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Cataloging Nature: Standardizing Fruit Varieties in the United States, 1800–1860

The forests and fields of the early American republic teemed with individually varying seedling fruit trees. American nurserymen stabilized both this chaotic landscape and their trade by promoting named fruit “varieties” gleaned from domestic orchards and from a global network of botanical gardens. Developing strategies to regulate the production of names and descriptions, they altered both texts and organisms, replacing a profusion of “wild” trees with a negotiated list of “named varieties.” Examining this process reveals intersections between commercial and scientific credibility and illuminates the alternative business forms built around living goods.

Buried in the New York State Agricultural Society’s *Transactions for 1842* is a short, irritable essay called “Hints on Describing Fruit.” Its author was John J. Thomas, who, in his early thirties, had just followed his father into the nursery business in Macedon, New York.¹ Bemoaning the state of American fruit culture, Thomas complained, “A good fruit garden is at the present moment a great rarity in most parts of our country.” He attributed this to problems that were textual as well as physical: “The numerous errors in the names of fruits” made it hard to procure “those which are genuine,” a problem compounded by “the multiplication of new varieties” and by “the meagreness, looseness, and inaccuracy of nearly all books of descriptions.”² Worse, Thomas argued, the circulation of fruit trees around the nation fundamentally challenged the act of description itself. When moved, varieties changed. Thus, the Virgalieu pear, prized in New York, became in Boston “an outcast,

¹“John Jacob Thomas,” in *Cyclopedia of American Horticulture*, ed. Liberty Hyde Bailey (London, 1907), 1797.

²John J. Thomas, “Hints on Describing Fruits,” in *Transactions of the New York State Agricultural Society* (Albany, 1843), 269.

intolerable even to sight.”³ Clearly the networks of print and plant distribution that constituted the mid-nineteenth-century nursery business sat uneasily together.

Equally clearly, these networks were transformative. While Thomas fretted, the kinds of orchards he called a “rarity”—filled with named, grafted fruit—were spreading quickly, displacing a landscape of semi-feral seedling trees. Writing two years later, in 1845, Thomas’s fellow nurseryman and author Andrew Jackson Downing boasted, “the planting of fruit-trees in one of the newest States numbers nearly a quarter of a million in a single year.”⁴ The 1850 federal census, evaluating trees and fruits for the first time, valued them at \$7.7 million—a number that would climb to \$20 million by 1860.⁵ Within a few decades, a new commercial landscape would emerge, one populated largely by trees that had been funneled through networks of nurserymen.⁶

This movement of fruit trees was part of a much larger shift: the wave of introduced or created varieties of plants and animals that swept across the recently appropriated lands of the new United States. A recent body of scholarship has shown that such “biological innovations” were crucial to the expanding American economy; just as new varieties of cotton allowed cotton culture to stretch into the rich soil of the black belt, new varieties of wheat made it possible for American farmers to multiply the American wheat crop by eight.⁷ However,

³ *Ibid.*, 270.

⁴ Andrew J. Downing, *Fruits and Fruit Trees of America* (New York, 1845), vi.

⁵ James D. B. De Bow, *The Seventh Census of the United States: 1850* (Washington, D.C., 1853), 153, lxxxiii; Joseph C. G. Kennedy, *Agriculture of the United States: Compiled from the Original Returns of the Eighth Census* (Washington, D.C., 1864), 186.

⁶ Cheryl Lyon-Jenness, “Planting a Seed: The Nineteenth-Century Horticultural Boom in America,” *Business History Review* 78 (Autumn 2004): 381–421; Ulysses P. Hedrick, *A History of Horticulture in America to 1860* (Portland, Ore., 1988); Daniel J. Kevles, “Fruit Nationalism: Horticulture in the United States—From the Revolution to the First Centennial,” in *Aurora Tocalis*, ed. Marco Beretta, Karl Grandin, and Svante Lindqvist (Sagamore Beach, Mass., 2008), 129–46; Philip Pauly, *Fruits and Plains: The Horticultural Transformation of America* (Cambridge, Mass., 2007); Erica Hannickel, *Empire of Vines: Wine Culture in America* (Philadelphia, 2013).

⁷ Alan L. Olmstead and Paul W. Rhode, *Creating Abundance: Biological Innovation and American Agricultural Development* (Cambridge, U.K., 2008). See also Daniel J. Kevles, “Protections, Privileges, and Patents: Intellectual Property in American Horticulture,” *Proceedings of the American Philosophical Society*, 152 (June 2008): 207–13; Daniel J. Kevles, “New Blood, New Fruits: Protections for Breeders and Originators, 1789–1930,” in *Making and Unmaking Intellectual Property*, ed. Mario Biagioli, Peter Jaszi, and Martha Woodmansee (Chicago, 2011); Deborah Fitzgerald, *The Business of Breeding: Hybrid Corn in Illinois, 1890–1920* (Ithaca, 1990); and Tom Okie, “Under the Trees: The Georgia Peach and the Quest for Labor in the Twentieth Century,” *Agricultural History* 85 (Jan. 2011): 72–101. For more global histories, see Jack Ralph Kloppenburg Jr., *First the Seed: The Political Economy of Plant Biotechnology* (Madison, Wisc., 2005); Londa Schiebinger, *Plants and Empire: Colonial Bioprospecting in the Atlantic World* (Cambridge, Mass., 2004); and

American markets moved more than just staple goods. Fruits and fruit trees found an ecological niche in the expanding culture of gentility, as recognizable proof of taste and refinement.

Chopped into cuttings that we would now call clones, grafted fruit trees became an easily shipped, varied, and beautiful product. However, businesses selling living things—seeds, cuttings, and living plants and animals—differ sharply from the markets that most histories of business have examined. On the one hand, living goods could not be improvised. While American provincial workshops might independently make elegant chairs out of local wood, the fruit tree trade required the maintenance of the social links through which genetic material passed.⁸ On the other hand, living goods are often both product and means of production. While a single silk ribbon could not become the ancestor of a population of identical ribbons, or escape from the control of its owner to produce a landscape full of chaotic offspring, fruit trees could and did.

Though Thomas was seated at the heart of the booming tree business, he was not wrong to complain about words; indeed, his complaint preoccupied most of the nurserymen of his generation. As this article will show, botanical practices of naming and description were foundational to the nursery business, allowing nurserymen to participate in an international network for the movement of varieties while at the same time stabilizing the identity of a product that, at the beginning of the nineteenth century, had been growing freely in North America for two hundred years. In gaining control of varietal names and reputations, nurserymen would alter not only words but also the organisms those words described, replacing a wild profusion of seedlings with a regimented set of named trees—one that, if imperfectly controlled, was also radically simplified. To understand how they did so, we must first understand the special meaning of the concept of the “variety” in the fruit tree trade.

Varieties and Commercial Taxonomy

Early-nineteenth-century agriculturists agreed that variability was a special quality granted to domesticated species. “By what means the first tendency to change their nature was given to domesticated plants,” British horticulturist John Lindley noted, “we are entirely ignorant.”⁹

Richard Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (New Haven, Conn., 2000), 225–52.

⁸ For provincial improvisation, see David Jaffee, *A New Nation of Goods: The Material Culture of Early America* (Philadelphia, 2010).

⁹ John Lindley, quoted in William Robert Prince, *The Pomological Manual*, vol. 2 (New York, 1831), viii.

Variability not only explained widely differing kinds of dogs, fruit, and flowers, but also made domesticated animals and plants gloriously subject to progressive development. Over generations, they could be manipulated into new forms—“breeds” in the case of animals and “varieties” in the case of plants. For gardeners and farmers, it was in these categories, not in species categories like “cow” and “apple,” that the characteristics significant to production and ornament appeared. However, *variety* was a changeable category, and the particular reproductive characteristics of fruit trees gave it a significant form.

Fruit trees, particularly apple trees, produce astonishingly variable offspring. Seedlings from the same tree can produce fruits of different colors, flavors, and shapes that appear at different times of year and keep for different periods. This instability means that fruit trees cannot be commercially propagated by seed; the seeds of a fine tree will produce thousands of bizarre, and often useless, offspring. This variability could produce an astonishing wealth of forms; early catalogs described striped apples; grey, egg-shaped apples; “twenty ounce” apples; and the “Surprise Apple,” which was “yellow outside, and red to the core.”¹⁰ However, most seedlings were undistinguished; to the novice, Andrew Jackson Downing wrote, planting seedlings “appears . . . a lottery, in which there are too many blanks to the prizes.”¹¹

Only a moment of luck combined with judgment qualified a seedling to receive a name and description and thereby to become a variety. In antebellum writing, these moments were cast as discoveries; for example, Prince boasted of having “discovered” the *Sine Qua Non* apple in a Flushing field.¹² However, as horticultural author Walter Elder wrote in the 1840s, this act of discovery fundamentally differed from the collection of botanical specimens: “The botanist considers a plant with a double flower a monster—the florist considers it a beauty. . . . Species are the hobby of the botanist—variation the hobby of the florist.”¹³ Where naturalists sought representative individuals, horticulturalists hunted “monsters” and “sports” and dealt in productive oddities. As fruit enthusiasts themselves pointed out, varieties were thus “the artificial productions of culture.”¹⁴

“Discovery” offered the fruit tree a new mode of human-mediated reproduction. Because fruit seedlings did not resemble their parents, varieties were propagated asexually. Pieces cut from the original tree

¹⁰ Prince & Sons, *Catalogue of Fruit and Ornamental Trees and Plants* (New York, 1823).

¹¹ Downing, *Fruits and Fruit Trees*, 2.

¹² Prince, *Pomological Manual*, vol. 2, 15.

¹³ Quoted in Ann Leighton, *American Gardens of the Nineteenth Century: “For Comfort and Affluence”* (Amherst, Mass., 1987), 65.

¹⁴ Franklin R. Elliott, *The Western Fruit Book* (New York, 1859), 17.

were either placed directly in the ground or, more frequently, as “scions,” attached to the root system of a different tree, a process called grafting. Once established, they branched and fruited on their new roots and could be split again.¹⁵ Described today as cloning, this was, in the nineteenth century, sometimes considered to be the creation of a single distributed organism; when the original tree died, many thought, so too would its scions.¹⁶ However, unlike wind-pollinated varieties of wheat or corn, whose integrity was threatened by every breeze, cuttings seemed to promise a stable identity over time.

Easily made and cheaply shipped, cuttings and grafted saplings became the basis of the nursery business. In 1828, correspondents of Bartram’s Garden could order such trees as the Lady’s Finger and the Golden Pearmain; the trees’ value, like their promise of sweetness, lay in their names.¹⁷ Unlike a species, the fruit tree variety was not a population of similar individuals encountered in a landscape, but a network of propagation spreading out from an initial point. It reproduced solely through networks of exchange, maintained its identity through catalogs and advertisements, and lived and died entirely according to the dictates of commercial orchards and consumers.

A Wealth of Seedling Fruit

Of course, grafting was a millennia-old practice when Thomas wrote his essay; nineteenth-century authors referred with wonder (and skepticism) to a tree described by Pliny the Elder onto which grapes, figs, pears, pomegranates, and apples had been grafted.¹⁸ During the mid-eighteenth century, however, what Thomas would have called a “good fruit garden” was limited to a small coterie of wealthy American merchants and planters and the few coastal nurseries that supplied them. For the majority of American colonists during the eighteenth and early nineteenth centuries, grafted fruit was a little-known luxury.

This did not mean these Americans lacked fruit. The first colonists brought seeds with them as well as a few cuttings and grafted trees, which rapidly spread beyond the colonists’ advance: General Sullivan’s 1779 expedition against the Cayugas and Senecas reported orchards bending with peaches and apples. Pouring westward in the 1790s,

¹⁵ Asexual propagation techniques involving cuttings, runners, or split tubers are used for dozens of other plants, from strawberries to potatoes.

¹⁶ Pauly, *Fruits and Plains*, 65.

¹⁷ Robert Carr, *Periodical Catalogue of Fruit and Ornamental Trees and Shrubs* (Philadelphia, 1828), 39.

¹⁸ John Bostock and Henry T. Riley, eds., *The Natural History of Pliny*, vol. 3 (London, 1855), 484.

settlers carried fresh infusions of seeds. Planting new orchards allowed settlers to negotiate requirements that they improve the land, and landlords often made orchard planting a condition in their leases. Wandering pigs and cattle, foddered on windfall fruit, carried fruit seeds beyond the bounds of settler and Native American orchards: apple, plum, and peach trees sprouted unaided in swamps, fields, and forests.¹⁹

By the 1810s, settlers, landlords, Native Americans, and animals had created a rich American landscape of fruit. However, these orchards were not the kind Thomas had in mind. A Hudson Valley lease reveals a typical planting practice. The lessee, it declared, should, “the first year, strew apple seed or pomace [the refuse of cider pressing] upon a patch of land for said Farm, for a nursery.”²⁰ Fruits grown in this way were namelessly variable and often inedible when raw. For most Americans during the late eighteenth and early nineteenth centuries, fruit became a commodity only when fed to pigs, pressed into cider, or distilled as brandy. These latter uses attracted the ire of temperance advocates; one, having written an article entitled “What Should I Do with My Apples?” signed himself, “BURN THEM.” It was seedling apples that would be propagated by the itinerant Swedenborgian nurseryman John Chapman, or “Johnny Appleseed.”²¹ By contrast, the “good fruit gardens” that nurserymen like Thomas hankered for emulated a model that originated thousands of miles from American shores.

Networked Gardens: Nurserymen in Global Context

In 1824, the Flushing, New York, branch of the Linnaean Society of Paris celebrated the 115th birthday of the great Swedish botanist Carolus Linnaeus. First launching “the new and elegant boat Linnaeus” in Manhattan, flying flags inscribed with Linnaeus’s name, society members proceeded to the Linnaean Botanic Garden and Nurseries—the nursery of Flushing’s most storied firm, Prince & Sons—where they read botanical papers, chanted poetry, and crowned a statue of Linnaeus with flowers, while Governor DeWitt Clinton praised the extension of “the empire of useful truths in Botany and Husbandry.”²² William Prince, proprietor of

¹⁹ S. A. Beach, *The Apples of New York* (New York, 1902); Alfred W. Crosby, *Ecological Imperialism: The Biological Expansion of Europe, 900–1900* (Westport, Conn., 1986), 157.

²⁰ Copy of a manuscript letter from Oliver J. Tillson to Helen Miller Gould, daughter of Jay Gould, Oliver Tillson Papers, box 8: “Receipts,” Kroch Library Manuscript and Special Collections, Cornell University, Ithaca, N.Y.

²¹ Burn Them [pseud.], “What Shall I Do with My Apples,” *Religious Intelligencer*, 6 Oct. 1827, 299; William Kerrigan, *Johnny Appleseed and the American Orchard: A Cultural History* (Baltimore, 2012), 19, 189.

²² *Celebration at Flushing of the Birthday of Linnaeus, by the New-York Branch of the Linnaean Society of Paris* (New York, 1824), 3–5.

Prince & Sons, had good reason to celebrate botany's most famous name. Prince's recent inclusion among the 136 foreign corresponding members of the London Horticultural Society (LHS) had not only added over a hundred botanical gardens to his list of global contacts, but had also raised his profile among the LHS's wealthy plant collectors.²³ His 1823 catalog displayed relationships with dozens of botanical luminaries, as well as the "interchange of civilities with Botanical Gardens in different quarters of the Globe" and regular importations from China and Paris.²⁴

Like other major American nurserymen, Prince drew both new plants and credibility from a global network of botanical gardens. Built on a foundation of medical gardens and private collections in the seventeenth century, this network had been bolstered in the eighteenth century by state gardens such as the Royal Gardens at Kew and the Jardin du Roi (later the Jardin des Plantes) at Versailles—which had, in turn, established competing subsystems of colonial botanical gardens.²⁵ By moving seeds and cuttings, these gardens determined colonial fortunes; for example, the sugar plantations of the Caribbean were saved from global cane epidemics by a supply of new varieties in the 1790s.²⁶ Simultaneously, botanists embarked on inventories of domestic plants, hoping to find unknown local treasures or substitutes for expensive exotics, to reverse a reliance on imports.²⁷

Botanical gardens supplied botanists and horticulturists alike. However, Prince's most recent contact had made fruit varieties its particular concern. The LHS was the domain of aristocratic members of the Whig Party, for whom luxurious gardens evidenced both rural virtue and the profit that could be wrung from lands operated on scientific principles.²⁸ In 1818, the society had established a new garden at Chiswick specifically for the testing and naming of fruits. Since the LHS sent free specimens to corresponding nurserymen for testing and distribution, Prince's connection gave him access to the 3,825 fruit varieties whose names would soon fill Chiswick's first catalog, in 1826.²⁹

²³ *Horticultural Society of London* (Saint James, U.K., 1828), 65–69.

²⁴ Prince & Sons, *Catalogue of Fruit and Ornamental Trees*, v–vii.

²⁵ Drayton, *Nature's Government*, 85–124; Emma Spary, *Utopia's Garden: French Natural History from Old Regime to Revolution* (Chicago, 2000); Kevles, "New Blood."

²⁶ Stuart McCook, *States of Nature: Science, Agriculture, and Environment in the Spanish Caribbean, 1760–1940* (Austin, 2002), 77–85.

²⁷ Fredrik Albritton Jonsson, *The Enlightenment in the Highlands: Natural History and Internal Colonization in the Scottish Enlightenment, 1760–1830* (Chicago, 2005); Lisbet Koerner, *Linnaeus: Nature and Nation* (Cambridge, Mass., 1999), 3, 136; Alix Cooper, "'The Possibilities of the Land': The Inventory of 'Natural Riches' in the Early Modern German Territories," *History of Political Economy* 35, no. S1 (2003): 129–53.

²⁸ Drayton, *Nature's Government*, 139.

²⁹ *Catalogue of Fruits Cultivated in the Garden of the Horticultural Society of London at Chiswick* (London, 1826), vi–vii, 153.

Chiswick was not alone in casting itself as a center of nomenclature. Accurate naming was the central practice of both botany and horticulture. Without an accompanying name and description, plants could not be exchanged through far-flung networks of correspondence, collections could not be compared, and value could not be determined. It was for developing a system for naming new species of plant that Linnaeus was celebrated around the globe, and it was naming and describing valuable new species and varieties that allowed aspirants entry into botanical circles. Prince's discovery of the *Sine Qua Non* helped launch him into this cosmopolitan world.

Within this transatlantic culture, "good fruit gardens" were comprehensive collections of accurately named fruit. To create a good collection, nurserymen had to foster a dense web of exchange relationships. For example, Andrew Jackson Downing's Rosselet de Meester pear came from the experiments of Jean-Baptiste Van Mons at the University of Louvain, in Belgium; his Thompson apple came from the Chiswick Garden; and his Downton Pippin from Britain's most famous fruit expert, Thomas Andrew Knight. However, this stream of specimens also required an exchange. Here, American nurserymen had an advantage. Where Van Mons and Knight struggled to breed new varieties, American nurserymen had a thick stack of lottery tickets in the seedling landscape. Circulated through the system, fruits like the Cranberry Pippin—"a strikingly beautiful apple" that Downing "found growing on a farm near Hudson, N.Y."—eased nurserymen into international circuits of specimen exchange.³⁰

Though American nurserymen started out on the margins of this system, we should not assume that they were permanently peripheral. Like many major nurserymen, Downing characterized his orchard as a site of knowledge production analogous to Chiswick, a place where varieties were tested and judged. "Little by little I have summoned [varieties] into my pleasant and quiet court," he wrote, "tested them as far as possible, and endeavored to pass the most impartial judgment upon them."³¹ The absence of an American state-sponsored botanical garden or privately sponsored testing garden like Chiswick during the early decades of the nineteenth century gave greater weight to such claims.

American nurserymen also benefited from the strength of local markets. By the 1830s, British fruit was in decline—undermined by the waning of cider and perry (pear cider) as working-class drinks, by medical tracts blaming cholera outbreaks on the eating of fresh fruit,

³⁰ Downing, *Fruits and Fruit Trees*, 106.

³¹ *Ibid.*, v.

and, in 1838, by the removal of almost all duties on imported fruit.³² Moreover, even as American seedling orchards turned out hundreds of new varieties, British varieties had begun to suffer from inexplicable ailments.³³ While British fruit culture contracted, American fruit culture expanded, fueled by the spread of rural refinement and the rise of urban markets.

Fruit Trees as Marks of Refinement

Grafted fruit trees found an important habitat in the expanding consumer culture of gardening. Drawing on a tradition of political legitimacy that self-consciously echoed British models, wealthy merchants and planters had long laid out country estates in a manner calculated to express refinement and an attention to the public good.³⁴ In the early nineteenth century, as Richard Bushman, David Jaffee, and Catherine Kelly have argued, a wider array of groups produced their own versions of gentility.³⁵ In doing so, they created new garden spaces. Farmers planted orchards near newly white picket fences and “ornamented barns”; urban entrepreneurs established public gardens for genteel recreation; and provincial towns planted their recently deforested centers with intentional greenery.³⁶ Lavish accounts of British estates, printed in horticultural journals and journals of fashion, strengthened the connection between gardens and class status. As editor of the *Western Farmer and Gardener* in the mid-1840s, Henry Ward Beecher expected his readers to share his fantasy of “imaginary visits to the Chiswick

³² Joan Morgan and Alison Richards, *New Book of Apples* (London, 1993), 107.

³³ Thomas Andrew Knight, *Pomona Herefordiensis* (London, 1811), ii.

³⁴ Tamara Plakins Thornton, *Cultivating Gentlemen: The Meaning of Country Life among the Boston Elite, 1785–1860* (New Haven, Conn., 1989). On eighteenth-century tree culture, see Barbara Wells Sarudy, *Gardens and Gardening in the Chesapeake* (Baltimore, 1998), 39–41, 127–33, 55–88; and Peter J. Hatch, *The Fruits and Fruit Trees of Monticello: Thomas Jefferson and the Origins of American Horticulture* (Richmond, Va., 1998).

³⁵ Richard Bushman, *The Refinement of America: Persons, Houses, Cities* (New York, 1993), 240–57; Jaffee, *New Nation of Goods*; Catherine E. Kelly, “‘Well Bred Country People’: Sociability, Social Networks, and the Creation of a Provincial Middle Class, 1820–1860,” *Journal of the Early Republic* 19 (Autumn 1999): 451–71. On this transition, see David H. Diamond, “Origins of Pioneer Apple Orchards in the American West: Random Seeding versus Artisan Horticulture,” *Agricultural History* 84 (Autumn 2010): 423–50.

³⁶ John R. Stilgoe, *Borderland: Origins of the American Suburb, 1820–1939* (New Haven, Conn., 1988), 67–93; Pauly, *Fruits and Plains*, 53–54; Brenda Bullion, “Hawthornes and Hemlocks: The Return of the Sacred Grove,” *Landscape Journal* 2 (Autumn 1983): 114. For more on refinement, see Hannickel, *Empire of Vines*, 57–58; Kevles, “Fruit Nationalism,” 132–33; and David Schuyler, *Apostle of Taste: Andrew Jackson Downing, 1815–1852* (Baltimore, 1999).

Garden [and] the more than oriental magnificence of the Duke of Devonshire's grounds at Chatsworth."³⁷

Grafting promised both direct access to aristocratic spaces and a homegrown source of luxury. Few Americans could afford the effort that the Duke of Devonshire's servants reportedly devoted to his "monster" Royal George peach tree, which extended over a hundred feet of trellis in a dedicated greenhouse and produced 8,727 peaches in a year. For thirty-five cents, though, they could buy a piece of it.³⁸ Conversely, American seedling orchards, recast as sources of new varieties, supplied the improvisational provincial gentility described by Kelly and Jaffee.³⁹ A correspondent to the *Genesee Farmer* lightly mocked the novice gardener who "had just read an account of an extraordinary 'seedling cherry,' produced by Mr. A., in one part of the country; a wonderful seedling apple, by Mr. B., in another, a no less remarkable pear, by Mr. C., somewhere else."⁴⁰ At a relatively low price, aspiring orchardists could begin to assemble rarities into good fruit gardens. This culture of collecting was at its most elaborate within the horticultural societies founded on the LHS model, starting in 1818.⁴¹ At their meetings, pomological gentlemen and prominent nurserymen took turns displaying fine, rare, or novel varieties of fruit; "By Mr. Richards," noted one report from Boston, "Red Juneating, Curtis' Early Striped, Shropshirevine or Sops-of-wine, Early Harvest, and a kind without name, a small, pleasant, striped fruit; also Early Bow, a fine, large, well known, sweet fruit."⁴² The growing number of agricultural fairs rewarded comprehensive collectors; early exhibition reports often consisted only of numbers and names of varieties displayed. Through such accounts, published in the horticultural journals, readers could watch new fruits move through the system and perhaps decide what to buy.

Sprouting haphazardly from roadsides and home orchards, seedling fruit had been fair game for passersby and neighbors—but as trees became a consumer good, fruit did too. In the 1840s, a series of state laws hastily enacted against "fruit theft" showed the new importance

³⁷ Henry Ward Beecher, *Plain and Pleasant Talk about Fruits, Flowers and Farming* (New York, 1859), v.

³⁸ Andrew Jackson Downing, "Mr. Downing's Letters from England," *Horticulturist* 5 (Nov. 1850): 217.

³⁹ Jaffee, *New Nation of Goods*; Catherine Kelly, *In the New England Fashion: Reshaping Women's Lives in the Nineteenth Century* (Ithaca, 1999), 10–11.

⁴⁰ "Fruit Culture," *Massachusetts Ploughman and New England Journal of Agriculture* 9 (8 June 1850): 1.

⁴¹ Hedrick, *History of Horticulture*, 505–16.

⁴² Samuel Walker and William Kenrick, "Massachusetts Horticultural Society: Exhibition of Fruits," *Horticultural Register and Gardener's Magazine*, 1 Sept. 1836, 352.

of markets in “fine fruit.”⁴³ These markets were real physical spaces. In 1837, New York City had two shops specializing in fruit; eleven years later it had seventy-one, and other large cities followed the same pattern.⁴⁴ Encouraged by the deregulation of public markets in the 1840s, a new class of urban grocers altered the way that fruit was presented and sold. Public markets had previously been segmented by time: prices dropped during the day, and battered afternoon fruits were sold to the poor. The new groceries, by contrast, were segmented by class: where street vendors served the poor from barrels, groceries in upscale neighborhoods competed to have the most elaborate displays—and new and attractive fruit varieties became key to their strategy.⁴⁵ By mid-century, nurserymen felt the pull of these new spaces. In 1852, the horticulturalist James Watts noted that “*consumers have become more particular about kinds.*” What they wanted now was “the Esopus, Spitzenberg, Baldwin, Roxbury Russet, Rhode Island Greening, Swaar, Talman Sweeting, Seek-no further, Pearmain, Twenty-Ounce Apple, and Vandevere,” and they called for them by name.⁴⁶

Calls for named fruit were satisfied by a new landscape of commercial orchards, springing up around the East Coast and in the new Great Lakes fruit region. In 1851, Cincinnati alone consumed 24,414 barrels of apples from the new orchards of Western New York and Michigan, worth approximately one hundred thousand dollars.⁴⁷ In 1845, the Reybold family of Delaware sent 63,344 baskets of peaches from their 117,720 trees to New York, Philadelphia, and Boston by specially hired steamer.⁴⁸ These orchards reversed the direction of luxury trade. Even before the Revolution, London markets had sold a few Long Island-grown Newtown Pippins, though they were “too expensive for common eating.”⁴⁹ After the removal of British duties on apples in the mid-1830s, American exports doubled within a decade—Baldwins from

⁴³ William Kerrigan, “Stealing Apples: Markets, Morality, and the Movement to Criminalize Apple-Pilfering in Antebellum Ohio” (paper presented at annual meeting of Society for Historians of the Early American Republic, St. Louis, July 2013).

⁴⁴ *Longworth’s American Almanac* (New York, 1837); *Doggett’s New York City Directory, 1848–1849* (New York, 1848). See also *The Boston Directory* (Boston, 1823); and *The Boston Directory* (Boston, 1848).

⁴⁵ Cindy R. Lobel, *Urban Appetites: Food and Culture in Nineteenth-Century New York* (Chicago, 2014), 63.

⁴⁶ *Transactions of the Second Session of the American Pomological Society* (Philadelphia, 1852), 74.

⁴⁷ “Apple Trade at Cincinnati,” *Ohio Cultivator* 7 (Dec. 1851): 360.

⁴⁸ James Pedder, “A Day at the Reybolds in Peach Harvest,” *Farmers’ Cabinet, and American Herd-book* 10 (15 Oct. 1846): 78–79.

⁴⁹ Michael Collinson quoted in William A. Taylor, *The Fruit Industry, and the Substitution of Domestic for Foreign-Grown Fruits, with Historical and Descriptive Notes on Ten Varieties of Apple Suitable for the Export Trade* (Washington, D.C., 1898), 311.

Boston and Albemarle Pippins from Virginia jostled with Long Island fruit in Covent Garden.⁵⁰ Overseas taste for American apples made possible places like the Pell Orchard of Esopus, New York, which claimed to be the largest commercial orchard in the world, producing about 13 percent of American apple exports in the 1840s.⁵¹

Nurserymen benefited from both collectors looking for rarities and “orchardists” looking for large numbers of grafted saplings. During the first half of the nineteenth century, the few dozen nurseries clustered around the major cities of the East Coast would grow to more than a thousand, selling between fifteen and twenty million trees annually.⁵² Eastern nurseries extended across the continent; for example, the proprietor of the Llewelling Nursery arrived in Oregon by wagon in 1847, carrying trees from the nurseries of Ellwanger & Barry and A. J. Downing.⁵³ However, as named fruits and trees became valuable, they posed new problems.

Disorder, Confusion, and Counterfeits of Varietal Names

Once grafted varieties became an accepted good, names and fruits multiplied together. Following the practice of using European names for American plants, for example, the new varieties springing from American orchards often received old names—William Prince may have discovered *the Sine Qua Non*, but “Sine Qua Nons” appeared everywhere. Seedlings of European varieties often received their parents’ names. Worse, varieties often started with multiple European names. Nurserymen would observe that a customer with a lengthy order—for instance, for “Beurre Dore, Beurre d’Anjou, Beurre d’Or, Beurre d’Ambleuse, Beurre d’Amboise, Poire d’Amboise, Isambert, Red Beurre, Beurre du Roi, and Golden Beurre, White Doyenne, Doyenne Blanc, Beurre Blanc, Bonneante, Saint Michael, Carlisle, Citron de Septembre, Kaiserbirne, Poire a Courte Queue, Poire de Limon, Poire de Neige, Poire de Seigneur, Poire Monsieur, Valencia, and White Beurre”—had actually purchased just two pear varieties.⁵⁴ When circulating among neighbors or distributed by agricultural societies, varieties accumulated even more names. The apple known in journals as the Williamson, after the owner of the first known tree, was locally known as the Land Office Apple because the original tree had grown near the land office of the Pultney

⁵⁰ Taylor, *The Fruit Industry*, 344.

⁵¹ Paul W. Gates, *The Farmers Age: Agriculture, 1815–1860* (New York, 1960), 257.

⁵² *Ibid.*, 259.

⁵³ Willis P. Duruz, “Notes on the Early History of Horticulture in Oregon: With Special Reference to Fruit-Tree Nurseries,” *Agricultural History* 15 (Apr. 1941): 88, 97.

⁵⁴ Michael Floy, *A Guide to the Orchard and Fruit Garden* (New York, 1833), iv.

Estate. Moreover, it was agreed that Williamson had brought the tree from England, so the name Land Office probably obliterated a past European name, and identical specimens with that name might have recently been reimported. Through such movements, fruit identities became uncertain.⁵⁵

As named fruit became valuable, moreover, it became worth faking.⁵⁶ Advocates of the newly fashionable Northern Spy apple complained in 1845 that it, “like all other popular fruits, is *counterfeited* by the men and boys who sell apples around the streets. . . . [E]very apple they can find, that in any way resembles the ‘Northern Spy,’ is so called by them.”⁵⁷

Buyers of trees, which did not fruit immediately, fell victim to the worst deceptions. “Many persons,” warned a Prince catalog, “apt to purchase trees without regard to any point but their cheapness . . . , after the toil and expense of years, find them, when they arrive at bearing, absolutely worthless.”⁵⁸ The life cycle of fruit trees left both buyers and sellers vulnerable—the first to fraud and the second to damaged reputations.

Nurserymen often blamed failed trees on transient laborers who increasingly extended the tree distribution network. The *Genesee Farmer* complained of farmers’ willingness to rely on “some irresponsible, peddling grafter” who threw different varieties together “promiscuously, without mark or label.”⁵⁹ Working cheaply and in bulk, grafters showed how easy it was to create informal orchards beyond the control of expert nurserymen. In April 1831, the farmer Moses Eames recorded in his diary the arrival of “two men come to graft apple trees” on his father’s farm; the next day he noted, “they do 364 grafts.”⁶⁰ As in antebellum culture generally, peddlers, as T. J. Jackson Lears writes, acted as “a lightning rod for the anxieties of a developing market society.”⁶¹

⁵⁵ W. W. B. “The Williamson Apple,” *Genesee Farmer and Gardener’s Journal* 5 (30 Apr. 1835): 122.

⁵⁶ On antebellum counterfeiting, see Stephen Mihm, *A Nation of Counterfeiters: Capitalists, Con Men, and the Making of the United States* (Cambridge, Mass., 2007).

⁵⁷ “Northern Spy,” *Genesee Farmer* 6 (Feb. 1845): 30.

⁵⁸ William Prince & Sons, *Annual Catalogue of Fruit and Ornamental Trees and Plants* (Jamaica, N.Y., 1835), ii.

⁵⁹ David Jaffee, “Peddlers of Progress and the Transformation of the Rural North, 1760–1860,” *Journal of American History* 78 (Sept. 1991): 513; Cheryl Lyon-Jenness, “A Telling Tirade: What Was the Controversy Surrounding Nineteenth-Century Midwestern Tree Agents Really All About?” *Agricultural History* 72 (Autumn 1998): 675–707; “The Weather,” *Genesee Farmer* 6 (Dec. 1845): 182.

⁶⁰ Moses Eames Diaries, vol. 1, 14–15 April 1831, Jefferson County Historical Society, Watertown, N.Y.

⁶¹ T. J. Jackson Lears, *Fables of Abundance: A Cultural History of Advertising in America* (New York, 1994), 69.

However, as Cheryl Lyon-Jenness has shown, they were often agents of nurserymen themselves, the vanguard of a new consumer gentility.

Most fundamentally, it was simply difficult to distinguish among the growing sea of varieties. Miniscule, seemingly insignificant gradations in the shape of the fruit, the pattern of mottling or striping, or the grain and flavor of the flesh became elusive distinguishing marks.⁶²

The Genre of Varietal Description

The “only remedy” to the confusing proliferation of poor varieties, declared the *Horticulturist*, “lies in restricting the right to describe, name, and publish a new fruit, to competent pomologists.”⁶³ The reference to “publishing a new fruit” would not have seemed strange in 1847. A flood of new horticultural journals, manuals, pamphlets, and catalogs had come out in the 1830s and 1840s. Conveniently, but not coincidentally, prominent nurserymen had a lock on these channels of communication, editing the *American Horticultural Magazine*, the *Horticultural Register*, and the *Horticulturist*, among others.⁶⁴ While the new journals contained elegant garden descriptions, designs for new homes, letters about blights and beetles, and the occasional poem, fruit descriptions—that is, accounts of individual varieties—were a mainstay of their content. When Downing advertised the *Horticulturist* in 1847, “the description and cultivation of Fruits and Fruit Trees” headed the list of featured subjects, ahead of “remarks on landscape gardening” and well ahead of “flowering plants.”⁶⁵

In the 1830s, specialized books that described varieties became a staple genre. Containing hundreds of pages of fruit descriptions, books like William Prince’s son William R. Prince’s *Pomological Manual* (1831) and Robert Manning’s *Book of Fruits* (1838) allowed nurserymen to operate at both of the levels that their work demanded. On the one hand, such books marked nurserymen as experts worthy of the attention—and the specimens—of a global audience of botanists and horticulturists. Descriptive catalogs of collected varieties were recognized as a play for authority among major botanical gardens, demonstrating the breadth of a collection and the scholarly accuracy and judgment of the

⁶² See, for example, Andrew Jackson Downing to William Darlington (c. 1830), Andrew Jackson Downing Papers, New York State Library, Albany, N.Y.

⁶³ “Pomological Reform,” *Horticulturist* 2 (Oct. 1847): 175.

⁶⁴ See Elisabeth Woodburn, “Horticultural Heritage: The Influence of U.S. Nurserymen,” in *Agricultural Literature: Proud Heritage, Future Promise*, ed. Alan Fusonie and Leila Moran (Washington, D.C., 1977), 109–36; and Brenda Bullion, “The Agricultural Press: To Improve the Soil and the Mind,” in *The Farm*, ed. Peter Benes (Boston, 1986), 74–94.

⁶⁵ *Subscriptions for the Cultivator and the Horticulturist* (broadside), 1847, Manuscripts and Special Collections, New York State Library, Albany, N.Y.

author.⁶⁶ However, in cataloging orchards, books of fruit description also advertised real, physical places of business. For example, Prince's descriptions mirrored the varieties available in the Prince & Sons *Annual Catalogue*.⁶⁷ More easily reproduced than images, written descriptions acted as banked copy. They could be quoted in advertisements for new varieties or reproduced in the puff pieces on new fruits that circulated in the journals.

Though they followed an existing European form, American books of descriptions were also shaped by the realities and possibilities of American fruit and print markets. Heavy with colored plates suitable for framing, British works such as *Pomona Londoniensis* (1818) were clearly objects of desire themselves, joining the array of spectacularly illustrated botanical books that were beginning to reach a middle-class British market in the 1830s.⁶⁸ While a few works imitated these forms, a larger number were, like Prince's, cheaply designed for rapid national distribution.⁶⁹ Priced affordably at \$1.50 a volume, Prince's books issued not from a single authoritative printer, but from a carefully spaced constellation of them, located in New York City and Boston and the growing fruit region around New York, but also in expected markets in the slave states and in Cincinnati, which in 1831 was a forty-one-year-old city of about twenty-seven thousand people.⁷⁰

More importantly, like many American works, Prince's volumes depended not on expensive images but on precision of language to fix varietal identity. Prince's description of the Mouthwater pear began with shape—"an exact pyramidal form"—and then proportion: "its height thirty-three lines and its greatest diameter twenty-six, tapering very much towards the stalk." Prince described the place of the eye, length of the stem, and its "uniform shade of rather dark green . . . [with] a grayish streak running lengthwise." He considered the flesh texture "rather firm, but melting," and the flavor "pleasant . . . with some sweetness and richness." Season of ripening and color of foliage followed.⁷¹ The characteristics of taste were significant identifying marks, just as color and shape were saleable qualities. All identifying

⁶⁶ See, for example, Jean Mayer, *Pomona Franconica* (Nuremberg, 1776); and William Hooker, *Pomona Londoniensis* (London, 1818).

⁶⁷ William Prince & Sons, *Annual Catalogue of Fruit*, vi.

⁶⁸ Anne Secord, "Botany on a Plate: Pleasure and the Power of Pictures in Promoting Early Nineteenth-Century Scientific Knowledge," *Isis* 93 (Mar. 2002): 37.

⁶⁹ On the sometimes gorgeous, always expensive, and often frustrated efforts of American pomologists to produce images of fruit, see Daniel J. Kevles, "Cultivating Art," *Smithsonian* 42 (July/August 2011): 76–82.

⁷⁰ Prince, *Pomological Manual*, vol. 2, title page; John Kilbourn, *The Ohio Gazetteer* (Columbus, Ohio, 1831), 108–9.

⁷¹ William R. Prince, *Pomological Manual*, vol. 1 (New York, 1831), 56–57.

descriptions were also advertisements, and all desirable qualities were also markers of authenticity.

Through catalogs, manuals, agricultural journals, and advertisements, printed descriptions of new varieties circulated more rapidly than trees did. Fixed by descriptions, nurserymen hoped, varieties would become true, transparent, safe, and profitable. This fixity, however, depended on the stability of the organisms described. This, as Thomas argued, was not dependable.

Place and Shifting Form

Unlike the texts that accompanied them, trees were not perfectly replicable. Variety forms differed from place to place—a Hudson Valley apple might be tasteless when grown in Massachusetts. Such difficulties were well known to American horticulturalists; European varieties frequently failed in the harsher winters of the northeastern states, a fact that American pomologists had used to justify the development of an American pomology in the first place. However, Thomas put his finger on a knottier problem. Unlike island-bound British specialists, Americans faced a territory spanning areas “almost as remote from each other as Norway and the Great Desert in the old world,” threatening the national networks of plant distribution.⁷²

In response, Thomas outlined a research program. Arguing that the single authoritative collection established at Chiswick could not address the varied climates of the United States, he suggested a network of fruit tree collections in different states. This would help pomologists determine the differing characters of varieties in different places and establish a true standard of fruit description. Thomas demonstrated such a system using flavor, the category that seemed to him to be most stable over distance. He laid out a standard for taste, describing, for example, the acidity of new varieties on a six-point scale from “sweet” to “very acid and austere.”⁷³ This effort was not enormously successful, perhaps because the language of taste was limited to a remarkably short list of terms: “sweet,” “acidic,” “rich,” and “sprightly.” However, Thomas’s search for fixed qualities was a common one.⁷⁴

Simple to make and reproduce, the fruit profile was one of the most widely used alternative solutions. Profiles were created by cutting an apple or pear in half, placing one half face down on a piece of paper and tracing around it with a pencil, producing an accurate line that

⁷² Thomas, “Describing Fruits,” 269.

⁷³ *Ibid.*, 272.

⁷⁴ Ebenezer Emmons, *Agriculture of New York* (Albany, 1851), 9.

could be cheaply reproduced in a woodcut. This method of representation had been promoted in Britain as early as 1828; American authors of the 1840s refigured it to meet their need for a fixed character that could be described over distance.⁷⁵ In a report to the New York State Legislature, the horticulturalist Ebenezer Emmons postulated that while size might vary between specimens, the ratio of height to width measured within a profile was unchanging. Next to a much bisected and labeled apple outline, he wrote, “If this is not true, we may despair of describing fruit so as to become useful to inquirers.”⁷⁶ Depending on structure rather than changeable color (in fruit as in humans, the sun could burn skin) profiles promised to reveal character in a way that was incontestably accurate and easily recognized. Despite the popularity of fruit profiles, a system of fixed characters was never fully agreed upon. Public negotiation proved a powerful tool not only for fixing identities but also for determining the value of those identities.

The Pomological Congress and Pomological Convention of 1848

If Downing’s orchard was a quiet court, the first Pomological Convention of 1848 was a noisy one. The seventy delegates were a little over-excited and inclined to interrupt one another. Their scribe, Oliver Dyer, sourly commented that his record was “as accurate and *faithful* as any *one* person could possibly have rendered,” since “[w]e do not profess to be able to report more than *one* speech at a time.”⁷⁷ The delegates’ agitation was understandable; after years of making do with descriptions, sketches, and correspondence, at last they were assembled in one place, carrying with them thousands of actual fruits for comparison. Together they would spend three days determining identities, rejecting unworthy varieties, and commenting on the promise of new seedlings. Delegates expected the national meeting to sweep away all difficulties; Lewis Falley Allen, the president of the New York State Agricultural Society, announced in his opening address, “We must have uniformity, and we can obtain it.”⁷⁸ Their sense of urgency was heightened by competition. One month later, a rival meeting—the National Congress of American Fruit Growers—would be held in New York City.

Convention rules confined delegates to the business of varietal description and rating. During daylight, they were to examine varieties

⁷⁵ W. R. Y., “General and Critical Observations on the Cultivation of the Pear,” *Gardener’s Magazine* 4 (June 1828): 107–13.

⁷⁶ Emmons, *Agriculture of New York*, 9.

⁷⁷ New York State Fair, *Proceedings of the New-York State Fair and of the Pomological Convention Held at Buffalo, Sept. 1848* (Buffalo, 1848), 2.

⁷⁸ *Ibid.*

one at a time. Convention members were to speak “brief statements of facts” (the limits of brevity can be seen in a rule limiting delegates to two ten-minute speeches). Other matters were confined to “evenings and intervals.”⁷⁹ Delegates attended not to share ideas, but to winnow through the hosts of varieties. Most attendees would have been acclimated to such rituals of sequential judgment from their service on the “fruit committees” at their local agricultural fairs—indeed, it was there that they gained the credibility and experience needed to act as experts. During the days of the meetings, and during the annual meetings that followed, they struggled to make reputations for particular varieties and, in doing so, for themselves.

Attendees at both conferences came from the several circles of fruit culture—some were “gentlemen curious in fruit,” while others came from the commercial orchards that increasingly dominated the Great Lakes region. The distinction between the two was not always clear. Allen, who had given the opening address at the state society convention was both the founder of the earliest commercial orchard in Buffalo and a noted author of works on genteel rural architecture. However, nurserymen spoke loudest. Of the seven members of the fruit committee who gave initial ratings and presented varieties to the group, the six whom I have traced were nurserymen. Other nurserymen also played active roles; William R. Prince, for example, was the delegate most likely to break into impromptu lectures contrary to the rules.

With its five rules, the convention moved to take control of the practice of naming. The first rule raised barriers of entry to upstart fruit and their champions: to receive a name, a new fruit had to be either better than all similar varieties of the first rate or, if judged as second rate, hardier and more productive than higher-ranked fruits. The second rule laid out the boundaries of expertise: names were not to be fixed until the fruit had been “accurately described in pomological terms” by an accepted authority—that is, a fruit committee, a horticultural or agricultural journal, a “pomologist of reputation,” or a “pomological work of some standard character.”⁸⁰ The third rule laid out a checklist of characteristics to be used in capturing identity, one familiar from the descriptions of Downing and Prince: for kernel fruits such as apples and pears, this included “the size of the core and seeds, the length, position, and insertion of the stalk, and form of the eye.”⁸¹ The fourth rule demanded simplicity and particularity in names. The fifth rule institutionalized Thomas’s call for coordinated testing: “No new fruit can be safely

⁷⁹ *Ibid.*

⁸⁰ *Ibid.*

⁸¹ *Ibid.*

recommended,” it stated, “until the same has been tested and found valuable in more than one locality.”⁸² For a variety to achieve a recommendation, it now had to be accepted by a community distributed over space. Trees that were sensitive to relocation were weeded out.

Both convention and congress were intended to produce a specific tool—the varietal list: a short list of varieties judged as “first rate.” Such lists had earlier been published by individual nurserymen, but now they were to be given the power of collective agreement. The stakes were high for the trees and for the participants, whose stocks, if stigmatized as second rate, might have to be chopped off at the collar and regrafted. Varieties were to be graded as first, second, or third rate. (The New York City meeting, more optimistically, used “good,” “very good,” and “excellent.”) The act of judgment, however, was not simple. Fruit specimens proved to be far from transparently meaningful. Some problems were physical: Many had been harvested before or after their peak period, while several were rotten, making their form difficult and their taste unpleasant to determine. By candlelight, fuzzy peach skins proved too indistinct for careful observation, and many fruits had been bruised by transport over hundreds of miles of uneven roads.⁸³ More consequential were differences caused by rivalries over distance. Local cultures of judgment clashed at the national level. “Many fruits which have long enjoyed the most irreproachable character in one part of the country,” wrote an observer at the New York meeting, “are found, on inquiry, to have the most indifferent reputation in another section.”⁸⁴ Some problems were resolved quickly. The Buffalo delegates instantly pronounced the Van Zandt’s Superb an imposter and voted the Yellow Melocoton peach “unworthy of a name.”⁸⁵ Other fruits, however, suffered prolonged assaults on their character.

Debates around the reputation of the Northern Spy were particularly revealing. A much-counterfeited Western New York staple, the Spy’s reputation away from home was dubious. Mr. Hodge, who moved that the apple be passed as first rate, admitted that “he knew there were persons in the room who considered the apple a humbug.”⁸⁶ This comment was aimed at Thomas, who had commented publicly that “out of ninety barrels of this apple only seventeen barrels were found fit to market.” Defensively, Hodge assured his peers that “the fruit was

⁸² Ibid.

⁸³ North American Pomological Convention, *Proceedings of the North American Pomological Convention. Held at Syracuse, September 14th 1849* (Syracuse, 1849), 18.

⁸⁴ “Proceedings of the National Congress of Fruit Growers,” in *Seventh Annual Report of the American Institute of the City of New York* (Albany, 1849), 225.

⁸⁵ New York State Fair, *Proceedings*, 2.

⁸⁶ Ibid., 14.

uniformly as fair as the Spitzenburg—five-sixths of them were fit for barreling.”⁸⁷ Thomas retreated, suggesting that his initial experiences had been marred by poor cultivation. Then, Downing made a fresh attack: “Mr. Chapin, the originator . . . considers the Northern Spy so poor that he will not plant a single tree.” Instantly, pandemonium reigned at the Pomological Convention. The voices of the Spy’s defenders were swallowed up; the stenographer complained, “owing to ‘the noise and confusion’ we could not catch the purport of them.” Shouting, Patrick Barry attempted to have Downing’s statement struck from the minutes. A Mr. Bissell chimed in with an attack on Chapin, accusing him of operating “the hardest looking orchard he ever saw . . . neglected beyond all account.”⁸⁸ Mr. Coit, of Ohio, attempting to assist, confused matters by praising the Spy’s “fine color . . . a lightish green.” Because the Spy was in fact “a fine light red” the discussion ended in embarrassment, and the Spy remained in limbo. At the New York meeting a few weeks later, Spy defender James H. Watts lamented, “Like every new thing now-a-days, to establish its character has been no small task.”⁸⁹

Rejected at these first two meetings, the Spy appeared on varietal lists in a lesser position as a “variety good for particular places.” However, its mixed reputation can be interpreted in two ways. On the one hand, it may show how instability over distance led to the adoption of more stable fruits. Certainly this was the aim of the varietal lists. On the other, the dispute may have emerged not from changes in the fruit itself, but from differences between regional cultures. In this case, the account of the Northern Spy’s natural changeability made it possible to smooth over social rupture. Labeling the Northern Spy as first rate in Western New York kept the stocks of western nurserymen valuable and kept the Spy alive.⁹⁰ Later efforts of the society revealed the continued importance of this strategy, producing a catalog with fifty-one close-packed tables keying particular varieties to particular regions.⁹¹

We should not allow the seeming eccentricity of these meetings to blind us to an important fact: as long as convention participants developed a consensus opinion, they were structurally well positioned to shape the fruit tree market. The large nurseries represented in the

⁸⁷ Ibid.

⁸⁸ Ibid., 15.

⁸⁹ “Proceedings of the National Congress of Fruit Growers,” 216.

⁹⁰ Thomas F. Devoe, *The Market Assistant* (New York, 1867), 370.

⁹¹ Patrick Barry, *A Catalogue of Fruits for Cultivation in the United States and Canadas; in Two Divisions. Division First—Embracing those States lying North of the Southern line of Virginia, Tennessee, Missouri, etc., and East of the Rocky Mountains, including the Canadas, Division Second—The States South of the line above named, and West of the Rocky Mountains*. Compiled under the Direction of the American Pomological Society (Boston, 1869).

room not only maintained small armies of agents, they also often supplied the smaller nurseries, and one another—and even some of the “peddling grafters.” Their control of major horticulture and agriculture publications amplified their voices. Rejected varieties might survive in home orchards, but the new names that moved through the nursery business would be filtered by the men in the room.

Despite continuing private rivalries, unity prevailed. Most of the delegates of the first national meeting attended the second, and the institutions carried on in parallel until merging in 1850. Institutionalized as annual meetings, such pomological conventions would prove astonishingly durable, eventually producing the American Pomological Society, which still produces professional varietal lists. This system also spread beyond American borders. In 1854, the British Pomological Society explicitly modeled itself on the American example, a reverse of earlier hierarchies of expertise.⁹²

More importantly, varietal lists reproduced through the horticultural journals began to change how tree buyers navigated the sea of varieties. Only two years after the first convention, the *Genesee Farmer* noted that they “had changed the current of taste among inexperienced planters.” Where once growers had sought “the newest, rarest, and most extraordinary” varieties, now “we see in the nurseries . . . over 100 new or rare varieties of the pear, from which scarcely a tree has been dug, unless for a nurseryman or an experimentalist.” The author, likely Patrick Barry, added contentedly, “This is as it should be. . . Nurserymen and pomologists alone should cultivate and test these [varieties].”⁹³

The Ambiguous Power of Consumer Taste

Though conventions claimed the sole right of judgment, a factor entered the judgment of varieties that was beyond their control: the metropolitan market for fruit. In the 1840s, marketability was not yet crucial to a “first rate” ranking. The first rate Early Joe, which nurserymen agreed was “about the best eating apple they had ever known,” had to be eaten in the first hours after it was picked.⁹⁴ Flavor on its own clearly influenced a variety’s reputation. But what about market qualities like easy shipping? In discussions, fissures appeared between men who grew for the market and a dwindling group who were “curious in

⁹² Thomas Rivers, “Pomological Society,” *Florist, Fruitist, and Garden Miscellany* 4 (Apr. 1854): 108–9.

⁹³ In 1850, Patrick Barry edited the horticulture department of the *Genesee Farmer*. “Fruit Culture,” *Massachusetts Ploughman and New England Journal of Agriculture* 9 (8 June 1850): 1.

⁹⁴ New York State Fair, *Proceedings*, 11.

fruit.” These tensions surfaced in an attack on the reliable Buffum pear at the Buffalo meeting. Patrick Barry sprang to its defense, declaring “it hardly proper to insinuate anything unworthy or knavish against gentlemen who spoke of fruits, and their qualities as ‘market fruits.’”⁹⁵ Barry’s defense represented a change in the hierarchies of pomology; the rising power of midwestern markets and the Great Lakes commercial orchards had shifted power toward Rochester, New York—particularly to Barry’s firm, Ellwanger & Barry, which by 1856 would reportedly produce twice as many trees as any other American nursery.⁹⁶ While Barry might stalwartly defend marketable fruit, even he had to admit that the increasing power of consumer taste made rating complex.

Consumer tastes made even the most commercially minded nurserymen uneasy. Preferences for fine skin were particularly fraught. Inspection by skilled shoppers and grocers made skin matter, so growers worked hard to protect fruit skin from bruising, inspecting each fruit, wiping it to remove any hint of moisture, and then packing it in sand-filled barrels. Henry David Thoreau, who celebrated the gnarls, stains, and “rusty blotches” of the “wild apples,” complained of the farmer who turned a “specked” fruit “over many times before he leaves it out [of the barrel].”⁹⁷ The nearly fatal criticism leveled against the Northern Spy—that it was “unfit for barreling”—showed the increasing dominance of barreled fruit. Where fruit carried from genteel hot-houses directly to tables might have benefited from a reputation for “delicacy,” new commercial fruits had to be tough.

All nurserymen agreed that the beauty of a fruit was a requirement for excellence. However, they fretted, a fine skin was, after all, simply a surface quality. The Red Astrachan, a popular market apple in both Britain and the United States, proved a particular sore spot. A Russian apple, its red skin was given depth of color by Northeastern winters, making it attractive, particularly to Londoners. However, even Barry, who sold it, admitted it was “not a first rate eating apple.” Thomas was more dubious: “it had been remarked that the apple was good for market on account of its beautiful skin; when we get within its skin there is very little left.”⁹⁸ In selling the Astrachan, were nurserymen preying on the ignorance of “the simple”?⁹⁹ Were consumers lured against their best interests by a deceptive skin? If so, should consumers

⁹⁵ *Proceedings of the Second Congress of Fruit Growers, Convened under the Auspices of the American Institute, in the City of New-York, 1849*, (Albany, 1850), 212.

⁹⁶ “The Largest Nursery in the World,” *Hunt’s Merchant’s Magazine* 25 (Sept. 1856): 373–75.

⁹⁷ Henry David Thoreau, *The Succession of Forest Trees and Wild Apples* (Boston, 1887), 60.

⁹⁸ New York State Fair, *Proceedings*, 12.

⁹⁹ “Proceedings of the Second Congress of Fruit Growers,” 212.

be catered to, or educated? Was the Red Astrachan, in short, a moral and trustworthy apple? Later lists would use the morally-ambiguous word “showy” for spectacularly-skinned fruit. While nurserymen publicly defined quality, they were also forced to confront, though not to resolve, their anxieties about the public good and the rationality of the consumer.

Conclusion

Thoreau’s essay “Wild Apples” (1859) celebrated seedlings spread by apple-fed cattle and clipped by grazing cows into spiky pyramids.¹⁰⁰ “We have all heard of the numerous varieties of fruit invented by Van Mons and Knight,” he joked. “This is the system of Van Cow, and she has invented far more and more memorable varieties than both of them.”¹⁰¹ Even as he memorialized the seedling landscape, he mocked the one that had come to replace it. He had “no faith in the selected lists of pomological gentlemen . . . their ‘Favorites’ and ‘Non-suches,’ and ‘Seek-no-farther’s.’” Instead, he proposed his own list of names for the hundred varieties of seedling apples to be found in a single cider pile: “the Apple which grows in Dells in the Woods (*sylcestrivallis*),” and “the Slug-Apple (*limacea*~)” not to mention “the Railroad-Apple, which perhaps came from a core thrown out of the cars.”¹⁰²

Thoreau’s essay reveals not only vivid details of the old wild apple landscape, but also the dominance of the new grafted varieties. An 1860 letter to the *Genesee Farmer* confirms Thoreau’s impression without his melancholy. D.A.A. Nichols, of Westfield, New York, announced, “The list is heard in every stall in every city market . . . *Rhode Island Greening, Esopus, Spitzenburgh, Baldwin, Newtown Pippin, Roxbury Russet, and Red Astrachan.*”¹⁰³ More than two centuries after the introduction of apple, peach, and pear trees to the American Northeast, the fertile chaos of the seedling orchards had given way to named trees funneled through and filtered by the networks of nurserymen.

Thoreau focused his ire on names for the same reason that nurserymen obsessed over them: the names and descriptions attached to trees were vital to the markets that nurserymen built around them. This was true on multiple levels. By naming new seedling varieties and publishing works of varietal descriptions, American nurserymen bought credibility in and access to global botanical networks. Only such networks could

¹⁰⁰ Thoreau, *Succession of Forest Trees*, 69.

¹⁰¹ *Ibid.*

¹⁰² *Ibid.*, 72–78.

¹⁰³ D. A. A. Nichols, “Best Fruit for Market Purposes,” *Genesee Farmer* 21 (Feb. 1860): 59.

provide the teeming catalogs of fashionable varieties required to maintain the interest of gentlemen buyers and market growers. Indeed, it was in part these international networks, and their direct link to aristocratic landscapes, that helped promote the second important aspect of naming: names were a key focus of the appeal of fruit, whether in urban markets, at agricultural societies, or in nursery catalogs. Without names shared by a wide community, fruit varieties could be the object neither of meaningful taste or judgment nor trade over distance.

Where the provincial workshops described by Jaffee were superseded by larger-scale production in the 1820s and 1830s, both the free-for-all trade in grafted fruit and the seedling landscape shrank with the rise of printed tools for the regulation of names—particularly lists of rated varieties produced by social agreement at pomological conventions and publicized through the nurseryman-dominated horticultural press. Their control was not total; pomological societies controlled neither the terms of value nor the continued movement of scions between neighbors or the peddler trade. However, their effect was profound.

The story of stabilization of the fruit tree variety does not provide a straightforward template for histories of the commercialization of plants. Other varietal stories played out differently, shaped by different biological constraints or possibilities or by alternative cultural pathways. Threatened by the instabilities of sexual reproduction, for example, seed-propagated varieties took decades longer to commercialize.¹⁰⁴ As apple and pear growers strove for fruit that could remain identical across space, for example, wine grape growers invented the concept of *terroir*, embracing the variability created by different soils and seasons.¹⁰⁵ However, the story of fruit naming can help us see some of the ways that the marketing of gene-bearing goods could be coordinated and accelerated. This in turn can help us understand both the rapid expansion of an antebellum agricultural economy and the creation of a landscape populated by organisms ordered from a catalog.

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¹⁰⁴ Moreover, as Barbara Hahn has shown, some plant “varieties” have no basis in genetic difference; Bright Tobacco, the kind of tobacco used to make cigarettes, often assumed to be a variety, is a product of soils and processing. Barbara Hahn, *Making Tobacco Bright: Creating an American Commodity, 1617–1937* (Baltimore, 2011).

¹⁰⁵ Amy Trubek, *The Taste of Place: A Cultural Journey into Terroir* (Berkeley, 2008).

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