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'American Eden' Review: The Ambitious Dr. Hosack

Early America's foremost botanist was also New York's greatest institution builder, a man of 'Industry and Talents.'

By Penelope Rowlands

June 1, 2018 5:08 p.m. ET

It was a cityscape so striking that visitors, arriving by sea, turned rapturous. "A lovely sweep of notched shoreline" is how Tocqueville described it, with "blossoming trees on greensward sloping down to the water, a multitude of small, artfully embellished candy-box houses in the background." It was New York in the early 19th century, before Manhattan's beautiful hills were leveled, its winding lanes forced into a grid.

The city was as yet a backwater, lacking the cultural and scientific institutions that a great city requires. Ninety miles to the south, Philadelphia led the way in civic infrastructure and sheer sophistication. Within a few decades, all of that would change, in large part due to the efforts of one man, Dr. David Hosack, a botanist, an educator and, in the words of one colleague, a physician of "zeal, Industry and Talents." Above all else, he was a civic-minded, forward-thinking visionary—and one extraordinarily adept at turning his dreams into reality.

In her captivating biography "American Eden: David Hosack, Botany, and Medicine in the Garden of the Early Republic," Victoria Johnson describes how, at a time when "Philadelphians thought they inhabited the Athens of America," Hosack helped to tip the scales in New York's favor. Along the way, she restores this attractive polymath—who today is mainly remembered, thanks to a small role in a certain hip-hop musical, as the doctor-in-attendance at the 1804 duel between two of his patients, Aaron Burr and



PHOTO: ALAMY STOCK PHOTO

Alexander Hamilton —to his rightful place in American history. The rescue from oblivion is long overdue.

Hosack was born on Manhattan Island in 1769, the son of a Scottish merchant. He grew up in a New York under British occupation and, in Ms. Johnson's words, "came of age just when the newly independent nation was most in need of his energy, intellect, and prodigious talent for organizing other people." Formal medical education in America was then in its infancy. Even after receiving his M.D. from the University of Pennsylvania, he felt so poorly prepared for medical practice that he

headed to London and Edinburgh for further study. There he learned the latest surgical techniques and, as he later confessed to his adult son, was "very much mortified by my ignorance of botany." Until Hosack visited the university gardens of Great Britain, he had considered plant-based *materia medica* mere supplies to be purchased from apothecaries. Now medical botany became his obsession, a body of rapidly developing scientific knowledge that he was eager to master and bring to America.

Upon his return to New York in 1796, the city of 60,000 seemed decidedly provincial: "There was no Royal Society [of Medicine], no Linnean Society, no Brompton Botanic Garden," Ms. Johnson writes. "Hosack turned the situation over in his mind and decided it suited him perfectly." The city, in a sense, was his to create. At a time when "overt ambition was frowned upon," he kept a "breakneck professional pace." While meeting the demands of a burgeoning medical practice and a professorship at

Columbia, he also helped conceive, found, lead or improve many institutions that exist to this day, including the New-York Historical Society, the New-York Horticultural Society, the American Academy of Fine Arts, Bellevue Hospital and the medical school that would become Columbia University's College of Physicians and Surgeons.

Hosack's greatest achievement, however, was an entity that has disappeared altogether and been largely forgotten—the Elgin Botanic Garden, which he founded, in 1801, on a hilly, wooded 20-acre area of Manhattan, now the site of Rockefeller Center. Named after Hosack's father's birthplace in Moray, Scotland, it was the first public garden in the United States, the first research institution devoted mainly to the cultivation and study of native plants, and a scientific laboratory of vital importance to the future of America. In the 1740s, Benjamin Franklin had despaired that America's "Mountains and Swamps" were filled with plants "whose Virtues and proper Uses are yet unknown to Physicians." Until Hosack, little research had been done on the medicinal possibilities of American flora.

Hosack purchased the land for Elgin from the City of New York for what today would be about \$100,000. He did so parcel by parcel, with his own money, through 1810. His plan was to develop it, manage it as a working farm and horticultural classroom, and eventually sell it back to the city as a public trust. By the summer of 1803, he had begun to build a great greenhouse, one of the largest in all of North America. In June of that year, he gave a spirited lecture at Columbia, which was then located in Park Place. He explained that, just as he was teaching medical students at that college the rudiments of surgery, he would soon also be training medical botanists at Elgin. He also spoke, writes Ms. Johnson, "about the thousands of plants he was collecting from around the world—medicinal, agricultural, commercial, and ornamental. . . . He intended to collect every known species native to the continent, and . . . would safeguard specimens of each one at the garden. He reminded his audience of the critical medicines and crops the nation was forced to import each year from 'distant quarters of the globe.' These very plants, Hosack promised, would soon be growing less than four miles north of where they now sat."

"Some of the earliest systematic research in the United States on the chemical properties of medicinal plants" took place at Elgin, Ms. Johnson notes. Thomas Jefferson, William Bartram, Meriwether Lewis and other luminaries "sent Hosack plants and seeds for his garden and lavished praise on him," while visiting European scientists, such as Baron Alexander von Humboldt, François André Michaux and Alire

Raffeneau Delile, botanist to Emperor Napoleon, marveled at the range of specimens he had assembled.



MMXAOH. English: Painting of the Elgin Botanic Garden (ca. 1810; artist unknown) Elgin Painting at NY Botanical Garden PHOTO: ALAMY STOCK PHOTO

AMERICAN EDEN

By Victoria Johnson

Liveright, 461 pages, \$29.95

The grounds grew incrementally, by the acre and by the building. But by 1805, Ms. Johnson writes, "half of the Elgin Botanic Garden was still trapped inside Hosack's head, the other half was a mess of clay pots and manure." He devised many schemes to keep the garden afloat and

moving ahead. For years he pleaded with Columbia to fund Elgin for pedagogic purposes. For a time they did. Later, he turned to the New York state legislature, in Albany, a place he found "opaque and infuriating." Politicians, including New York Gov. Morgan Lewis and Hosack's close friend DeWitt Clinton, backed the project, only in the end to betray it. Petitions were drawn up. The telling of this is dry stuff, yet Ms. Johnson holds our interest as Hosack wheedles and cajoles, desperate to keep his beloved garden alive.

At last, Ms. Johnson writes, Elgin collapsed for lack of funding, just as it was "beginning to make its mark on American medicine." In the fall of 1812, a carriage rolled up near the site and a young civil servant emerged, there to map out a grid of new streets. It was the garden's death knell. The "Middle Road" on which its front gates stood would soon be renamed Fifth Avenue.

As his dreams for the garden faded, Hosack wove himself ever deeper into the fabric of his native city. Described by some contemporaries as "the first citizen of New-York," the doctor could hardly walk a Manhattan street without passersby stopping to pay

their respects. A noted bon vivant, he for years held a legendary Saturday-night salon at his home near Wall Street, where such notables as Washington Irving and John Jay turned up. Letters from around the globe, addressed only to "Dr. Hosack, New York," found their way to his door.

Hosack's accomplishments, early and late, are so numerous that a biography of the man risks becoming a spreadsheet, fact-heavy and unreadable. Yet so many deserve mention. He had a string of medical innovations to his credit, including being the first physician to tie off the femoral artery in the treatment of aneurisms. He was also the first in the United States to treat a swelling of the scrotum by injection—a technique he'd learned in Britain and the only one that alleviated that painful condition. Perhaps most dramatically, in 1795, as yellow fever closed in on New York, he faced off against his medical colleagues by insisting that the disease—which had ravaged Philadelphia two years earlier, reducing its population by a third—was contagious and could be curtailed by general hygiene and cleaning up the city's filth, particularly around its docks. While he was wrong in the first instance—the disease was caused by mosquitoes, something that wouldn't be understood for another half-century—he was correct in the latter. Even so, the actions he recommended destroyed mosquito breeding grounds, with many lives saved as a result.

Ms. Johnson, an associate professor of urban planning at Hunter College and an authority on botanic gardens, never allows her subject's many achievements to weigh down her narrative. She writes trippingly, with engaging fluency and wit. She has a lovely way of conjuring up early New York and its denizens—the workers calling out as they unload cargo at the docks; the gentlemen crowding into the Tontine Coffee House for the news of the day. The book's botany-related passages are particularly vivid. The author writes of plants delightedly, precisely—as Hosack himself might have done. The lovingly described "tall grass called Job's tears (*Coix lacryma*) for the pearly little tear-shaped grains that grew at the end of its stalks" is but one of many such examples.

The book also offers fascinating glimpses of early New Yorkers responding to world events, such as when, at the outbreak of the War of 1812, the city's residents fall "into a frenzy of fear and recrimination." Who knew that, at the time of the French Revolution, sympathetic crowds of Democratic-Republicans paraded through Manhattan singing the "Marseillaise" and sporting the red liberty caps favored by the revolutionary mobs across the Atlantic? On a much smaller scale, the city's residents fumed—Hosack prominent among them—when a mastodon fossil excavated in the Hudson Valley was spirited across state lines for the glory of that rival city, Philadelphia.

After the garden's demise, Hosack continued working at his usual, feverish pace. In 1816, he was named a Fellow of the Royal Society, an almost unheard of honor for an American; other accolades, including an honorary degree from Princeton, rolled in.

Toward the end of his life—he died of a stroke, at age 66, in 1835—Hosack married an immensely wealthy woman (he had been twice a widower) and became the proprietor of an estate in Hyde Park-on-Hudson, where he—no surprise there—was "captivated by every aspect of farming and country living."

By then, New York City was firmly on the map. In a gracious letter to Hosack, Charles Willson Peale, the artist, naturalist and very personification of Philadelphia high culture, conceded that the rival city to the north was now more "advanced in learning, arts & science" than his own. For the ambitious Dr. Hosack, it must have been sweet vindication.

—Ms. Rowlands is the author of "A Dash of Daring," a life of fashion editor Carmel Snow. She is a great-great-great-great-great-great-grandniece of David Hosack.

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