his election in a very long, unsolicited, rambling letter he wrote to the botanical colossus of Uppsala, Carl Linnaeus. Bartram may have apprehended it was Wrangel’s and Peter Bergius’s advocacy before the Academy of Sciences that won his membership, but he surely also realized it could not have come without Linnaeus’s agreement. And Linnaeus’s approval meant international approbation. Thus, with this overt scientific certification, Bartram could at least momentarily set aside whatever doubts gnawed at his sense of achievement.

Nya Sverige (New Sweden)

The election was the culmination of Bartram’s two-decade-long involvement with Swedes. Like many other gardeners living in the Delaware Valley, he probably was unaware, when he planted seeds of *Franklinia alatamaha*, that he hoed aside a layer of English clay and laid them on a stratum of Swedish loam. To be sure, when the seeds sprouted, they sent roots down into very deep Lenapean earth. But it was Swedes who were displaced, not Indians, when William Penn’s flock founded Philadelphia. A half century earlier, in 1638, two boats from Sweden, the *Kalmar Nyckel*, a merchant ship filled with persons sent to establish a Swedish

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colony in America, and the Fogel Grip, a naval vessel with twenty-three soldiers, landed near present-day Wilmington on the Delaware River. The neophytes immediately bought from Lenape chiefs the entire west bank of the Delaware River from Bombay Hook to the Schuylkill. The first settlement was named “Christina” after the not-yet-crowned Swedish queen, and for the next seventeen years, the territory was called “Nya Sverige” (New Sweden). As more Swedish settlers arrived, the boundaries pushed north to the latitude of Trenton and south to the mouth of the Delaware. Parts of what the English Quakers would later call Philadelphia were then occupied by Swedes and referred to by their Indian names: Kingsessing, Passayunk, Wicaco, and Moyamensing. Seventeenth-century Swedish log cabins still stand nearby in Tinicum and Upper Darby. Several Swedish fortifications were built near the site where Bartram’s house was to stand a century later: the blockhouse Vasa and Fort Korsholm about three miles to the southwest and south, respectively, and Fort Nya Göteborg on the southwest tip of Tinicum. Also on Tinicum stood the Swedish Governor Prinz’s house and the area’s first Swedish church (built in 1646). Other Swedish churches were established during the following century: a converted blockhouse (1677) in Wicaco, which was replaced by Gloria Dei in 1700; Heliga Trefaldighets Kyrka in Christina (1699); Trefaldighets Kyrka in Raccoon (first a log cabin, 1704; then a substantial structure, 1784); St. James (1763), only a mile south of Bartram’s in Kingsessing; and Christ Church in Upper Merion (1764). When the Finnish Swede, botanist Pehr Kalm, arrived in the mid-eighteenth century, he noted in his diary that Philadelphia was located in “Nya Sverige,” while towns on the other side of the river were in “New Jersey.” When writing about trips to Christina, Kalm added parenthetically “(now called Wilmington).” He was biased, of course. But it is well to remember that the reason he came to Philadelphia, and not to Boston, New York, Virginia, or North Carolina, was its location in Nya Sverige. However, there was a second reason, too: John Bartram lived in Philadelphia.

Pehr Kalm and Carl Linnaeus

Pehr Kalm (Plate 7) was born in 1716 into a Swedish-Finnish family that had fled from the wars in Finland to Ångermansland, a province on the northeast coast of Sweden, on the Gulf of Bothnia. His father, a clergyman, died about the time Pehr was born. In 1721, his widowed mother returned to her family in Finland, which was at the time also a province of Sweden. The youngster Pehr turned out to be

a good student and was admitted at age nineteen to university studies at the Academy in Åbo (now Turku), then Finland’s most important city. Though his intention was to follow his father’s footsteps into the ministry, his mentor at Åbo, professor of physics (and later bishop and politician) Johann Browallius (Fig. 1), recognized interests like his own in the young Kalm, and so urged him to study natural history at Uppsala University, as he himself had done. In this urging, Browallius had as ally the Swedish nobleman and member of the Royal Academy of Sciences, Baron Sten Carl Bielke. Browallius had introduced Kalm to Bielke, who saw in Kalm an indirect way of maintaining his own connection with the Academy of Sciences. His desire to participate in the scientific excitement of the Swedish mainland had been undermined by his having been sent to an appellate judgeship in distant Åbo. So Bielke adopted Kalm as a ward and paid his way to Uppsala. Both Browallius and Bielke were familiar with Carl Linnaeus’s *Systema Naturae*, indeed they were personal friends and champions of Linnaeus (Fig. 2), who was not yet professor at Uppsala when Kalm arrived there in 1740. But soon after Linnaeus’s appointment, Kalm became one of the earliest of
a distinguished list of Linnaean students that included Daniel Solander and Peter Bergius, who are also part of this story. In 1744, as a sort of practicum in the midst of his studies, Kalm accompanied Bielke on an expedition to St. Petersburg and Moscow to examine the wealth of exotic and useful plants brought there from the far east by plant-collecting explorers. They returned to Uppsala with a collection of 200 species new to Linnaeus. In the same year, Bielke became a private student of Linnaeus and Kalm presented his thesis. A year later, at age twenty-nine, Kalm was elected to the Royal Academy of Sciences. In two more years, Kalm was back at Åbo as professor of oeconomia—that is, of agricultural economics. At the same time, the Academy of Sciences decided to send a naturalist-explorer to the American continent to provide descriptions and to collect specimens of plants, animals, and minerals from the New World for the Academy. Linnaeus and Bielke championed Kalm as candidate for the job, and the Academy agreed. Thus, on September 15, 1748, a ship named Mary Gaily landed at Philadelphia, Nya Sverige, with Kalm and Bielke's horseman and expert gardener, Lars Jungström, on board.

As already noted, Kalm's second reason for coming to Philadelphia was John Bartram's presence. Not surprisingly, Linnaeus knew of Bartram through Bartram's unofficial mentor, Peter Collinson of London. Linnaeus had met Collinson when he briefly visited London in 1736. Thereafter, until Collinson's death in 1768, there was a regular exchange of letters and packages of plant materials between the two. The earliest indirect reference to Linnaeus in Collinson's correspondence with Bartram came in December 1737 in one of a flurry of letters Collinson penned to his friend. Without naming him, Collinson described Linnaeus's *Systema Naturae* as "a curious performance for a young man, [though] He is certainly a very Ingenious Man & a great naturalist." Perhaps Bartram had already mentioned Linnaeus in a previous, now missing letter. Again, in a 1738 letter to Bartram, Collinson wrote, "Pray, next year, look out for the flower of the Sweet Gum, and the Papaw. Send a few in a little bottle ... of spirits. ... Our friend Linnaeus, wants them much." And by 1743, Collinson already was urging Linnaeus to name some organism for Bartram: "For his great pains and industry pray find out a new genus, and name it Bartramia." At the same time, he elaborated a bit to Bartram on what he had written to Linnaeus: "I have writ... to...

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4 Collinson to Bartram, December 14, 1737, *Bartram Correspondence*, p. 72.
5 Collinson to Bartram, May 2, 1738, ibid., p. 90.
Linnaeus not to forget the pains & Travel of Indefatigable John Bartram but stick a Feather in his Cap who is as Deserving [as] the Rest.” Linnaeus complied, although the mosses now called Bartramia were not dubbed at Uppsala.

On at least two occasions, Linnaeus himself wrote to Bartram, though the letters are lost. The earlier of the two was doubtless written in 1747. When Kalm set out from Uppsala in October of that year, he apparently had in his pocket Linnaeus’s letter of introduction to Bartram. The third day after arriving in Philadelphia, Kalm walked “about four miles to the south” with the Swedish painter Gustavus Hesselius to meet John Bartram. There is an odd thing about Kalm’s account of that day in his book, Travels in North America. After noting in the entry for September 18, 1748 that he and Hesselius had walked to Bartram’s estate, he described the plants he saw along the way but wrote nothing about a meeting. The abrupt change of subject seems puzzling until one reads in Kalm’s travel diary, upon which the book was based, that Bartram was not at home at the time. When the two finally did meet ten days later, it was for a two-night stay during which Kalm must have quizzed Bartram without stop. Kalm recorded their discussions on the geological history of the east coast, Indian customs, a recently uncovered Indian grave, Indian cuisine and indigenous foods, the use of Apocynum instead of linen, spring planting times, cows, vermin, change in tree-size with latitude, when Europeans first came to the region, and more. At some point during the two days, Kalm also found time to hand Bartram the letter from Linnaeus. Later, in his reply to Linnaeus, Bartram wrote, “I received thy kind letter by the hands of our Curious friend Mr. Kalm.”

Linnaeus’s second letter to Bartram was written in 1750 and took two years to arrive. From Bartram’s reply of March 1753 we may deduce that Linnaeus asked if Bartram would collect and send him botanical specimens. In his letter, Bartram asked Linnaeus what seeds he should send next. Since he received no answer within eight months, Bartram wrote again in November 1753. The sec-

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7 Collinson to Bartram, March 10, 1744, Bartram Correspondence, p. 235.
10 Bartram to Linnaeus, undated (but written in the fall of 1748), Bartram Correspondence, p. 294.
11 Bartram to Linnaeus, March 20, 1753, ibid., pp. 345–346.
12 There are two versions of the November 11 letter: the one sent to Linnaeus, now in London, and the other a copy he kept for himself (ibid., pp. 355–356). They are quite different, indicating that letters known only from Bartram’s copies may contain only essential parts of the actual correspondence.
ond try also failed to elicit a letter from Linnaeus. As already noted, Bartram wrote once again to Linnaeus in 1769 after his election to the Royal Academy. Perhaps there was a reply to this letter, but if so, it too is lost.

Kalm extended his stay in America to 1751, longer than the Royal Academy of Sciences had at first agreed to support. Bielke personally underwrote much of what the Academy was unwilling to pay for. During the three years Kalm spent in America, he recorded in his journal many discussions with Bartram, covering an even broader range of subjects than on their first meeting—skunks, rattlesnakes, and moose, the discovery of new species and importation of European species, cultivation of white cedar, human sickness, and Indian pottery. Because of his scientific training with Browallius and Linnaeus, he recorded these conversations precisely, carefully avoiding imposition of his own bias, just as he also did when describing fossils or new plants. Thus, his book is an extraordinarily precise record not only of biological and mineralogical discovery, but also of eighteenth-century life and thought in America. For his part, Bartram could not always resist giving preposterous answers to some of Kalm's incessant queries. Kalm nonetheless automatically recorded Bartram's answers verbatim, providing consistent evidence for the thesis that Scandinavian humor is a myth (see Plate 7). For example, when Kalm wondered what could cause trees to "crack to the ground" on windless nights, Bartram said it was a difference in atmospheric pressure and that it was usually followed by rain. On another occasion, Bartram told Kalm that a bear kills a cow in the following way: "he bites a hole into the hide and blows with all his power into it till the animal swells excessively and dies." The comments were faithfully recorded.

When he returned to Åbo and thought back on his American experiences, Kalm summarized his admiration for Bartram this way:

He has acquired a great knowledge of natural philosophy and history, and seems to be born with a peculiar genius for these sciences. In his youth he had no opportunity of going to school, but by his own diligence and indefatigable application, [he now reads Latin]. . . . He has . . . made frequent excursions into different distant parts of North America . . . gathering all sorts of plants which are scarce and little known. . . . [H]e has planted [these] in his own garden and likewise sent over their seeds or fresh roots to England. We owe to

13 Ibid., pp. 719–723.
14 John Louis Anderson, Scandinavian Humor and Other Myths (Minneapolis: Nordbook, 1986).
15 Peter Kalm's Travels, pp. 369–370, 644.
16 Ibid., p. 63.
him the knowledge of many rare plants which he first found and which were never known before. He has shown great judgment and an attention which lets nothing escape unnoticed.

Linnaeus apparently referred to John Bartram as the greatest natural botanist in the world. If true, it very likely was Kalm’s assessment that led Linnaeus to that view. Whether or not Linnaeus actually made the statement, Kalm’s opinions would at least have disposed Linnaeus to favor Bartram’s candidacy for membership in the Royal Academy of Sciences.

**Daniel Carl Solander**

In 1760, a decade after Kalm left America, another Linnaean student, Daniel Carl Solander (Fig. 3) arrived in London. Like Kalm, he was a pastor’s son, born in the far north of Sweden. Similarly, he was a bright young man and in 1750 entered Uppsala University with thoughts of a career in the ministry. There, however, he fell under the spell of Linnaeus and began instead to work toward a doctor of medicine degree. The mentor and the student became very close friends—sufficiently so that when Solander’s father died in 1760, he wrote to Linnaeus begging him to serve in his father’s place. Linnaeus agreed. Soon, it became evident that the

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enhanced relationship meant that Solander felt free to ask for money when his stipend ran out. In fact, Linnaeus complied more than once.\(^\text{18}\)

It was Linnaeus who sent Solander to London to serve John Ellis, a member of the Royal Society, discoverer of the animal nature of corals, namer of several plant genera, and friend and colleague of Collinson. English scientists and London society immediately lionized the Swede for his charm, proficiency in English, and extraordinary knowledge of natural history. Within three years, Solander accepted a position at the British Museum, obviating the need for further handouts from Linnaeus. He became quite Anglicized and never returned to Sweden, though he corresponded in a desultory fashion with his beloved mentor. At various times, Linnaeus had harbored three hopes for his favorite student: that he would accept a position offered at the University of St. Petersburg; that he would become Linnaeus’s own successor at Uppsala; and that he would marry Linnaeus’s daughter, Elisabeth Christina. None of these was realized. In the setting of his adopted land, though, Solander became world renowned when, at his own suggestion, he accompanied Joseph Banks as naturalist on Captain James Cook’s *Endeavour* during her voyage to the south Pacific, 1768–1771.

For Collinson, and through him, for Bartram, Solander became the final arbiter for identification and classification of botanical specimens. Solander addressed a few letters directly to Bartram, in them identifying specimens that Bartram had sent to Collinson. Usually the letters were written when Collinson was sitting over him, forcing the busy Swede to make the identifications he had vaguely agreed to do months earlier. But aside from the few instances of direct correspondence, several letters between Collinson and Bartram, in both directions, mention Solander’s name. In one letter, Bartram wrote Collinson that he had delivered, as requested by Solander, a packet of Swedish mail to Carl Magnus Wrangel,\(^\text{19}\) indicating yet another loop in the complex knitting of Swedes with Bartram. That delivery did not constitute the first meeting between Bartram and Wrangel, but it clearly provided an opportunity for the two to cement a friendship.

Although Solander was a member of the Royal Academy of Sciences, he obviously was not at the meeting when Bartram was elected. But we know from Collinson’s correspondence that he was an admirer of Bartram’s work, and also

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\(^{19}\) Bartram to Collinson, August 19, 1764, *Bartram Correspondence*, pp. 635–636.
of William Bartram's botanical paintings. From the same source, we know that Linnaeus knew Solander's opinions, too.

**Carl Magnus Wrangel, Peter Bergius, and Lovisa Ulrika**

The name Wrangel is noble and well known in Sweden. The family had its origins in the Baltic states where forebears distinguished themselves militarily on behalf of Sweden during wars of the seventeenth century. Subsequently, one branch of the family emigrated to Russia, where they continued to polish their military skills; another moved to Sweden, where they evolved from being military officers to being lawyers, then diplomats, clergy, and finally artists and authors. Periodically, when the family was flush, they built palaces in Sweden that now are tourist attractions. Carl Magnus came along during the clerical period. Like many clergymen of the time, he was well educated; like a few others, his education in part was in the hands of Linnaeus of Uppsala.20

In 1759, the Swedish church sent Wrangel to Philadelphia to serve as dean for the Swedish Lutheran communities in the former Nya Sverige. Clearly, he was effective in that position. In a 1764 letter to Collinson, John Bartram wrote,

Dr. wrangel . . . is I believe the most indefatigable & zealous minister that ever crossed the seas of any sect whatsoever this day as usual he preached in our township then came to my house dined read the letters I gave him walked in the garden discoursed a few hours then forced to part to visit the sick in the neibourhood & then tho A very rainy stormy day he must go to town its surprizing what pains he takes to reform the people by tender preaching innocent persuasion & pious practice . . . he gains the love of all societies.21

Wrangel must have had that same day in mind when five years later he wrote Bartram from Stockholm about the election to the Royal Academy of Sciences. The letter began: "Dear Sir & beloved Friend Whenever I think of America (which I do every day of my life), I think at the same time of you & your House & . . . I . . . bear you the warmest gratitude, for all the civilities you were pleased to show me, while I had the pleasure to cultivat a Friendship with you at a nearer distance. I always looked upon myself as one of your Family, being happy enough to be counted so by you and yours." Then, after telling of Bartram's election, the

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21 Bartram to Collinson, August 19, 1764, *Bartram Correspondence*, p. 635.
letter ended, “... my heart is allways in America & when I think of my Friends there it makes me wish to be amongst them. I wish you & yours all the prosperity which this troublesom life will admit of & beg to be kindly remembered to your Dear Spouse & all the Family.”

When Bartram responded two years later, his salutation was surprisingly similar to Wrangel’s to him: “Dear worthy & beloved friend.” While many of Bartram’s letters began “Dear worthy Friend,” he addressed almost no one else as “beloved.” Perhaps the term was easier to use when addressing a man of the cloth, but there is no doubt the meaning was affection. In a postscript, Bartram confirmed Wrangel’s status as practically a member of the family: “My much respected & beloved friend & one of our family.”

These letters clearly testify to the singular friendship of Bartram and Wrangel.

Presumably out of this friendship, Wrangel served Bartram in important ways. As noted, he was present during the meeting of the Royal Academy of Sciences when Bartram was elected. Wrangel was not a member, but he came to the meeting to provide firsthand testimony about the quality of Bartram’s scientific work, probably at the request of Peter Bergius, who had nominated Bartram.

Like Linnaeus, Peter Jonas Bergius (Fig. 4) was raised in Småland, Sweden,

22 Wrangel to Bartram, July 2, 1769, ibid., pp. 712–713. Wrangel’s letter is also interesting because it is but one of a number of accounts of the hospitality of the Bartram family of Kingsessing, such as Hector St. John de Crèvecoeur, Letters from an American Farmer (London, 1782), chap. 11.

23 Bartram to Wrangel, July 6, 1771, Bartram Correspondence, pp. 741–743.

24 Bartram to Fothergill, November 28, 1769, ibid., p. 726; and Bartram to his wife, Ann, September 4, 1765, wherein he writes, “My dear love: my love is to all our children” (ibid., pp. 653–654).

25 Bartram to Wrangel, July 6, 1771, ibid., p. 741.
in a pastor’s family. His older brother, Bengt, obtained a doctorate at Lund University, but then persuaded Peter to attend Uppsala University because of its outstanding medical faculty. At Uppsala, the younger Bergius wrote a thesis on mosses for Linnaeus, and another on smallpox for the medical faculty. Upon completion of his degree, he became a prosperous physician in Stockholm. But Bergius’s passion was horticulture. With his brother, he acquired land northeast of Stockholm and experimented with fruit trees suitable to agriculture in the North. Even today, the Bergianska Trädgården serves the Stockholm metropolitan region as a garden center and botanical showplace. Like Linnaeus, Peter Bergius added to his garden by acquisition of seeds and cuttings from foreign lands. In fact, Wrangel diverted to Bergius one packet of botanical specimens Bartram had sent for Linnaeus because, as Wrangel wrote Bartram, “Doctor Linnaeus is so used to receive presents from all quarters, that he hardly thinks of it.” Interestingly, Collinson had directly told Linnaeus of his reputation in this regard twelve years earlier: “It is a general complaint that Dr. Linnaeus receives all, and returns nothing. This I tell you as a friend.”

We may also safely presume it was from Wrangel that Bartram learned about the Queen of Sweden, Lovisa Ulrika (Fig. 5). She and her husband, King Adolf Fredrik, assumed the Swedish throne in 1751. He was an agreeable fellow who preferred other aspects of life to being king. In 1752 he visited Åbo and got to ride in an American Indian birch bark canoe built by Finnish students from the careful blueprints prepared in Canada by their professor Kalm. He died suddenly in 1771 from a stroke after a meal of oysters, lobster, caviar, smoked herring, sauerkraut, meat, and Shrove Tuesday buns. His wife, Lovisa Ulrika, was of a quite different cut. She was the sister of Frederick the Great of Prussia, and having been raised in the hub of European society, she was ambitious and had great interest in culture, science, and politics—especially of the scheming sort. Given her cosmopolitan upbringing, she found Stockholm extraordinarily provincial. To fill the void, she surrounded herself with all the intelligentsia she could find, including Linnaeus and Wrangel. Wrangel became chaplain at the Royal Court after his return from America, and he likely told Bartram of the queen’s curiosity museum at Drottningholm Palace.

27 Wrangel to Bartram, July 2, 1769, Bartram Correspondence, p. 713.
28 Smith, Correspondence of Linnaeus, 1: 18.
On September 23, 1764, John Bartram had European royalty on his mind. He prepared two packets of the choicest plant rarities, sent one to Peter Collinson with the request that he present it to George III, and sent the other directly to Lovisa Ulrika along with an appropriately respectful and complimentary letter expressing his hope that she would honor his collection with a place in her museum. The gift to George III doubtless helped Collinson persuade the king to appoint

29 Bartram to Queen Lovisa Ulrika, September 23, 1764, Gustavian Collection, Carolina Rediviva Library, Uppsala. Joel T. Fry, Curator of Historic Collections at Historic Bartram's Garden, Philadelphia, provided us evidence from papers at the Historical Society of Pennsylvania that Bartram may have sent earlier packets to Lovisa Ulrika. On the back of an unrelated letter, Bartram subtended a list of fifty woody plants with the note,
Bartram as King’s botanist for the Floridas. If Queen Lovisa Ulrika responded, her letter has gone astray; there is no copy of it among the queen’s papers at Uppsala. However, a French immigrant residing in Pennsylvania, J. Hector St. John de Crèvecoeur, or perhaps a Russian acquaintance of his whom he sent to visit Bartram, claims to have seen a letter from the queen. In his 1782 book, *Letters from an American Farmer*, Crèvecoeur wrote that John Bartram said to the visitor, since “thee understandest the Latin tongue, read this kind epistle which the good Queen of Sweden, Ulrica, sent me a few years ago. Good woman! that she should think in her palace at Stockholm of poor John Bertram on the banks of Schuylkill; appeareth to me very strange.” The guest then thoughtfully protested Bartram’s modesty.

**Coda**

Bartram’s self-belittling in Crèvecoeur’s tale—which may have been intended to elicit a compliment—occurs elsewhere in Bartram’s correspondence. It reflects his passion for recognition by renowned persons, foreigners, and especially the well educated. His need for approbation seems to have increased with age, illogically just when he actually was gaining wide recognition as the first and great American botanist he was. More has been made of his insecurity than is warranted, especially given the similar behavior of more famous scientists of his time (including the botanical colossus of Uppsala) and since. It is pleasing, though, that there were in his lifetime overt tributes that must have constituted moments of self-satisfaction. On a personal level, one of the greatest of these came in a 1763 letter from Collinson. With uncharacteristic lyricism, he wrote Bartram: “O Botany Delightfullest of all Sciences there is no End of thy Gratifications—All Botanists will joyn with Mee in thanking my Dear John for his unwearied Pains to Gratifie every Inquisitive Genius.” And in the public realm, there was his election to the Royal Swedish Academy of Sciences, which came appropriately to Bartram as a result of his hard work, observational skill, conceptual brilliance—and good fortune: he lived in Nya Sverige in America, he had a loyal and well-connected Quaker patron in London, and he had won a true friend in Stockholm.

“A list of woods sent to the Queen of Sweden 1759” and headed a second column of twenty plant names with “seeds sent to her in 1760 from Carolina” (Bartram Papers, i: 90, Historical Society of Pennsylvania).


32 Collinson to Bartram, June 30, 1763, *Bartram Correspondence*, p. 600.
Acknowledgments

The authors thank Monique Bourque, University of Pennsylvania; Peter Stebbins Craig; Eric Iversen; Richard Waldron, American Swedish Historical Museum; and Scott Gilbert, Swarthmore College, for reading and thoughtfully commenting on the paper. Thanks, too, to Alfred E. Schuyler, Academy of Natural Sciences, Philadelphia, for detecting our misunderstanding of a bit of correspondence between Linnæus and Haller. And special thanks to Tomas Anfält, Svenska Linné-sällskapet, Uppsala, for answering questions and clarifying many details during the entire course of our work on this project.