



A Sweet Legacy? Thomas Jefferson and the Development of the Maple Sugar Industry in Vermont

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A Sweet Legacy?

Thomas Jefferson and the Development of the Maple Sugar Industry in Vermont

Mary B. Donchez

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Abstract

When Thomas Jefferson and James Madison headed north from New York City on May 21, 1791 for a trip through New York and New England, Americans were sweetening their tea and baked goods with white cane sugar produced by slaves in the British West Indies and imported from Great Britain, America's erstwhile enemy. Jefferson was already a proponent of using maple sugar instead of cane, largely as a result of his friendship with Benjamin Rush, the Philadelphia abolitionist. At a stop in Bennington Vermont he met with local dignitaries, including Governor Moses Robinson and *Vermont Gazette* editor Anthony Haswell, who reported on Jefferson's championing of maple sugar production and optimistic calculations of how much the US demand for sweeteners the local product could supply. Jefferson had already begun attempts to grow maple trees at Monticello, and on his return trip he placed an order for sugar maples with a nursery on Long Island. For the rest of his life he continued to purchase, use, and promote maple sugar as a replacement for cane, even as slave labor maintained his lifestyle at Monticello.

Maple sugaring is a quintessential New England activity, and it is most closely associated with Vermont. Vermont is by far the largest maple syrup producer in the United States and makes twice what the other five New England states combined produce. What impact, if any, did Thomas Jefferson's advocacy have on the development of the sugaring industry, particularly in Vermont? What other factors were at work in

promoting maple over cane sugar in the late eighteenth and early nineteenth centuries? To what extent is it possible to document the influence of one or another factor in the evolution of the maple sugaring industry, given the dearth of production records during this era? How does the picture we gain of Thomas Jefferson as maple sugar advocate reconcile with that of the lifelong slaveowner who even on his death did not free all of his slaves?

Using both primary and secondary sources (including letters, newspapers, almanacs, government agricultural reports, journal articles, and Jefferson biographies), this thesis discusses the impact of Thomas Jefferson's advocacy on the development of maple sugaring in Vermont. Despite suggestions in popular literature that Jefferson was the father of the maple sugar industry, the reality is more complex. For one thing, there were numerous other factors contributing to the promotion and development of maple sugar and syrup in the United States, such as the so-called maple sugar bubble fueled by land speculator; abolitionist fervor; and economic necessity among colonial farmers struggling to wrest a living from the rocky, forested lands of New England. It is also difficult to draw a line from Jefferson to the steadily increasing amount of maple sugar and syrup produced because no production records were kept until 1940, when the US Census Bureau began to keep them. Finally, the maple sugar industry never became a force in the commercial arena until technological advances beginning in the mid-nineteenth century (e.g., tin buckets and cans and more efficient sap evaporating systems) gave it impetus. Therefore, my conclusion is that, while Jefferson continued to advocate the use of maple sugar both at home and abroad well past the turn of the nineteenth century, his influence was just one of many, and not a seminal one.

Dedication

To Paul, who read many and many a draft, and Andrew, whose Mother's Day gift was the pen with which I literally *wrote* my thesis.

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Introduction

When Thomas Jefferson and James Madison headed north from New York City on May 21, 1791 for a trip through New York and New England, Americans were sweetening their tea and their baked goods with white cane sugar produced by slaves in the British West Indies and imported from Great Britain, America's erstwhile enemy. Jefferson was already a proponent of using maple sugar instead of cane sugar and had already planted maple trees at Monticello. He believed, as he wrote to his son-in-law Thomas Mann Randolph, Jr, that the US would be able to supply enough maple sugar for its own needs and have enough left over to export.¹ Much of this optimism came from his association with his friend Benjamin Rush, the Philadelphia physician and social reformer whose 1791 pamphlet, "The Account of the Sugar Maple-Tree of the United States," took the form of a letter to Jefferson. Rush's interest, and that of a number of his Philadelphia Quaker friends, was motivated by his abhorrence for depending on a commodity produced by the labor of slaves, and this became one of Jefferson's motivations as well.

The promotion of maple sugar over cane was not the primary purpose of the trip. Jefferson was exhausted from his duties as Secretary of State and suffering from migraines, and he was also looking forward to examining and documenting flora and fauna new to a native of more southern climes. Nevertheless, during his stop in

¹ Thomas Jefferson to Thomas Mann Randolph, Jr, 1 May 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-20-02-0099>>.

Bennington, VT, he spoke to a group of distinguished citizens about his hopes for a maple sugar industry.²

Long before the American colonies gained their independence from Britain, other British colonies had begun producing sugar to export. By the 1650s, white cane sugar was being exported to England and it quickly did far better than any other colonial commodity.³ English people, including colonists, began to view sugar as essential, and while it was still a luxury in the mid-eighteenth century, it was well on its way to becoming a necessity, even among the working class.⁴ Meanwhile, deep in the forests of the New World, Native Americans had been gashing the trunks of maple trees with axes and collecting the sap in bark containers for many years, using it as a sweetener and a drink. St John de Crevecoeur, a Frenchman who emigrated from Canada and spent several years exploring the territory and then living among farmers in New York before the Revolutionary War, described one of his neighbors saying, “In clearing his farm my father prudently saved all the maple trees he found, which fortunately are all placed together in the middle of our woodland; and by his particular caution in bleeding them, they yield sap as plentifully as ever.”⁵ Early histories of the state of Vermont (it was

² Anthony Haswell, “Vermont,” *Vermont Gazette*, June 13, 1791.

³ Richard S. Dunn, *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713* (Chapel Hill: University of North Carolina Press, 1972), 188.

⁴ Sidney Mintz, *Sweetness and Power: The Place of Sugar in Modern History* (New York: Viking, 1985), 148, 157.

⁵ St John de Crevecoeur, *Sketches of Eighteenth Century America; More “Letters from an American Farmer,”* ed. Henri Boudin, Ralph H. Gabriel, Stanley T. Williams (New York: Benjamin Blom, 1972), 98.

admitted to the Union on February 18, 1791) tout the value of the maple tree for its beauty, its lumber, and the sugar extracted from it.⁶

Interest in maple sugar had been percolating for many years before Jefferson and Rush seized on it. One of the first references to extracting sugar from trees was made by British officials in Massachusetts in 1664, and there are several from various sources in 1765.⁷ In May of 1789, the *Federal Gazette and Philadelphia Evening Post* reported that “a gentleman, who has lately visited the country between the Delaware and the Susquehanna, has calculated that there are sugar maple trees enough in the state of Pennsylvania to make as much sugar as could be consumed in the United States.”⁸

Such optimistic and enthusiastic estimates fueled the interest of land speculators and produced what came to be called the “maple sugar bubble.” The name most closely associated with the bubble is William Cooper, the founder of Cooperstown, New York. In 1789, Benjamin Rush commissioned him to sell some tracts of land he owned in Pennsylvania,⁹ and in June of the same year Cooper made an agreement with Rush’s friend Henry Drinker to produce maple sugar on Cooper’s Otsego lands for the Philadelphia market.¹⁰ In July 1790, Cooper shipped his hogsheads of sugar over rough

⁶ Zadock Thompson, *History of Vermont: Natural, Civil, and Statistical* (Burlington, VT: Stacey and Jameson, Printers, 1853), 210; Samuel Williams, *The Natural and Civil History of Vermont* (Burlington, VT: Samuel Mills, Printer, 1809), 363.

⁷ Roy L. Butterfield, “The Great Days of Maple Sugar,” *New York History* 39, no. 2 (1958): 153.

⁸ *Federal Gazette and Philadelphia Evening Post*, May 13, 1789, p. 3.

⁹ L. H. Butterfield, “Judge William Cooper (1754-1809): A Sketch of His Character and Accomplishment,” *New York History* 30, no. 4 (1949): 393.

¹⁰ Alan Taylor, *William Cooper’s Town: Power and Persuasion on the Frontier of the Early American Republic* (New York: Alfred A. Knopf, 1995), 122.

terrain in rainy weather; they arrived in Philadelphia amid great fanfare on September 8.¹¹ Unfortunately, not only was the harvest far smaller than Cooper had predicted (only about 20,000 pounds as opposed to 50 tons, owing partly to a meteorologically uncooperative and truncated sugaring season), but in addition, rain had spoiled some of the product.¹²

This disappointment failed to quell the hopes of many “gentlemen of the urban Northeast—who were fascinated with the commercial prospects and benevolent implications of maple sugar.”¹³ Drinker had his agent open a settlement on the Delaware River just south of the New York boundary, which he later moved a few miles away and named Union Farm (its full name was the Society for Promoting the Manufacture of Sugar from the Sugar-Maple Tree, and Furthering the Interest of Agriculture in Pennsylvania).¹⁴

Foreign land speculators also got on board. The Holland Land Company, a private land development corporation sponsored by several Dutch banking houses, sent two agents to scout out land in New York, Pennsylvania, and Vermont, eventually purchasing more than three million acres in central and western New York. By 1795, however, all of the major participants in the bubble—Cooper, Drinker, and the Holland Land Company—had given up on their dreams of large-scale maple sugar marketing in the face of poor harvests and difficulties in transportation.

¹¹ Ibid., 124.

¹² Ibid., 123, 126.

¹³ Ibid., 124.

¹⁴ David W. Maxey, “The Union Farm: Henry Drinker’s Experiment in Deriving Profit from Virtue,” *Pennsylvania Magazine of History and Biography* 107, no. 4 (1983): 612.

The maple sugar bubble burst partly because of unreasonable production estimates and difficulty in storing the finished product but also because many settlers were using their maple trees for things other than producing sugar. During the last decade of the eighteenth and the first decade of the nineteenth centuries settlers were flooding into frontier lands like William Cooper's Otsego tract. In Vermont, "the population increased from 85,425 in 1791 to 217,895 in 1810."¹⁵ They were clearing their lands for farming and there were other ways to make money besides sugaring. Fires started to clear the land generated lots of ashes, rich in potassium. In addition to being a fertilizer, these ashes could be sold to make potash, which was in demand for numerous uses in Great Britain, particularly in its dynamic textile industry.¹⁶ Maple timber "brought 20 to 30 times as much money as maple sugar" and farmers "sold off their valuable stands of virgin maple forest whenever they needed cash."¹⁷

Another problem was the lack of technological advances in an extremely labor-intensive activity. The official "Maple History Timeline" from the University of Vermont shows a two-decade gap between 1791, when "Jefferson starts maple plantation at Monticello" and 1810, when the first technological advance occurred with the substitution of augurs and wooden spouts for the ax gashes of earlier times.¹⁸ As one Vermont state history noted, "[t]he business is now carried on under the greatest

¹⁵ Walter Hill Crockett, *Vermont: The Green Mountain State* (New York: Century History Company, 1921), 499.

¹⁶ Alan Taylor, "The Great Change Begins: Settling the Forests of Central New York," *New York History* 76 (1995): 280, 281.

¹⁷ Martha Thomas, "Maple Sugar: America's Native Sweet," *Early American Life* 9, no. 1 (1978): 35.

¹⁸ "Maple History Timeline," <<http://library.uvm.edu/maple/history/timeline.php>>.

disadvantages, without proper conveniences, instruments or works, solely by the exertions of private families, in the woods and without any other conveniences than one or two iron kettles, the largest of which will not hold more than four or five pailfuls.”¹⁹

This is a good description of why, despite Thomas Jefferson’s and Benjamin Rush’s advocacy and the determined efforts of the maple sugar bubble entrepreneurs, the maple sugar industry never got off the ground in the early nineteenth century. The next major technological advance after wooden spouts and augurs in 1810 did not come until 1858, with the patenting of the first evaporating pan, which had gradually been replacing the iron kettle. Improvements in evaporator technology continued through the latter half of the nineteenth century and by 1875 metal sap collection buckets were being widely used.

These advances helped propel maple sugar production to a level large enough for the first Census of Agriculture to report on when it came out in 1840, and the US Department of Agriculture when it followed in 1862. Another impetus for maple sugar production came in the mid-nineteenth century with the abolitionist movement and the looming Civil War. Vermont had been the first territory to abolish slavery, in 1777, and increasing production of maple sugar there in the mid-nineteenth century can be seen as a continuation of a tradition that stretched back to the 1790s, when Thomas Jefferson spoke in Bennington and ordered his maple trees, and newspapers published articles claiming

¹⁹ Crockett, *Vermont: The Green Mountain State*, 210.

that “the sugar of the West-Indies cannot be produced but at an expense and by methods at which the enlightened inhabitants of this land of freedom should [view] with horror.”²⁰

Maple syrup and sugar production is, as it has always been, a labor-intensive process, much of it conducted outdoors in inclement weather, and the sap must be boiled close to the time it is tapped, leaving a very short window of opportunity. Given the technological constraints, and the unsuitability of the process for mass production, the maple product industry was never really in a position to benefit from the patronage of Jefferson and Rush. Fervent as their support was, it could not have overcome the logistical, technological, and climatological obstacles that turning *Acer saccharum*'s sap into syrup and sugar present. The connection between this founding father from Virginia and the most quintessentially New England of products leads us down a fascinating byway in history. But if we can discount Thomas Jefferson's influence as a major factor in the development of the maple sugar industry, and assign him a place as just one among many, the question remains: Why was this Virginia slaveholder, who freed only members of the Hemings family in his will and no other slaves,²¹ such an ardent proponent of the use of maple sugar to replace slave-produced cane sugar? As I will discuss in my thesis, there were other reasons for this besides his famously conflicted attitude on slavery, chief among them his promotion of the ideal of a nation of small farmers and reduction of American dependence on imports from Great Britain.

²⁰ Thoughts on the Importance of the Maple Sugar Tree to the United States,” *New-York Packet*, August 22, 1790.

²¹ Jon Meacham, *Thomas Jefferson: The Art of Power* (New York: Random House, 2012), 495.

Chapter I

Thomas Jefferson Visits Vermont

In the spring of 1791 Jefferson, who was George Washington's Secretary of State, was living in Philadelphia and feeling the effects of overwork and stress, which manifested themselves in migraine headaches. Anxious for a break, he planned a trip with his friend James Madison through northern New York and "instead of coming back the same way, to cross over through Vermont to Connecticut River and down that to New-haven then through Long Island to N.Y. and so to Philada."²² Madison replied, "I do not foresee any objection to the route you propose. . . . Health, recreation and curiosity being my objects, I can never be out of my way."²³ Both men kept only sketchy journals on the trip, Jefferson's focusing on flora and fauna new to him as a southerner and, in particular, the Hessian fly, which was a serious pest in the wheat crop.

Their route took them up the Hudson River to Poughkeepsie, then on by horseback to Albany. Passing through Saratoga, they sailed on Lake George, which Jefferson admired, and attempted to get to Vermont via Lake Champlain, which he did not. Turned back by bad weather, they headed into Vermont on land, staying in

²² Thomas Jefferson to James Madison, 9 May 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-14-02-0015>>.

²³ James Madison to Thomas Jefferson, 12 May 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Madison/01-14-02-0018>>.

Bennington, which was their northernmost stop. They traveled south through Connecticut, crossed the sound to Long Island, and so back to New York City.²⁴

The two men reached Bennington, Vermont on June 4. At the time it was the second most populous town in Vermont and the wealthiest and most politically influential town west of the Green Mountains.²⁵ They stayed that night at Elijah Dewey's inn and received an invitation from Moses Robinson to be his guests for the next day.²⁶ Robinson had just completed a term as Vermont's governor and was about to become one of its first two senators.

Robinson took his guests to church on Sunday, June 5, then for a tour of the site of the 1777 Battle of Bennington. Later they visited Robinson's farm and discussed agricultural matters. Robinson invited the two men to stay for dinner, along with several other guests, including Joseph Fay, secretary of the Governor's Council, and Anthony

²⁴ There was speculation on the part of Federalists that Jefferson's and Madison's trip north, far from being a vacation with a botanical accent, was in fact the first step in forging an alliance between New York and Virginia Republicans in order to form an opposition party. Jefferson and Madison probably did meet with Robert Livingston, another of the Founding Fathers, and possibly with newly elected New York senator Aaron Burr as well in New York the night before they left on their trip. En route they were hosted by Philip Schuyler (Hamilton's father-in-law whom Burr had defeated for the New York senatorial seat). There is no evidence that they met with Governor George Clinton of New York, another Jefferson supporter, and the Federalist paper the *Albany Gazette* made no mention of the Virginians' visit to the city. Throughout the summer after their return, Jefferson and Madison exchanged many political letters with absolutely no mention of these visits, and such a political motivation for the trip has been largely discredited (Julian Boyd, editor, *The Papers of Thomas Jefferson*, vol. 21 [Princeton: Princeton University Press, 1950], 437; Alfred Young, *The Democratic Republicans of New York: The Origins, 1763-1797* [Chapel Hill: University of North Carolina Press, 1967], 197-198; Philip M. Marsh, "The Jefferson-Madison Vacation," *Pennsylvania Magazine of History and Biography* 71, no. 1 [1947]:72).

²⁵ Robert A. Mello, *Moses Robinson and the Founding of Vermont* (Barre: Vermont Historical Society, 2014), 277.

²⁶ *Ibid.*

Haswell, editor of the *Vermont Gazette*, which was the only newspaper printed west of the Green Mountains.²⁷

Although the theory that Madison and Jefferson spent time stirring up anti-Federalist support on their trip north has been pretty much discarded, it could be said that their trip was political in the sense that they spent time talking with farmers, innkeepers, shopkeepers, blacksmiths, and the like to sound them out on how they felt about a national bank, the French Revolution, and various other matters on which the two statesmen disagreed with Alexander Hamilton.²⁸ Part of their disagreement with Hamilton arose from the fact that the latter championed an industrialized economy (which favored the North) while Jefferson saw farmers as the nation's backbone.²⁹ On the day after their visit with Robinson, Haswell commented in his *Vermont Gazette* that

Mr. Jefferson, secretary of state of the American union, and mr. Maddison [sic] member of congress for Virginia, arrived in this town on Saturday, on their way to Connecticut, having made a tour to the northward, as far as Lake Champlain. How enlightened is the policy of American legislators and statesmen, in thus acquainting themselves with the state of population, situation and extent of the empire to which their abilities are devoted: by these means they obtain a personal knowledge of the abilities and prejudices of citizens of different parts, and find the surest mode of reconciling differences, from investigation of the causes whence they originate.³⁰

While Jefferson's last travel journal entry was made on June 3, the day before he reached Bennington, he did discuss his hopes for a maple sugar industry while he was

²⁷ Ibid., 278.

²⁸ Ibid.

²⁹ Ibid., 275.

³⁰ Anthony Haswell, "Vermont," *Vermont Gazette*, June 6, 1791.

there. Haswell reported information in the following week's *Gazette* that he undoubtedly got from Jefferson, saying,

It is reported from good authority, that accurate calculations have been made, by which it is ascertained beyond a doubt, that there are maple trees in the inhabited part of the united states, more than sufficient, with careful attention, to produce sugar adequate to the consumption of its inhabitants. It is likewise said, that refineries are being established, by some wealthy foreigners, resident in the union: by whom agents will be established in different parts, who will loan out kettles etc on reasonable terms, to persons unable to purchase. With these agents cash will likewise be lodged to purchase all the raw sugar in their power. This scheme, prosecuted to effect, cannot fail to be extensively beneficial to community; but in the meantime, attention to our sugar orchards is essentially necessary to secure the independence of our country.³¹

Jefferson had expressed these sentiments a year earlier in a letter to a British friend: “. . . it seems fully believed by judicious persons, that we can not only supply our own demand but make for exportation.”³² In correspondence with Joseph Fay later that summer, Jefferson followed up on the maple seeds he had asked Fay to send him and applauded Fay's intention of planting a maple orchard and of encouraging others to do likewise.³³

Thomas Jefferson was not, of course, the first person to comment on or to promote maple sugar's potential as a substitute for cane. A farm in Dummerston, Vermont produced some of the first maple sugar for the market in 1764.³⁴ In 1787 the *Massachusetts Centinel* reported on a journey a gentleman made along the Ohio River

³¹ Haswell, *Vermont Gazette*, June 13, 1791.

³² Thomas Jefferson to Benjamin Vaughan, 27 June 1790. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-16-02-0342>>.

³³ Thomas Jefferson from Joseph Fay, 9 August 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-22-02-0018>>; Thomas Jefferson to Joseph Fay, 30 August 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-22-02-0097>>.

³⁴ Myron F. Dutton, “The Oldest Sugar Orchard in Vermont,” *The Vermonter* 27, 1922: 3-4.

from Pittsburgh to the Mississippi River in which he mentions “the sugar maple, the sap of which had become an object of commerce. . . .”³⁵ Writing in Philadelphia in 1788, a correspondent known as Agricola opined that “From the facility with which they may be cultivated, and the profit which can be had from them, it is plain, that a farmer in an old county could raise nothing on his farm with less labour, and nothing from which he could derive more emolument, than the sugar maple tree.”³⁶ Several almanacs from the last decade of the eighteenth century and on into the early nineteenth included entries on sugar-making in March, for example, “Now for maple sugar. Neglect not attending to it, if you have trees. Remember you have expense in buying.”³⁷

Economic benefit for small farmers was not the only advantage to be gained. There was also decreased dependence on Great Britain for a basic commodity and the knowledge that one was not contributing to the perpetuation of slavery when indulging one’s sweet tooth. Thomas Jefferson was aware of all three advantages and his advocacy of maple sugar as a substitute for cane encompassed them all. But where did this advocacy arise? Where did his optimistic calculations come from? In large part they came from his friendship with Benjamin Rush, the Philadelphia physician, politician, and social reformer.

³⁵ “Letters of a Gentleman,” *Massachusetts Centinel* 8, no. 5, October 3, 1787.

³⁶ Agricola, “Advantages of the Culture of the Sugar Maple-Tree,” *American Museum* 4, no. 4, October 1788, 349.

³⁷ *The Farmer’s Almanack 1806* (Boston: John West), 1805.

Chapter II

Thomas Jefferson and Benjamin Rush: Philosophical Friends

Benjamin Rush (1746-1813), a native of Philadelphia and signer of the Declaration of Independence, was educated at the College of New Jersey (now Princeton University) and at the University of Edinburgh, where he received his medical training. Rush was a practicing physician when he was asked to serve in the Second Continental Congress that convened in Philadelphia in May 1775. It was there, at a party honoring George Washington on his appointment as Commander-in-Chief of the Continental Army, that Rush met and became friendly with Thomas Jefferson.³⁸

By the time Jefferson and Rush reconnected in the spring of 1790, when Jefferson took up the post of Secretary of State on his return from France, Rush was a committed abolitionist. The man whom Daniel Boorstin called “one of the most thorough and outspoken humanitarians of his day”³⁹ was a secretary of the anti-slavery society with the cumbersome name of The Pennsylvania Society for Promotion of the Abolition of Slavery and the Relief of Free Negroes Unlawfully Held in Bondage. He had helped craft the anti-slavery petition that was sent to the Constitutional Convention, and he approved of the clause in the Constitution that called for an end to the slave trade after twenty years.⁴⁰ Rush had written an essay in 1773 entitled “An Address to the Inhabitants of the

³⁸ David Freeman Hawke, *Benjamin Rush: Revolutionary Gadfly* (Indianapolis: Bobbs-Merrill, 1971), 130.

³⁹ Daniel J. Boorstin, *The Lost World of Thomas Jefferson* (Boston: Beacon Press, 1960), 179.

⁴⁰ Hawke, *Benjamin Rush*, 360-361.

British Settlements in America upon Slave-Keeping,” in which he argued that slaves “are the equal to the Europeans.”⁴¹ He mentioned the subject in other writings as well, including his essay on good government, in which he said “It has been urged by the inhabitants of the Sugar Islands and South Carolina, that it would be impossible to carry on the manufactories of Sugar, Rice, and Indigo without Negro slaves. No manufactory can ever be of consequence enough to society, to admit the least violation of the laws of justice or humanity.”⁴² He recommended that the first step toward abolishing slavery be to stop the importation of slaves, and he gave a nod of approval to the Virginia Assembly, which “have lately set another laudable example to the colonies in being the first in petitioning for a redress of this grievance.”⁴³ (In *Notes on the State of Virginia* Jefferson observed that “In the very first session held under the republican government, the assembly passed a law for the perpetual prohibition of the importation of slaves.”⁴⁴ He added, in words that prefigure his lifelong attitude of hesitation and delay—but also inevitability—where the emancipation of slaves was concerned, “This will in some measure stop the increase of this great political and moral evil, while the minds of our citizens may be ripening for a complete emancipation of human nature.”⁴⁵)

⁴¹ Dagobert D. Runes, ed., *The Selected Writings of Benjamin Rush* (New York: Philosophical Library, 1947), 3.

⁴² *Ibid.*, 5.

⁴³ *Ibid.*, 13.

⁴⁴ Thomas Jefferson, *Notes on the State of Virginia*, ed. William Peden (Chapel Hill: University of North Carolina Press, 1955), 87.

⁴⁵ *Ibid.*

Rush had already fastened on the substitution of maple for cane sugar as a way to reduce dependence on the output of slaves and thus help bring an end to slavery. In 1789 he recorded in his *Commonplace Book* that he “Met James Pemberton, Jno. Parish and Jer. Parker in the street and proposed to them to get on foot an association to purchase 500 barrels of maple sugar every year in order to encourage the manufacturing of that article in Pennsylvania and thereby to lessen or destroy the consumption of West India sugar and thus indirectly destroy negro slavery. They were pleased with the proposal and agreed to meet on the Tuesday following at James Pemberton’s at 6 o’clock.”⁴⁶ Rush thus became one of the founding members of the Society for Promoting the Manufacture of Sugar from the Sugar Maple-Tree, which began promoting the cause that same year.

Some basic differences in their outlook, aspirations, and philosophy of life divided Rush and Jefferson after the shared fervor of the revolutionary war years. Both men had the same sort of congenial, hopeful temperament as well as a faith in Enlightenment liberalism, but they “could not have been farther apart in their view of the role of Christian theology in life and education.”⁴⁷ Rush was a Christian thinker who eventually came to regret the secularization of the republic he had helped to found, while Jefferson firmly believed that neither freedom of inquiry nor true science could exist where one’s judgment was stifled by theological orthodoxy.⁴⁸ While Jefferson admired Rush’s humanity and integrity, he resisted all his friend’s efforts to convert him.

⁴⁶ Carl Binger, *Revolutionary Doctor: Benjamin Rush (1746-1813)* (New York: W.W. Norton, 1966), 190.

⁴⁷ Donald J. D’Elia, “Jefferson, Rush, and the Limits of Philosophical Friendship,” *Proceedings of the American Philosophical Society* 117, no. 5 (1973): 334.

⁴⁸ *Ibid.*

Nevertheless, Rush and Jefferson renewed their acquaintance with pleasure in Philadelphia in the spring of 1790. Rush made a note in his *Commonplace Book*: “Visited Mr. Jefferson on his way to New York. It was the first time I saw him since his return from France. He was plain in dress and unchanged in his manners.”⁴⁹ Rush’s maple sugar society had published a pamphlet that year entitled “Remarks on the Manufacturing of Maple Sugar; with Directions for Its Further Improvement.” The pamphlet repeated claims that there was “a sufficient number of this kind of tree, in the states of New-York and Pennsylvania, only, to supply the whole of the United States. . . .”⁵⁰ It went into great detail describing the necessary equipment and procedures to harvest sap and turn it into syrup and then sugar, and also molasses and vinegar. Rush had also already done some land speculating, acquiring tracts of forest land in Pennsylvania, and had made the acquaintance of William Cooper when he commissioned Cooper in 1789 to sell them. By the spring of the following year, when Jefferson was in Philadelphia, Cooper was busy trying to bring his first crop of sugar to the Philadelphia market.

Given that Jefferson had written to his British friend Benjamin Vaughan in June 1790 that “Late difficulties in the sugar trade have excited attention to our sugar trees, and it seems fully believed by judicious persons, that we can not only supply our own demand...but make for exportation. . . .,”⁵¹ and that he had purchased 50 pounds of maple sugar as soon as he arrived back in Philadelphia in November of 1790,⁵² it seems

⁴⁹ Binger, *Revolutionary Doctor*, 190.

⁵⁰ *Remarks on the Manufacturing of Maple Sugar; with Directions for its Further Improvement* (Philadelphia: James & Johnson, printers, 1790), 4.

⁵¹ Thomas Jefferson to Benjamin Vaughan, 27 June 1790. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-16-02-0342>>.

likely that he and Rush had discussed the topic of efforts to substitute maple sugar for cane sugar when he passed through Philadelphia in March. Jefferson and Rush had found a mutual enthusiasm, their first since the fervor of the revolutionary days, one that could mask the very real differences in outlook and philosophy that divided them. Each of them, in his own sphere, set about making the goal a reality.

For his part, Jefferson sent maple seeds to his son-in-law Thomas Mann Randolph in December 1790.⁵³ On May 1, 1791 he sent two letters that promoted the use of maple sugar. One went to William Drayton, the president of South Carolina's agricultural society, in which he said, "The attention now paying to the sugar-Maple tree promises us an abundant supply of sugar at home. . . ."⁵⁴ The second letter went to President George Washington. In it Jefferson refers to William Cooper's efforts to "bring 3000[pounds]' worth [of maple sugar] to market this season, and gives the most flattering calculations of what may be done in that way."⁵⁵ At the end of the month Jefferson and Madison took their trip to Vermont, and on his return Jefferson ordered "Sugar maples. All you have"⁵⁶ from a nursery on Long Island. He corresponded with Joseph Fay, whom he had met in Bennington, on planting maples in both Vermont and Virginia, and even after the trees he

⁵² Thomas Jefferson, *Memorandum Books: Accounts, with Legal Records and Miscellany, 1767-1826*, eds. James A. Bear, Lucia C. Stanton (Princeton: Princeton University Press, 1997) 1: 769.

⁵³ Thomas Jefferson to Thomas Mann Randolph, 16 December 1790. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-18-02-0117>>.

⁵⁴ Thomas Jefferson to William Drayton, 1 May 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-20-02-0090>>.

⁵⁵ Thomas Jefferson to George Washington, 1 May 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-20-02-0101>>.

⁵⁶ Thomas Jefferson to William Prince, 6 July 1791. *Founders Online*, National Archives <<http://archives.gov/documents/Jefferson/01-20-02-0254>>.

ordered from the Long Island nursery had died at Monticello, he wrote to his son-in-law that he would have no trouble obtaining more trees because “It is too hopeful an object to be abandoned.”⁵⁷

Meanwhile, Rush set to work on a pamphlet entitled “An Account of the Sugar-Maple Tree of the United States.” Written in the form of a letter to Thomas Jefferson, it was read before the American Philosophical Society on August 19, 1791. In it, similar to his observations in the pamphlet of 1789, Rush went into detail on how and when to tap the maple trees, how to turn the sap into sugar, and how relatively simple a task it is for a farmer to accomplish with only basic equipment he already possesses and the help of family members. He went on to tout the purity of the finished product compared with West Indian sugar, produced as it was “in a season when not a single insect exists to feed upon it, or to mix its excretions with it and. . . [by] men, women and children. . . who work exclusively for the benefit of *themselves*, and who have been educated in the habits of cleanliness.”⁵⁸

The two men were destined not to meet again after the 1790s. Rush wrote to Jefferson in late 1800, “I reciprocate your kind expressions, upon the probability of our not meeting again, and feel sincere distress upon the account of it. I shall always recollect with pleasure the many delightful hours we have spent together from the day we first met on the banks of the Schuylkill in the year 1775 to the day in which we parted.”⁵⁹ They

⁵⁷ Thomas Jefferson to Thomas Mann Randolph, Jr., 19 April 1792. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-23-02-0389>>.

⁵⁸ Benjamin Rush, “An Account of the Sugar Maple-Tree,” in L. H. Butterfield, ed., *Letters of Benjamin Rush*, vol. 1 (Princeton: Princeton University Press, 1951), 592.

⁵⁹ Thomas Jefferson from Benjamin Rush, 6 October 1800. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-32-02-0120>>.

remained friends and maintained a correspondence until Rush's death in April of 1813. In fact, Rush was able to do his friend a great service from afar: He was instrumental in bringing about Jefferson's reconciliation with John Adams, who had split with Jefferson over Alexander Hamilton's Federalist policies. Rush, who was a regular correspondent of both men, told Adams he had a dream in which they had reconciled. When Adams responded favorably, Rush approached Jefferson, who was also amenable. On New Year's Day in 1812, Adams wrote a short letter to Jefferson, who responded, and the two engaged in a lively correspondence that ended only with their deaths on July 4, 1826.⁶⁰ All that, however, was far in the future as Jefferson continued to try to get sugar maples to grow at Monticello and Rush continued his association with the Philadelphia Quakers and the frontier land speculators who gave rise to the short-lived maple sugar bubble.

⁶⁰ Annette Gordon-Reed and Peter S. Onuf, *Most Blessed of the Patriarchs: Thomas Jefferson and the Empire of the Imagination* (New York: Liveright Publishing, 2016), 308-309.

Chapter III

The Great Maple Sugar Bubble

The great maple sugar bubble of the 1790s resulted from a collaboration between abolitionists and land speculators at the intersection of piety and profit. Men like Henry Drinker, Benjamin Rush, and his friend Thomas Jefferson hoped to do their part to help eradicate slavery, while men like William Cooper, Arthur Noble, and representatives of the Holland Land Company hoped to make a profit by bringing maple sugar⁶¹ out of the forests to commercial markets. The bubble began in the last years of the 1780s when Cooper, in collaboration with Drinker, began his efforts to produce maple sugar on a large scale on his lands in upstate New York and bring it to the Philadelphia market, and it ended at the close of the 1790s, when Henry Drinker shut down his sugar-making operation at Stockport, PA and Cooper sold his sugar-house property. Farmers in the Northeast and northern Midwest continued to harvest maple sap and make sugar for their own use and for local distribution, but there were no more attempts at wider distribution until the middle of the next century. Instead, Americans used white cane sugar as their main sweetener.

In the mid-seventeenth century the British had begun conquering Caribbean islands, starting with Barbados in 1640. By the 1650s white cane sugar was being

⁶¹ At the time, the only product of maple sap that could be conveyed to market was maple sugar, which results when the sap is boiled into syrup and then boiled further until crystallization begins, at which point it is poured into molds. It then hardens and can be stored. Before the invention of tin cans this was the only way to preserve and store the maple product.

exported to England, and it quickly did far better than any other colonial commodity, including tobacco.⁶² English people, including colonists, began to view sugar as essential and, while it was still a luxury in the mid-eighteenth century, it was well on its way to becoming a necessity, even among the working class.⁶³ England became the largest sugar-consuming nation in the world, using 18 pounds per person by 1800.⁶⁴ Sugar was part of one of the triangle trades linking England to Africa and the New World. Finished goods went from England to Africa, slaves went to the Americas, and American tropical goods, like sugar, went back to England.⁶⁵ Beet sugar was not manufactured at all until 1801 and did not get a firm hold on the market until about 1830.⁶⁶

Despite cane sugar's monopoly, maple sugar interested a few observers in the mid- to late eighteenth century. In the 1765 London *Annual Register*, an anonymous author wrote, "Of this [maple] sugar alone 600 lb. was made by one man during the last season. . . and several hundred weight of it were in July last brought for sale to Boston in New England, from various towns situated in the northern and western parts of that province."⁶⁷ In 1784 Jeremy Belknap, a Boston clergyman and friend of Benjamin Rush,

⁶² Dunn, *Sugar and Slaves*, 188.

⁶³Mintz, *Sweetness and Power*, 148, 157.

⁶⁴ Deborah Jean Warner, *Sweet Stuff: An American History of Sweeteners from Sugar to Sucralose* (Washington, DC: Smithsonian Institution Scholarly Press, 2011), 1.

⁶⁵Mintz, *Sweetness and Power*, 43.

⁶⁶ Butterfield, "The Great Days of Maple Sugar," 151.

⁶⁷*Ibid.*, 153.

wrote from New Hampshire that “Great quantities of maple sugar are made here. . . . They commonly make enough for a year’s store.”⁶⁸

Tench Coxe, a Philadelphia political economist, proponent of industrialization, and Assistant Secretary of the Treasury under Alexander Hamilton, published *A View of the United States of America*, which was a series of papers on various subjects written between 1787 and 1784. In it he referred to the distaste of Pennsylvanians for benefiting from the labor of slaves (“The great and increasing dislike to negro slavery and to the African trade among the people of [Pennsylvania], occasioned this new prospect of obtaining a sugar not made by the unhappy blacks”⁶⁹), and he went so far as to estimate the capacity of the sugar maple forests and the demand that could be supplied from them. Based on information from the Philadelphia Customs House, he calculated the demand for brown and loaf sugar and molasses at 8,416,828 pounds. Drawing on information from William Cooper, he said that, based on an average of five pounds of sugar per tree and 40 trees per acre, 52,605 acres could produce the 8,416,828 pounds needed on just 263,000 acres (there being far more available acreage than that in just five counties in New York and Pennsylvania alone).⁷⁰ While he acknowledged that this estimate has “a wild and visionary appearance. . . it is not unreasonable to give some faith to it until exaggeration of fact or error shall be pointed out.”⁷¹ It was just such enthusiasm and

⁶⁸ Ibid., 156.

⁶⁹ Tench Coxe, *A View of the United States of America* (Philadelphia: William Hall and Wrigley & Berriman, 1794), 78.

⁷⁰ Ibid.

⁷¹ Ibid., 80.

optimistic estimates, coupled with the earnest desire not to benefit from the labor of slaves, that brought men like Drinker and Cooper, Rush and Jefferson together in the endeavor that has come to be known as the maple sugar bubble.

Henry Drinker

In addition to the three men (Pemberton, Parker, and Parish) with whom he founded the Society for Promoting the Manufacture of Sugar from the Sugar Maple-Tree, Benjamin Rush was very friendly with Henry Drinker (1734-1809), a Quaker merchant in Philadelphia and one of the three major players in the bubble, along with William Cooper and the Holland Land Company. Drinker was a partner in the trading firm of James & Drinker; owner of the Atsion Ironworks in New Jersey; and a financier, provider of credit, and land speculator. Like Rush, Drinker was an engaging and clubbable man, as well as a committed Quaker and a leader in Philadelphia's Yearly Meeting, the preeminent Quaker body in North America. He was guided by the principles of his religion, which included the primacy of a personal and direct experience of Jesus Christ, pacifism, teetotalism, and opposition to slavery. The Quakers had declared the importing of slaves a disownable offense in 1774,⁷² and they were devoted to the eventual eradication of slavery altogether. Drinker, in describing his ironworks to an English friend, said, "One was to have nothing to do with slaves. . . it is devoutly to be wish'd that this unchristian practice was universaly [sic] rejected."⁷³ Like many other Quakers,

⁷² Maxey, "The Union Farm," 611.

⁷³ Ibid.

however, Drinker was not averse to mingling profit and virtue,⁷⁴ and if he could do well for himself and his family by doing good, so much the better.

The very day after Benjamin Rush had encountered his friends Pemberton, Parker, and Parish in the street and proposed that they form an association for the promotion and purchase of maple sugar, he and Tench Coxe met Henry Drinker in the street and enlisted his support for the endeavor.⁷⁵ By that time Drinker had already made the acquaintance of William Cooper and had enlisted his help in selling and settling his frontier lands.⁷⁶ That same month (August 1789), Drinker offered for sale from his ironworks “kettles of a proper form and size for the making of sugar from the Maple Tree.”⁷⁷ At the same time he extended William Cooper credit to buy a large quantity of the kettles so that Cooper’s Otsego settlers could harvest sap that winter.⁷⁸ Drinker agreed to deliver to Cooper 300 fifteen-gallon sugar kettles with handles for eighteen shillings apiece.⁷⁹ Meanwhile, along with Rush and Coxe, he continued to garner support for the maple sugar enterprise, enlisting other eminent Philadelphians into a subscription. As completed on September 3, 1789, the list included seventy-four men who subscribed to the enterprise for a total of 15,800 pounds.⁸⁰

⁷⁴ Ibid., 610.

⁷⁵ Maxey, “The Union Farm,” 612.

⁷⁶ Taylor, *William Cooper’s Town*, 116.

⁷⁷ Maxey, “The Union Farm,” 614.

⁷⁸ Butterfield, “Great Days of Maple Sugar,” 156.

⁷⁹ Taylor, *William Cooper’s Town*, 122.

⁸⁰ Ibid., 123.

The sugaring season was disappointing, which meant that Cooper was able to ship only about 20,000 pounds of sugar to Philadelphia the following summer, which was only about one-fifth of the amount he had promised.⁸¹ Undeterred, Cooper tried again, and he had Drinker ship him 653 more kettles in the fall of 1790 for the 1791 season.⁸² Again the season was disappointing, and although the settlers produced a little more sugar than they had in the previous year, it was still far less than they had hoped for.⁸³ Still, there was enough quality sugar for Cooper to send his associate Arthur Noble to Philadelphia with a sample, which Benjamin Rush had him present to Thomas Jefferson. On May 7, 1791, just before Jefferson left on his trip, Noble wrote to Cooper, “Rush brought me to Mr. Jefferson the Secretary of State, he is as sanguine as you or I about the Maple Sugar, he thinks in a few years we shall be able to supply half the world. . . .”⁸⁴ Noble also left a sample with Rush for President Washington, who accepted it graciously and even planted a few sugar maples at Mount Vernon.⁸⁵ Drinker sent sugar samples and promotional pamphlets to prominent English Quakers and to anti-slavery members of Parliament.⁸⁶

⁸¹ Ibid.

⁸² Ibid., 130.

⁸³ Ibid., 131.

⁸⁴ James Fenimore Cooper, *The Legends and Traditions of a Northern County* (New York: G. P. Putnam’s Sons, 1921), 139.

⁸⁵ Taylor, *William Cooper’s Town*, 125.

⁸⁶ Ibid.

Nevertheless, the handwriting was on the wall, and although Cooper had his settlers produce sugar for the Philadelphia market for one more season, he bought no more kettles, broke up his own sugar works, and informed Drinker in May of 1792, “I think I shall quit [the] trade this fall.”⁸⁷

Drinker, while disappointed, was motivated by more than profit or renown, and he persevered. His land agent, Samuel Preston, had opened up a settlement in Pennsylvania called Stockport, located on the Delaware River just south of the New York border. Starting in the spring of 1790 Drinker instructed Preston to concentrate on maple sugaring.⁸⁸ The pamphlet “Remarks on the Manufacturing of Maple Sugar; With Directions for its Further Improvements” published by the society Rush had helped to found in 1789 referred to the experiments and improvements taking place at Stockport.⁸⁹ Neither that harvest nor the one the following year was very successful, partly because of the same uncooperative weather that hampered Cooper’s efforts at Otsego. Nevertheless, his hopes and expectations were still high when he breakfasted with Jefferson on May 13 and learned that he and Madison were “about to set off in a day or two on tour through an extensive Sugar Maple Country.”⁹⁰

The Stockport enterprise also attracted the attention of the Holland Land Company, whose agents were investigating commercial opportunities for a group of

⁸⁷ Ibid., 132.

⁸⁸ Maxey, “The Union Farm,” 614.

⁸⁹ “Remarks on the Manufacturing of Maple Sugar; with Directions for Its Further Improvement.” (Philadelphia: James & Johnson, 1790), 5.

⁹⁰ Maxey, “The Union Farm,” 618.

Dutch capitalists, likely the “wealthy foreigners” referred to in the *Vermont Gazette*’s report on Jefferson’s visit to Bennington. Jan Lincklaen arrived at Stockport on August 17, 1791 and met with Drinker’s agent Preston. His report was not enthusiastic: “I was unable to see that in this neighborhood there were trees sufficient to support an extended settlement.”⁹¹

Drinker and Preston apparently came to the same conclusion because the next year they established the Union Farm seven miles away. Formally named The Society for Promoting the Manufacture of Sugar from the Sugar-Maple Tree and Furthering the Interest of Agriculture in Pennsylvania, it functioned the same way as Drinker’s enterprise with Cooper: Wealthy Philadelphians subscribed for shares of stock at fifty pounds a share,⁹² putting in their money up front to fund the start-up with the expectation of getting their money back and more the following summer, when the sugar came to market. The first sugaring season, in 1793, was disappointing, as was that of 1794, and on November 9, 1795, the managers recommended to the shareholders that it was “inexpedient further to prosecute the plan.”⁹³ The shareholders consented and, although he continued—and after him his heirs—to pay real estate taxes on Union Farm until it was finally sold in 1833,⁹⁴ Henry Drinker was done with maple sugar.

⁹¹ Ibid., 619.

⁹² Ibid., 620.

⁹³ Ibid., 628.

⁹⁴ Ibid., 629.

William Cooper

But what of his erstwhile partner, William Cooper? If Drinker's motivation was at least as much about abolitionism as capitalism, what kept Cooper tapping maple trees in the forests near Lake Otsego for as long as he did?

Judge William Cooper (1754-1809) was born near Philadelphia, the third son of a Quaker farmer. He received only a rudimentary education but he married well, to a daughter of a wealthy New Jersey landowner. Cooper began his land speculation career in Pennsylvania, but eventually bought a tract of wilderness in central New York, stretching west from Lake Otsego, where Cooperstown sits today.⁹⁵ In May 1786 he put up for sale 40,000 acres there, all of which were bought in the first sixteen days.⁹⁶ From that relatively modest beginning he rapidly developed a reputation as an expert in the sale and settlement of frontier land.⁹⁷ In addition to managing his own lands, he served as an agent for wealthy speculators who owned property in New York but lived elsewhere, and it was thus that he came in contact with Henry Drinker and Benjamin Rush. In 1791 he was named presiding judge of common pleas in Otsego, and he served in Congress from 1795 to 1797 and from 1799 to 1801.⁹⁸

Cooper kept a careful eye on the bottom line, but he also cultivated a "paternal image" with his settlers, offering good terms and investing in community

⁹⁵ Butterfield, "Judge William Cooper," 390.

⁹⁶ Ibid.

⁹⁷ Taylor, *William Cooper's Town*, 112.

⁹⁸ Butterfield, "Judge William Cooper," 397, 399.

improvements.⁹⁹ During the “starving time” in 1789, when a devastating famine struck the Otsego area, Cooper helped his settlers catch fish to feed their families and organized the distribution of government-supplied corn.¹⁰⁰

Cooper had motivations beyond profit or even concern for his settlers. Although his views on leaseholds and settlements were in accord with those of Thomas Jefferson (who had tried to curb land monopolies in Virginia¹⁰¹) in that he believed lands should be sold outright to a settler with an accompanying deed,¹⁰² Cooper was “destined by his economic interests and his social connections to be a Federalist.”¹⁰³ Having come into his prime in the post-Revolution era, Cooper was bent on establishing his wealth and position, which meant gaining acceptance from the social elite. He and men like him “posed as ‘Fathers of the People’—well-meaning superiors ready to assist their lessers.”¹⁰⁴ In a letter to James Monroe commenting on the 1792 New York gubernatorial election, Thomas Jefferson referred to Cooper as “the Bashaw of Otsego”¹⁰⁵ (bashaw being another word for Turkish pasha), thereby commenting on how Cooper saw himself

⁹⁹ Alan Taylor, “From Fathers to Friends of the People: Political Personas in the Early Republic,” *Journal of the Early Republic* 11, no. 4 (1991): 479-480.

¹⁰⁰ Alfred F. Young, *The Democratic Republicans of New York: The Origins 1767-1797* (Chapel Hill: University of North Carolina Press, 1967), 265.

¹⁰¹ Butterfield, “Judge William Cooper,” 392.

¹⁰² *Ibid.*, 391.

¹⁰³ Young, *The Democratic Republicans of New York*, 266.

¹⁰⁴ Taylor, “From Fathers to Friends of the People,” 469.

¹⁰⁵ Thomas Jefferson to James Monroe, 23 June 1792. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-24-02-0223>>.

influencing local politics. His friendships and connections with the urban elite such as Henry Drinker and Benjamin Rush consequently were important to him, so that when he had a chance to parlay the contacts he had made with these men as a land agent into a business arrangement, he jumped at the chance.

Like Thomas Jefferson, Cooper saw maple sugar as a commodity that could be produced with relatively little labor and even less cash outlay. If he could develop a market for maple sugar, he could promote Otsego commerce, help his settlers pay their land debts, and bring himself to the attention of some of America's most illustrious gentlemen.¹⁰⁶

In September 1789 Cooper was quoted as saying, in an article on the capacity of New York and Pennsylvania sugar maples to supply American demand, that a single tree could generally produce five pounds of sugar per season and that there were generally about fifty trees per acre. The author, "a friend of manufacture," went on to calculate that only 526,000 acres would supply the whole country's needs.¹⁰⁷ In 1792 Cooper wrote a letter to the New York Agricultural Society in which he asserted that "a full supply of that article of life [maple sugar] may be manufactured within the boundaries of this state."¹⁰⁸ In his book Tench Coxe reprinted a letter that Cooper and others had sent to him, Drinker, and Rush in 1793 stating that they produced 150,000 pounds of sugar worth \$15,000 at ninepence per pound and that such production "is an object of sufficient

¹⁰⁶ Taylor, *William Cooper's Town*, 117.

¹⁰⁷ "American Maple Sugar and Molasses," *Federal Gazette & Philadelphia Evening Post*, September 9, 1789, p. 2.

¹⁰⁸ William Cooper, "A Letter on the Manufacture of Maple Sugar." In *Transactions of the Society for the Promotion of Agriculture, Arts and Manufacture* (New York: Childs and Swaine, 1792), 84.

consequence to claim the encouragement of the legislature of your state [Pennsylvania].”¹⁰⁹

At this point in his maple sugaring endeavors, Cooper may well have been attempting to get state sponsorship because it was apparent that individual efforts, like his in Otsego and Drinker’s at Stockport, were not going to be successful. The statistics that he was promulgating, while they might have been technically accurate, were predicated upon actually being able to extract that amount of sugar from each tree and bring it to an urban market from the wilderness in perfect condition, a task he was unable to fulfill. Cooper wanted to save what he called “these diamonds of America”¹¹⁰ from destruction by use as firewood or potash because he believed their value as sugar producers in the long term outweighed those short-term benefits.¹¹¹

Nevertheless, as each successive sugar harvest proved a disappointment, Cooper began to turn his attention from sugaring to making potash. According to Alan Taylor in *William Cooper’s Town*, he “had little choice, for he would go bankrupt and return to obscurity if he failed to produce an annual revenue in excess of the inexorably mounting annual interest on his debts.”¹¹² Cooper cut his losses—and his ties to Drinker (who wrote “It is with reluctance, I censure the conduct of my friend William Cooper, for

¹⁰⁹ Coxe, *A View of the United States of America*, 80.

¹¹⁰ Taylor, *William Cooper’s Town*, 121.

¹¹¹ Ibid.

¹¹² Taylor, *William Cooper’s Town*, 134.

whom I entertain a real regard, but I cannot think that he has paid a proper attention to the state of my account”¹¹³)—preferring to remain a bashaw, at least in Otsego County.

The Holland Land Company and Other Foreign Interests

Interest in maple sugaring, for both economic and altruistic reasons, was not confined to America. In 1792 the Holland Land Company purchased 3.3 million acres of land in far western New York state, stretching from the Genesee River west to Lake Erie and from Pennsylvania north to Lake Ontario.¹¹⁴ Its eventual purchase, including land in northern and western Pennsylvania, totaled more than five million acres. Unlike most American speculators, the Company paid cash, with the idea of making a profit from eventual resales to settlers.¹¹⁵

The Holland Land Company was formed in 1789 with the merger of several Dutch banking and brokerage firms. It named Theophile Cazenove as its purchasing agent in the United States, and Gerrit Boon and Jan Lincklaen were chosen to visit and investigate the potential purchases. Boon, who worked at a Rotterdam banking firm that had joined the enterprise, was selected to manage the sugar business they planned to establish. Lincklaen, who left a journal of his travels for the company, began his career in the Dutch Navy, enjoyed the patronage of the Holland Land Company’s principal director of American business, and had already spent several years in the United States.

¹¹³ Ibid., 137-138.

¹¹⁴ Charles E. Brooks, “Overrun with Bushes: Frontier Land Development and the Forest History of the Holland Land Purchase, 1800-50,” *Forest and Conservation History* 39, no. 1 (1995): 17.

¹¹⁵ Paul Evans, *The Holland Land Company* (Buffalo: Buffalo Historical Society, 1924), xii.

By early 1791 discussions were underway about setting up a maple sugaring enterprise on some of the lands they would eventually buy.¹¹⁶ It is impossible to know what the company's main motivation was. Certainly it was not only American idealists who cherished the idea that if maple sugar supplanted cane sugar, slave labor might decrease.¹¹⁷ Still, one of the firms that merged to form the Holland Land Company was already engaged in the sugar business, and it seems likely that its motive was largely materialistic.¹¹⁸

Boone and Lincklaen began their land explorations in August of 1791, just two months after Jefferson's visit to Vermont. They eventually covered about 2600 miles. Starting in Pennsylvania, they moved on to New York, Vermont, and Connecticut, then back through New York and on to Philadelphia, where they had started.¹¹⁹ During their journey they visited Henry Drinker's maple sugaring operation at Stockport, Pennsylvania and that of William Cooper at Otsego as well.¹²⁰ They reported their findings to Cazenove, who made the actual purchases for the Holland Land Company.

¹¹⁶ Ibid., 13, 14.

¹¹⁷ For example, Jefferson corresponded with Jacques Pierre Brissot de Warville about becoming a member of an abolitionist society that de Warville had founded in Paris, Les Amis des Noirs (Thomas Jefferson to Brissot de Warville, *Founders Online*, National Archives <http://founders.archives.gov/documents/Jefferson_01-12-02-0612>). Jefferson, who was Minister to France at the time, declined.

¹¹⁸ Evans, *The Holland Land Company*, 15.

¹¹⁹ Ibid., 16.

¹²⁰ John Lincklaen, *Travels in the Years 1791 and 1792 in Pennsylvania, New York and Vermont: Journals of John Lincklaen, Agent of the Holland Land Company* (New York: G. P Putnam's Sons, 1897), 48, 72.

By the end of February 1793 Boon was planning his maple sugar operation, centered north of Utica, New York and called Oldenbarneveld. He started small, experimenting on just seventeen acres, planning to expand to 10,000 acres, which he hoped would produce one and a half million pounds of sugar per season.¹²¹ With an idea that was ahead of its time, he found a wood-worker to construct troughs to collect the maple sap, with each tree and its trough connected by a system of subsidiary troughs to a reservoir at the bottom of the wooded slope of sugar maple trees. At first the system seemed to be successful, but sun and frost warped the wooden troughs, causing leakage.¹²² Boon tried other variations on the system—though apparently not the standard bucket collection method—without success. He was not given another chance. On November 30, 1794 the books of the sugar enterprise were closed,¹²³ and the efforts of the Holland Land Company to produce maple sugar for a widespread market came to an end.¹²⁴

¹²¹ Evans, *The Holland Land Company*, 64.

¹²² *Ibid.*

¹²³ *Ibid.*, 65.

¹²⁴ Although the attempts to produce maple sugar on a large scale associated with the maple sugar bubble were centered in New York and Pennsylvania, two sources mention a Dutch concern purchasing land in Vermont and starting an operation there (Willard Sterne Randall, “Thomas Jefferson Takes a Vacation,” *American Heritage* 47, no. 4 (1996): 74; and Massachusetts Maple Producers’ Association, Maple History Timeline <<http://www.massmaple.org/history.php>>). Randall specifically mentions Rutland, Vermont, as the locus of the operation, without citing a source, but no other sources confirm this. For example, the Maple History Timeline from the University of Vermont does not contain this milestone. Communication with the Coordinator of the Massachusetts Maple Producers’ Association elicited the information that the timeline had been produced some time previously and that his predecessor believed the source of the note about the Dutch enterprise buying 23,000 acres in Vermont might have been *The Maple Sugar Book* by Helen and Scott Nearing, which does not mention the enterprise (Winton Pitcoff, Massachusetts Maple Producers’ Association, personal communication [e-mail], November 16, 2016). Communication with the President of the Rutland Historical Society (Bill, Powers, Rutland Historical Society, personal communication [e-mail], September 19, 2016), who searched the town of Rutland for deeds mentioning the Holland Land Company, also yielded no information on such an enterprise.

The French were also interested in maple sugar as a commodity. The Castorland Company was a French syndicate that owned lands in New York; a medal they presented to their directors in 1793 in appreciation for their service shows Ceres, tapping tools in hand, standing by a maple tree from which sap is flowing.¹²⁵ Talleyrand, the French politician and diplomat, bought woodland in Pennsylvania and was in contact with Cazenove of the Holland Land Company about the additional wealth maple trees could bring to an investment in land.¹²⁶ Louis Philippe, Duke of Orleans and later the last French king (he reigned from 1830 to 1848), took a lengthy tour of the United States in 1797 and 1798, when he was an exile from the turmoil in France. While in Virginia he was a guest of Arthur Campbell, a Revolutionary War soldier and landholder who had large groves of sugar maples on his land.¹²⁷ Louis Philippe had observed smaller groves of sugar maples elsewhere in Virginia (although there is no record of his having visited Monticello, where Jefferson was still trying to get his to thrive). He was a keen observer

I believe the confusion may have arisen in the introductory chapter to Lincklaen's journal, which is not part of the journal itself but rather a biographical sketch of the author (Lincklaen, *Travels in the Years 1791 and 1792*, 10, 11). On page 10 the author of the biographical sketch says that "The Company purchased no land in Vermont, where the journey seems to have been made—partly at least—to gain information at first hand upon the maple sugar industry . . ." On page 11, however, the author says that "A maple grove of some 23,000 acres was bought, but the enterprise proved practically visionary and abortive, though based on the best of philanthropic intentions." It is not specified where the 23,000 acres of land was located (this might even have been referring to Boon's operation at Oldenbarneveld). Nor is the author of the biographical sketch identified. The author of the Preface was Helen Lincklaen Fairchild who, Lincklaen himself having died childless, may have been a descendant of his wife's brother, whom Lincklaen adopted after his marriage to Helen Ledyard in 1797. In any event, no successful Dutch maple sugaring enterprise was ever established in Vermont in the eighteenth century.

¹²⁵ Butterfield, "The Great Days of Maple Sugar," 161.

¹²⁶ Edwin R. Baldwin, Jr., "Talleyrand's Visit to Pennsylvania, 1794-1796," *Pennsylvania History: A Journal of Mid-Atlantic Studies* 36, no. 2 (1969): 150.

¹²⁷ Sharon B. Watkins, "A Future French King Visits the Virginia Backcountry in 1797: The Travel Diary of Louis Philippe, Duke of Orleans," *Smithfield Review* 16 (2012): 19.

of the state of agriculture, types of soil and trees, crops, and the like,¹²⁸ and his interest in maple sugar was probably piqued, as Jefferson's was, by the opportunity it represented to decrease dependence on a British import at a time when hostilities in Europe were disrupting international trade.¹²⁹

The End of the Bubble

The Holland Land Company closed the books on its sugaring operation in 1794. In 1795 Henry Drinker shut down Union Farm. In the same year Benjamin Rush signed a proposal for the sale of lands and property of his Society for Promoting the Manufacture of Sugar from the Sugar Maple Tree,¹³⁰ which marked the end of his advocacy of maple sugar. The bubble burst partly because of unrealistic production estimates but also because settlers were using their maple trees for more than producing sugar. Settlers were flooding into frontier lands during the last decade of the eighteenth and the first decade of the nineteenth centuries. In Vermont alone the population increased from 85,425 in 1791 to 217,895 in 1810.¹³¹ The new landholders were clearing their land for farming and there were other ways to make money besides sugaring. Fires started to clear the land generated ashes rich in potassium. In addition to being a fertilizer, the ashes could be sold to make potash, which was in demand for numerous uses in Great Britain, particularly in

¹²⁸ Ibid., 23.

¹²⁹ Ibid., 19.

¹³⁰ Nathan G. Goodman, *Benjamin Rush: Physician and Citizen* (Philadelphia: University of Pennsylvania Press, 1934), 287.

¹³¹ Crockett, *Vermont: The Green Mountain State*, 499.

its dynamic textile industry.¹³² Maple timber “brought 20 to 30 times as much money as maple sugar” and farmers “sold off their valuable stands of virgin maple forest whenever they needed cash.”¹³³ Maple sugar was still being produced in Vermont and elsewhere (by “perhaps two-thirds of the families” in Vermont by one estimate¹³⁴) but “[t]he business is now carried on under the greatest disadvantages, without proper conveniences, instruments, or works, solely by the exertions of private families, in the woods and without any other conveniences than one or two iron kettles, the largest of which will not hold more than four or five pailfuls.”¹³⁵

This is a good description of why, despite Thomas Jefferson’s and Benjamin Rush’s advocacy and the determined efforts of the maple sugar bubble entrepreneurs, the maple sugar industry never got off the ground. The next major technological advance after wooden spouts and augurs in 1810 did not come until 1858, with the patenting of the first evaporating pan, which replaced the iron kettles. The next chapter deals with how the sugaring industry evolved and how maple sugar came to be the quintessential product of Vermont.

¹³² Taylor, “The Great Change Begins,” 280, 281.

¹³³ Thomas, “Maple Sugar,” 35.

¹³⁴ Crockett, *Vermont: The Green Mountain State*, 210.

¹³⁵ *Ibid.*

Chapter IV

The Evolution of the Maple Sugar Industry

After the flurry of interest in promoting maple sugar occasioned by the advocacy of men like Thomas Jefferson and Benjamin Rush and by the maple sugar bubble speculations, attention waned. Tench Coxe, the Philadelphia political economist and proponent of industrialization, included a section on maple sugar in his 1810 *Statement of the Arts and Manufactures of the United States of America* in which he said that “9,665,108 pounds of maple sugar are proved to have been made in the year 1810. . . [and] it is not rare for careful and attentive families to make 3 or 400 pounds of weight in a season.”¹³⁶ By 1831, however, in his *History of Vermont*, Nathan Hoskins acknowledged that “the manufacture of maple sugar some years ago, was of very great importance to the state [and] more than one half of the families in Vermont were engaged in this business,” but he went on to note, “This kind of business is not as much attended to now as formerly.”¹³⁷ *The New England Farmer and Horticultural Journal* lamented that “the making of maple sugar is highly important to the people [of Vermont]; and it is in our opinion treated with too much neglect.”¹³⁸ In Coolidge and Mansfield’s volume on Vermont in their *History and Description of New England*, published in 1860, they

¹³⁶ Tench Coxe, *A Statement of the Arts and Manufactures of the United States of America for the Year 1810* (Philadelphia: A. Cornman, Junr, 1814), xxxvi.

¹³⁷ Nathan Hoskins, *A History of the State of Vermont* (Vergennes, VT: J. Shedd, 1831), 271-272.

¹³⁸ “Maple Sugar,” *New England Farmer and Horticultural Journal* 8, no. 31 (March 13, 1829).

describe an enterprise still on a very small scale, unmechanized and “carried out under the greatest disadvantages.”¹³⁹

Along with the collapse of the bubble and the general difficulty of extracting the maple sap and turning it into sugar in the middle of the snowy woods, other forces were at work that kept maple sugaring from becoming a thriving commercial enterprise. In the late eighteenth and early nineteenth centuries, settlers were moving onto uninhabited lands in record numbers, looking to domesticate the wilderness and make a living for themselves and their families. Land had to be cleared for farming, and there were other ways to make money from the land besides maple sugaring. “Alas that the fond hopes of the friends of the maple were not destined to be fully realized,” lamented the author of an article on the early history of Vermont, referring to Benjamin Rush and his associates. “For along with its contemporary, the red man, the maple was sorely persecuted by the advance of civilization.”¹⁴⁰

Vermont went from unsullied wilderness in 1760 to three-quarters denuded by 1850.¹⁴¹ Maple timber could yield twenty to thirty times as much money as maple sugar, because hundreds of board feet of lumber could be cut from a large tree that would produce just three pounds of refined maple sugar per season.¹⁴² Potash was another source of revenue from maple trees. Once the land was cleared the trees were burned,

¹³⁹ A. J. Coolidge and J. B. Mansfield, *History and Description of New England: Vermont* (Boston: Austin J. Coolidge, 1860), 509.

¹⁴⁰ Clarence Porter Cowles, “Early History of Maple Sugar,” *The Vermonter* (St Albans, VT: Charles S. Forbes, March 1902), 112.

¹⁴¹ Rux Martin and James M. Lawrence, *Sweet Maple: Life, Lore and Recipes from the Sugarbush* (Shelburne, VT: Charters Publishing, 1993), 65.

¹⁴² Thomas, “Maple Sugar: America’s Native Sweet,” 35.

generating huge piles of potassium-rich ashes, which could be used for fertilizer or sold to a merchant who boiled them down to make potash. This became a major export commodity to Great Britain, which found various uses for it in its burgeoning manufacturing economy. Potash was used as an alkali in the manufacture of soap, dyes, glass, and some drugs, while the textile industry used it to bleach linens, scour woolens, and print calicos.¹⁴³ According to one nineteenth-century land speculator in New York, “The proceeds of ashes have supplied many a log cabin with the common necessities of life, in the absence of which there would have been destitution.”¹⁴⁴

Cutting and burning the maple trees, while hard work, was simpler and less labor intensive than sugaring and could be done at any time of the year. As Samuel Strickland noted in Volume II of his 1853 work, *Twenty-Seven Years in Canada West* (quoted in Nearing 1970), “My readers must not suppose that sugarmaking is a light and pleasurable employment. On the contrary, it is one of the most laborious occupations, while it lasts, that falls to the lot of the settler to perform.”¹⁴⁵

Technology Begins to Catch Up

For more than a hundred years the process of making maple sugar remained virtually unchanged, save for the substitution of augurs for axes to pierce the tree and wooden spouts to direct the flow of sap. The sap still poured into wooden buckets that

¹⁴³ Alan Taylor, “The Great Change Begins: Settling the Forests of Central New York,” *New York History* 76 (1995): 281.

¹⁴⁴ *Ibid.*, 280.

¹⁴⁵ Helen and Scott Nearing, *The Maple Sugar Book* (White River Junction, VT: Chelsea Green Publishing, 1970), 14.

were emptied into iron kettles over open fires. Despite the primitiveness of its manufacture, however, maple sugar was beginning to establish itself as a commodity. In 1844, the *American Agriculturist*, a periodical published from 1842 to 1964, quoted the *New York Sun* as reporting that 10,000 hogsheads of maple sugar were sold annually in the city.¹⁴⁶ In 1850, Vermont produced 6,349,357 pounds of maple sugar, second only to New York.¹⁴⁷ In 1862, in the first annual *Report of the United States Department of Agriculture*, C .T. Alvord described the manufacture of maple sugar as “in its infancy. . . . [t]he details of the business were but very imperfectly understood, and the different processes in the manufacture but poorly executed, in consequence of the lack of means to do it with as well as the want of knowledge. . . .”¹⁴⁸ That was beginning to change.

Starting in the 1830s, processes for refining sheet metal and the invention of the tin can led to advances in the manufacture and storage of maple products. Eli Mosher of Flushing, Michigan patented the first metal sap spout in 1860.¹⁴⁹ Metal sap pails and lids followed, and tin cans meant that maple syrup could be stored and sold without having to be turned into sugar. As the century wore on, production of sugar waned in relation to production of syrup, reflecting these improved storage methods—and the fact that the extra step of boiling the syrup could be eliminated. But the most revolutionary change in

¹⁴⁶ Ibid., 222

¹⁴⁷ Albert P. Sy, “History, Manufacture, and Analysis of Maple Products,” *Journal of the Franklin Institute* 166, no. 4 (190): 256.

¹⁴⁸ C. T. Alvord, “The Manufacture of Maple Sugar,” in *Report of the United States Department Commissioner of Agriculture* (Washington, DC: Government Printing Office, 1863), 394.

¹⁴⁹ Martin and Lawrence, *Sweet Maple*, 68.

the process of maple sugaring involved the substitution of flat pans, called evaporators, for the iron kettles.

It is difficult to determine exactly when evaporators were first used. The earliest design was a shallow iron pan thirty inches wide, six inches deep, and six to twenty feet long, supported by a firebox of stone or brick.¹⁵⁰ The larger undersurface of the pan allowed for quicker evaporation, use of less fuel, and higher quality sugar and syrup. Between 1858 and 1863, D. M. Cook of Ohio patented four evaporating pans.¹⁵¹ Eventually sugar makers developed a system for regulating the flow of sap from one pan to another, although, since this system was more expensive and required more skill, it was slow to be adopted.

For the most part, after the 1870s, maple sugar-making technology remained static for another hundred years, when tubing systems came into widespread use. For example, in the 1870s sugar makers were still debating the merits of metal versus wooden buckets, as well as pans versus evaporators.¹⁵² Nevertheless, maple sugar production continued to increase steadily, to a peak of 40,120,205 pounds (from twenty-three states) in 1860. There was another factor at play in the upswing of maple sugar production besides improvements in technology, and it hearkened back to Thomas Jefferson's and Benjamin Rush's interest in promoting the commodity as a substitute for slave-produced cane sugar.

¹⁵⁰ William F. Fox and William F. Hubbard, "The Maple Sugar Industry," in *United States Department of Agriculture, Bureau of Forestry, Bulletin No. 59* (Washington: Government Printing Office, 1905), 7.

¹⁵¹ Martin and Lawrence, *Sweet Maple*, 68.

¹⁵² Leander Coburn, "Manufacture of Maple Sugar," in *First Annual Report of the Vermont State Board of Agriculture, Manufactures, and Mining for the Year 1872* (Montpelier, VT: Peter Collier, 1872), 215.

Maple Sugar and the Civil War

Vermont was antislavery from its very beginnings as a territory. According to George Bancroft's *History of the United States of America*, "in 1777, the people of Vermont, in separating themselves from the jurisdiction of New York, framed a constitution which prohibited slavery."¹⁵³ This antislavery ethos continued when Vermont became a state in 1791. By 1837 it boasted eighty-nine antislavery societies with a total of more than 5,000 members.¹⁵⁴ In the Farmer's Calendar section of various almanacs readers were urged to pay attention to maple sugaring in March: "I will . . . sing of Maple Sugar. Come then thou sweet, delicious juice, and from the pregnant maple pour and fill my cauldrons. The sweat and tears of sorrowing slaves shall ne'er impair thy charming flavor."¹⁵⁵ "Maple sugar will now call your attention," said another. "This is a more wholesome and pleasant sweetening, and every true American will prefer it to that which is seasoned with the tears, sweat, and blood of the miserable slave."¹⁵⁶ The Free Produce movement, which originated among Quakers in the late eighteenth century, shunned the products of slave labor and its adherents sought out maple sugar.

Eastman Johnson, an American painter of the nineteenth century noted for his portraits and his paintings of scenes of daily life (such as representations of black life in

¹⁵³ George Bancroft, *A History of the United States of America from the Discovery of that Continent*, ed. and abridged Russel B. Nye (Chicago: University of Chicago Press, 1966), 299.

¹⁵⁴ Betty Ann Lockhart, *Maple Sugarin' in Vermont: A Sweet History* (Charleston, The History Press, 2008), 90.

¹⁵⁵ *The Farmer's Almanack 1815* (Boston: West and Richardson, 1814), March.

¹⁵⁶ *The Farmer's Almanack 1817* (Boston: West and Richardson, 1816), March.

the south and cranberry harvesting), did a series of maple sugar paintings in the 1860s and early 1870s (see next page for one of the pictures in the series). Johnson was a Union supporter, and through these paintings he drew attention to maple sugar, produced by free people in their own communities (the Thomas Jefferson ideal), as an alternative to sugar produced by slaves. These abolitionist sentiments, coupled with the burgeoning technical advances, pushed maple sugar to its absolute peak in 1860, and sometime between then and 1870, when the next agricultural census was taken, Vermont overtook New York as the nation's top producer of maple sugar, a position it holds to this day. Along the way, as the latter part of the nineteenth century unfolded, the manufacture of maple sugar began to emerge from the woods and farms and take a place in the nation's marketplace.



Eastman Johnson, American, 1824-1906, Sugaring Off, ca. 1861-1866, Oil on Canvas. Museum of Art, Rhode Island School of Design. Reprinted with permission.

Expansion of Maple Sugar Manufacture

There is no fixed date for the beginning of maple sugar-making as an industry.¹⁵⁷

Alvord's summary in the first annual Department of Agriculture report describes sugar making as still very much a family business, but one that is coming to have a greater and greater impact on the American agricultural economy:

In all those towns where maple sugar is or can be manufactured, the inhabitants have a reliable and unfailing source from which to obtain a supply of sugar for their own consumption and a surplus to spare. . . . The ready sale of maple sugar for a few years past, and the prices which it has brought, I think, are sufficient inducements for all, who have the opportunity for doing so, to engage in the manufacture of this article, and thereby add to the wealth of the country and to the amount of their individual incomes.¹⁵⁸

The General Assembly of Vermont commissioned a state board of agriculture in 1870, which championed the commercial production of maple sugar.¹⁵⁹ Its efforts were aided by increased use of maple flavoring in tobacco products. "Strong marketing by the state of Vermont . . . developed a major outlet for commercial syrup in the tobacco industry, where the poorer grades found a use in sweetening chewing tobacco. . . ."¹⁶⁰

¹⁵⁷ Fox and Hubbard, "The Maple Sugar Industry," 6.

¹⁵⁸ Alvord, "The Manufacture of Maple Sugar," 396.

¹⁵⁹ Harold A. Meeks, *Time and Change in Vermont: A Human Geography* (Chester, CT: Globe Pequot Press, 1986), 289.

¹⁶⁰ *Ibid.*

One person who benefited from this new use for maple syrup was George C. Cary, who founded the Cary Maple Sugar Company and eventually became North America's largest buyer and seller of maple products.¹⁶¹ In 1886 he was a salesman for a Maine wholesale grocery company when he stopped in North Craftsbury, Vermont. A local merchant agreed to buy some of his groceries if Cary would take 1500 pounds of maple sugar off his hands at four and one-half cents a pound, which he did.¹⁶² Luckily, he encountered a tobacco salesman from Virginia, whose company was using West Indian sugar at five cents a pound to flavor its chewing tobacco. Cary persuaded him to try the maple sugar and soon "railroad car loads of maple sugar were traveling south to the tobacco companies."¹⁶³ On the strength of his profits, Cary established the Cary Maple Sugar Company in 1902, which sold maple sugar, syrup, and candies throughout the country and abroad before filing for bankruptcy in 1931.

The primary market for maple sugar and syrup, however, was not the individual consumer but rather large processing corporations that used them as flavoring.¹⁶⁴ Farmers, who were not organized and were otherwise occupied with making a living from the land, tended to sell the product they did not keep for home use to neighbors and friends or to the local general store at a low price or in exchange for cane sugar.¹⁶⁵ The

¹⁶¹ Paul Wood, "Sweet Days in the Sugar Bush: Maple Sugaring, Part I," *Chronicle of the Early American Industries Association, Inc.* 64, no. 1 (2011): 23.

¹⁶² *Ibid.*, 22

¹⁶³ *Ibid.*, 23.

¹⁶⁴ David K. Leff, *Maple Sugaring: Keeping it Real in New England* (Middletown, CT: Wesleyan University Press, 2015), 70.

¹⁶⁵ Fox and Hubbard, "The Maple Sugar Industry," 9.

stores then resold it to mixers who used it “to flavor a body of glucose or cane sugar six or ten times as great, making a product which was marketed as ‘pure maple syrup.’”¹⁶⁶ The mixers preferred a dark, inferior sugar because it would go farther in the mixture, and by one estimate, seven-eighths of the product sold by the turn of the twentieth century was suspect, being only partially maple sugar or else made entirely of other substances.¹⁶⁷ The United States Department of Agriculture was so concerned about this that it included a “Discussion of Adulteration of Maple Products” in its 1905 Bureau of Forestry Bulletin on the maple sugar industry.¹⁶⁸

In the 1890s, Senator Redfield Proctor of Vermont had expressed interest in a pure food and drug bill in terms of both consumer safety and the economic protection it would afford producers by prevention of adulteration. In 1903 he became more personally involved when he attempted to determine if syrup produced by the Towle Maple Syrup Company of Burlington, Vermont was (1) actually maple syrup, as opposed to brown-colored cane sugar syrup, and (2) made in Vermont. It turned out that the poorest grade of Vermont maple syrup was shipped to the Towle Company in St Paul, Minnesota, where it was blended and “Burlington, Vermont” put on the label, but though Proctor was sure what he had tasted was not maple syrup, adulteration could not be

¹⁶⁶ Ibid.

¹⁶⁷ Ibid.

¹⁶⁸ Ibid., 47.

proved.¹⁶⁹ In 1906, partly as a result of concern about the dilution of this iconic product of the American forests, Congress passed the Pure Food and Drug Act.¹⁷⁰

Organizations such as the Vermont Maple Sugar Makers' Association (VMSMA) became another force behind the promotion of Vermont maple products and attempts to maintain their purity. As the US Department of Agriculture's Forestry Bulletin noted, "With a steadily growing demand for maple sirup, which to-day is almost entirely supplied by the mixer, the producer of pure sirup can hope to control the trade only through organization."¹⁷¹ In January 1893, a group of men met in Morrisville, Vermont and formed the VMSMA, among the first agricultural organizations in the country.¹⁷² Perhaps the major reason for its founding was to help stop the adulteration of maple products. Professor Hills of the University of Vermont wrote in the *Thirteenth Vermont Agricultural Report for the Year 1893* (quoted in Lockhart): "Vermont sugar and syrup have won a just reputation and enjoy the doubtful honor of giving a name to spurious goods. It is stated that there is more so-called Vermont sugar and syrup made in the city of Chicago than in the entire state [of Vermont]. The sugar makers of the state have wisely associated themselves for the purpose of bettering, enlarging, and advertising the genuine product. . . ."¹⁷³ Their efforts were successful. In addition to passage of the Pure

¹⁶⁹ Lockhart, *Maple Sugarin' in Vermont*, 116-117.

¹⁷⁰ Yoni Appelbaum, "Making the Grade: Why the Cheapest Maple Syrup Tastes Best," *The Atlantic*, November 1, 2011 <www.theatlantic.com/health/archive/2011/11/making-the-grade-why-the-cheapest-maple-syrup-tastes-best>.

¹⁷¹ Fox and Hubbard, "The Maple Sugar Industry," 18.

¹⁷² Lockhart, *Maple Sugarin' in Vermont*, 107.

¹⁷³ *Ibid.*

Food and Drug Act, which helped protect the purity and reputation of Vermont maple products, production doubled to more than twelve million pounds by 1930, and more than 3.6 million acres of sugar maple trees were tapped in 1940, the highest figure of any state.¹⁷⁴

The United States government attempted to give a boost to producers of domestic sugar, including the maple variety, after it reduced customs duties on imported sugar in 1890. It agreed to pay a bounty of two cents a pound for sugar that tested ninety degrees or more by polariscope (which is an instrument for examining substances in polarized light) and a bounty of one and three-fourths cents for sugar that tested between eighty and ninety degrees (one degree was equivalent to one percent pure sugar).¹⁷⁵ Despite government efforts to encourage sugar makers to take advantage of this largesse (“The bounty does not cost the farmer anything, in other words it is a free gift from the government”),¹⁷⁶ it was not popular. For one thing, the bounty was provided only for sugar, with a minimum of 500 pounds, and not for syrup, and the switch from one to the other was already well underway. Also, it involved bureaucratic paperwork and formalities for which Vermont farmers apparently had little patience.¹⁷⁷ Statistics published in 1892 reveal that an estimated 10,099 persons in the state in 1889 made 500 pounds of sugar or more and thus were able to take advantage of the bounty, but only

¹⁷⁴ Christopher McGrory Klyza, Stephen A. Trombulak, *The Story of Vermont: A Natural and Cultural History* (Hanover, NH: University Press of New England, 1999), 91.

¹⁷⁵ Wells Woodbridge Cooke, “The Bounty on Maple Sugar,” *State Agricultural Experimental Station Bulletin No. 25*, 1928, 33 <<http://cdi.uvm.edu/collections/item/bulletin25>>.

¹⁷⁶ *Ibid.*, 34.

¹⁷⁷ Sy, “History, Manufacture and Analysis of Maple Products,” 275.

2,609 even took out license papers. Of those, only 1,918 actually had their sugar weighed and tried for the bounty.¹⁷⁸ Finally, some producers found that their two-cent bounty was deducted from the price when they sold their sugar to the mixers, who were already profiting from the low price of cane sugar resulting from the 1890 tariff reduction. Thus, “Instead of helping the maple-sugar grower, there is every reason to believe that the bounty really inured to the profit of his rival, the wholesale dealer.”¹⁷⁹

The price of cane sugar continued to drop. In 1818, maple sugar was half the price of cane, and by 1880 they were equal. By 1885, cane sugar was actually cheaper for the first time.¹⁸⁰ Maple sugaring still made economic sense for farmers with woodland on their property and families to help them harvest the sap, but as the price of cane sugar dropped, beet sugar became available, and America continued to urbanize, maple sugar lost its economic advantage.¹⁸¹ Still, while cane sugar may have displaced maple sugar as a basic food item, “the demand for maple sirup and sugar as luxuries and flavoring materials not only keeps the industry alive, but calls for a continually increasing supply.”¹⁸²

That supply continued to be furnished by small farmers and householders, not big businesses or cooperatives. Less than seven percent of the maple sugar product in the US

¹⁷⁸ Lockhart, *Maple Sugarin' in Vermont*, 105.

¹⁷⁹ Fox and Hubbard, “The Maple Sugar Industry,” 17.

¹⁸⁰ Leff, *Maple Sugaring*, 70.

¹⁸¹ Warner, *Sweet Stuff*, 164.

¹⁸² Fox and Hubbard, “The Maple Sugar Industry,” 8.

received any bounty, “and the industry was in no way improved.”¹⁸³ Still, if it was not precisely an industry, maple sugar and syrup were nonetheless considered legitimate agricultural products to be reported on by state and national agricultural commissions. Crockett’s history of Vermont lists no maple sugar or syrup “manufactories, factories or establishments” in 1921,¹⁸⁴ and by the 1930s “the making of these products [was], of course, a sideline.”¹⁸⁵ Nevertheless, it was an important sideline in Vermont, where 36% of farmers tapped their trees, compared to 15% in New Hampshire and 13% in New York. In no other state did more than 5% of farmers tap their maple trees.¹⁸⁶

Organized business has never been able to take over the maple industry.

According to Scott and Helen Nearing, in their exhaustive overview of maple sugaring in this country, there were four points at which it would have been possible to do so: (1) making maple syrup, (2) marketing maple syrup, (3) converting maple syrup to sugar and marketing that product, and (4) manufacturing the machinery needed in the maple industry.¹⁸⁷ Big business has managed to insert itself in any significant way only at the point of making and distributing maple sugar and manufacturing sugar-making tools.¹⁸⁸ Nor has maple sugaring ever developed into a cooperative enterprise, “with centralized

¹⁸³ Ibid., 17.

¹⁸⁴ Crockett, *Vermont: The Green Mountain State*, 476.

¹⁸⁵ S. Axel Anderson and Florence Woodard, “Agricultural Vermont,” *Economic Geography* 8, no. 1 (1932), 35.

¹⁸⁶ Ibid., 36.

¹⁸⁷ Nearing, *The Maple Sugar Book*, 223.

¹⁸⁸ Ibid.

evaporation, packaging and marketing like creameries or cheese factories,”¹⁸⁹ this despite higher profits for small farmers for only about a month’s work, compared to, for example, dairy making. This may be because of the high weight and volume of sap that would need to be transported to a central evaporator, because the sap needs to be boiled very soon after tapping and cannot easily be stored, or because the evaporator facilities would be used for such a short time during the year.¹⁹⁰

Maple Sugaring Today

Lack of intervention and promotion by big business did not mean a lack of progress in maple-sugaring techniques. In 1916, W. C. Bower invented a metal sap-gathering tube, which eventually proved impractical because of freezing and leakage.¹⁹¹ Other tubing systems were tried in the first half of the twentieth century, including gutter spouting and iron water pipes. Various problems rendered these impractical, such as breakage from ice and falling limbs, and damage from deer. Tin pipes heated up too much during the day and could cause the sap to begin to ferment by the time it reached the sugarhouse. In 1935, when they became interested in syrup making, the Nearing’s found only one example of a tree-to-tree pipe system in their area, which they ultimately decided was more trouble than it was worth.¹⁹²

¹⁸⁹ Wood, “Sweet Days in the Sugar Bush,” 21-22.

¹⁹⁰ *Ibid.*, 22

¹⁹¹ University of Vermont, Maple History Timeline
<<http://library.uvm.edu/maple/history/timeline.php>>.

¹⁹² Nearing, *The Maple Sugar Book*, 101.

In 1959, Nelson Griggs of Vermont patented the first plastic sap-gathering pipeline system.¹⁹³ Advances in the plastics industry starting in the late 1950s enabled the development of a collection system consisting of vinyl tubing that connected hundreds of trees, using gravity to drain the sap downhill to a centralized tank that fed directly to the sugarhouse.

Maple sugar and syrup also became more and more closely tied to Vermont's economy and self-image. By 1870, Vermont had overtaken New York as the nation's largest producer of maple products. In 1935, Vermont instituted spring Maple Festivals, with 134 towns staging events, and in 1946, the Proctor Maple Research Center, named for Governor Mortimer Proctor, the grandson of Senator Redfield Proctor, was founded at the University of Vermont.¹⁹⁴ In 1949, the sugar maple became the state tree of Vermont.¹⁹⁵

In 2016, Vermont was responsible for almost two million of the 4.2 million gallons of maple syrup produced in the United States.¹⁹⁶ According to the US Department of Agriculture, "Vermont is the largest maple producer in the United States, accounting for 42 percent of production, and maple is the fourth-most valued agricultural commodity

¹⁹³ University of Vermont, Maple History Timeline <<http://library.uvm.edu/maple/history/timeline.php>>.

¹⁹⁴ Ibid.

¹⁹⁵ Warner, *Sweet Stuff*, 164.

¹⁹⁶ United States Department of Agriculture (National Agricultural Statistics Service), "Northeast Maple Syrup production," June 2016 <www.nass.usda.gov>.

in the state,” contributing between \$317 and \$330 million in total sales to the economy in 2013, with maple syrup accounting for most of the product.¹⁹⁷

Thus, more than 200 years after Thomas Jefferson tried to gain support for maple sugaring in Vermont, maple products have established a niche as a luxury, home-grown, natural-food item, tied to Vermont’s image as a bucolic and sylvan paradise, whose beautiful leaves draw visitors in the fall and whose maple sugar and syrup draw interest all year round. Not exactly what Jefferson had in mind, perhaps, but he never gave up on maple sugar. What kept him promoting it, writing about it, and growing maple trees—against all odds—at Monticello for so long? The next chapter focuses on Jefferson’s quixotic championing of maple sugar and the vexing question of why a lifelong slave owner continued to champion this anti-slavery cause.

¹⁹⁷ Jeffrey R. Wakefield, “Vermont Maple Industry Contributes More than \$300 Million in Sales to State’s Economy,” University Communications, University of Vermont, <[https://www.uvm.edu/newsstories/news/study_vermont_contributes_more_than_\\$300_million_in_sales_to_state's_economy](https://www.uvm.edu/newsstories/news/study_vermont_contributes_more_than_$300_million_in_sales_to_state's_economy)>

Chapter V

Thomas Jefferson and Maple Sugar: A Conflicted Advocate

The last sugar maple tree at Monticello died in July 1992. It was probably from a planting done in 1798 (possibly the last planting of sugar maples at Monticello) and it had reached a diameter of five feet.¹⁹⁸ Its endurance and longevity reflect Thomas Jefferson's persistence in championing maple sugar as a replacement for cane in an effort not to profit from the slaves who labored to produce cane sugar for the commercial market. Meanwhile, slaves continued to labor at Monticello, throughout Jefferson's life and beyond, to feed his family and support his lifestyle. What were the roots of this dichotomy? How did Jefferson justify holding on to his own slaves while trying to undermine an industry that depended completely on slave labor?

Jefferson's early writings—resolutions for the Virginia Assembly; the Declaration of Independence; his sole book, *Notes on the State of Virginia*—take a consistent and emphatic position against slavery. He took a leadership role in getting the questions of slavery and emancipation onto the agenda in the Virginia Assembly.¹⁹⁹ When Jefferson wrote in the Declaration that all men were created equal, he meant exactly that. The Continental Congress deleted his clause accusing George III of waging “cruel war against human nature itself, violating its most sacred rights of life and liberty in the persons of a distant people who never offended him, captivating and carrying them into slavery in

¹⁹⁸ Martin and Lawrence, *Sweet Maple*, 67.

¹⁹⁹ Joseph Ellis, *American Sphinx* (New York: Alfred A. Knopf, 1997), 172.

another hemisphere,”²⁰⁰ thus vitiating some of the force of his statement.²⁰¹ Nevertheless, Massachusetts freed its slaves on the strength of the Declaration of Independence, “weaving Jefferson’s language into the state constitution of 1780, giving it the force of law.”²⁰²

Despite his theorizing about the inherent inferiority of black people in *Notes on the State of Virginia* (“They are at least as brave, and more adventuresome [as whites]. But this may perhaps proceed from a want of forethought, which prevents their seeing a danger till it be present. . . . Their griefs are transient. . . . in imagination they are dull, tasteless, and anomalous,”²⁰³), Jefferson loathed slavery and the burdens and struggles it imposed on slave and master alike. Nevertheless, once revolutionary fervor waned, so did Jefferson’s once fervent attempts to eradicate slavery from the American nation.

Many Jefferson biographies date this waning from the time of his stay in France (1784-1789) as US representative and eventually successor to Benjamin Franklin as Minister. David Davis, in his book on slavery in the age of revolution, says that Jefferson, while in France, “began experimenting with the locutions which for the rest of his life would characterize his response” to questions on slavery.²⁰⁴ These locutions were by

²⁰⁰ David Brion Davis, *The Problem of Slavery in the Age of Revolution: 1770-1823* (Ithaca: Cornell University Press, 1975), 24.

²⁰¹ Henry Wienczek, *Master of the Mountain: Thomas Jefferson and His Slaves* (New York: Farrar, Straus and Giroux, 2012), 28.

²⁰² Ibid.

²⁰³ Jefferson, *Notes on the State of Virginia*, 139.

²⁰⁴ Davis, *The Problem of Slavery in the Age of Revolution*, 175.

turns contradictory, apologetic, paradoxical, and most of all, aimed at procrastinating. Emancipation would come, it must come, but not right now.

Joseph Ellis theorizes that there were three reasons for this change and the timing of it. First, *Notes on the State of Virginia* was printed in the US while Jefferson was in France, and his denunciation of slavery, which he had not intended for an American audience, made him a controversial figure among his own plantation class in Virginia.²⁰⁵ Second, he realized he had no workable answer to the question of what would happen to the slaves once they were freed.²⁰⁶ Finally, toward the end of his time in France, as he prepared to go back to Monticello, he began to focus on how much his financial status depended on his slaves.²⁰⁷

Annette Gordon-Reed and Peter Onuf, in their recent book *Most Blessed of the Patriarchs*, add another reason for Jefferson's changing attitude toward slavery while in France: Jefferson's relationship with Sally Hemings. Sally had gone to France as Jefferson's daughter Polly's companion, and her brother James was also there. They were treated as paid servants along with the rest of Jefferson's staff,²⁰⁸ and if they remained in France they could be free. The situation was all the more delicate because Sally had become what their son Madison termed Jefferson's "concubine,"²⁰⁹ and she did not want to go back to Monticello and be "re-enslaved."²¹⁰ Jefferson had to think seriously about

²⁰⁵ Ellis, *American Sphinx*, 173.

²⁰⁶ Ibid.

²⁰⁷ Ibid., 174-175.

²⁰⁸ Gordon-Reed and Onuf, *Most Blessed of the Patriarchs*, 125.

²⁰⁹ Ibid., 127.

slavery, their relative positions, and what he wanted for his domestic life going forward. He promised Sally that she would have a life of privilege at Monticello and that their children would be freed when they grew to adulthood.²¹¹ So when Jefferson returned home he lived with what essentially became a two-tiered system of slavery at Monticello.

According to Gordon-Reed and Onuf, “The Jeffersonian world depended upon forced labor for its very existence,”²¹² and it was not the world of yeoman farmers but of landowners with large estates laboring under heavy debts. Not just slave labor needed to be factored into the financial equation. By the early 1790s Jefferson was also calculating the profit he was making on the births of children to his slaves, and it was a steady 4% a year.²¹³

This was all in aid of the kind of agrarian archetype that Jefferson saw as the ideal. Not for him the hustle and bustle of the industrial North with its big seaports and its centers of banking and commerce. He saw his new country as a nation primarily of small farmers, engaged with the land, living in bucolic harmony with it as they produced provisions to feed themselves and to sell to their neighbors and friends. In Jefferson’s eyes slavery was a blight on that landscape, and his primary goal in advocating emancipation was “not to free black people but to free white people from the moral evil of being slaveholders.”²¹⁴ In this regard, his attitude toward abolition was very different

²¹⁰ Ibid., 129.

²¹¹ Ibid., 130.

²¹² Davis, *The Problem of Slavery in the Age of Revolution*, 168.

²¹³ Wiencek, *Master of the Mountain*, 8.

²¹⁴ Peter S. Onuf, *The Mind of Thomas Jefferson* (Charlottesville: University of Virginia Press, 2007), 250.

from that of Benjamin Rush, who advocated an end to slavery simply because it was a moral and ethical evil, not out of fear of its corrupting effect on slaveholders.

Of all the characters involved in the effort to replace cane sugar with maple in the late eighteenth century, Benjamin Rush probably had the purest motives. His numerous anti-slavery writings, his association with the abolitionist Philadelphia Quakers, and his championing the cause of using maple sugar to replace cane all attest to his lofty aspiration. Henry Drinker, while abhorring slavery, also hoped to make a profit. William Cooper, in addition to making a profit, hoped to ingratiate himself with a more socially superior class than the one into which he had been born.

Jefferson too had other motives besides undermining slavery. For one thing, he wanted to reduce America's dependence on Great Britain. Cane sugar, produced in the British West Indies from the 1640s on, had quickly become a major commercial commodity for Great Britain. The growth potential was significant,²¹⁵ particularly in Great Britain's erstwhile colonies. Jefferson was an advocate of economic independence from Great Britain, and he saw the development of the market for maple sugar as a way to lessen that dependence.²¹⁶ He even tried to persuade a merchant who owned a distillery in Hudson, New York (when he passed through on his trip with Madison in 1791) that he could produce better and cheaper spirits from French wine than from molasses.²¹⁷ This would have served the dual purpose of decreasing British imports while increasing those

²¹⁵ Mintz, *Sweetness and Power*, 42.

²¹⁶ Andrea Wulf, *Founding Gardeners: The Revolutionary Generation, Nature, and the Shaping of the American Nation* (New York: Alfred A. Knopf, 2011), 96.

²¹⁷ Thomas Jefferson to Seth Jenkins, 21 June 1791. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-20-02-0207>>

from France, but it was unsuccessful. Like all advocates of maple sugar, Jefferson touted “its ability to improve America’s balance of payments as well as its moral utility.”²¹⁸

Jefferson kept on planting sugar maple trees at Monticello, again and again, for almost a decade. While his devotion to the idea of the United States as an agrarian Utopia—especially in contrast to Hamilton’s championing of a manufacturing-based economy—has been overstated,²¹⁹ and he had less interest in the day-to-day life of farming²²⁰ than he did in building, tinkering, or music, Jefferson did believe, as he wrote in *Notes on the State of Virginia*, that farmers were “the chosen people of God”²²¹ and that “the small landholders are the most precious part of a state.”²²² According to his biographer Dumas Malone, Jefferson’s preference for agriculture was based on moral and political grounds more than economic,²²³ and his championing of maple sugar, with its anti-slavery and anti-Great Britain connotations, provides us with a striking example of this thinking.

In 1809, he was still promoting maple sugar and hoping to plant more maple trees at Monticello, writing to a friend that “I propose to plant me a large orchard of Paccan & Roanake & Missouri scaly barks. . . . To these I shall add the sugar maple tree if I can

²¹⁸ D. Gellman, “Pirates, Sugar, Debtors, and Slaves: Political Economy and the Case for Gradual Abolition in New York,” *Slavery and Abolition* 22, no. 2 (2001): 56.

²¹⁹ Gordon-Reed and Onuf, *Most Blessed of the Patriarchs*, 81.

²²⁰ *Ibid.*, 39.

²²¹ Jefferson, *Notes on the State of Virginia*, 165.

²²² Thomas Jefferson to James Madison, 28 October 1785. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/01-08-02-0534>>

²²³ Dumas Malone, *Jefferson and His Time*, vol. 2: *Jefferson and the Rights of Man* (Charlottesville: University of Virginia Press, 1951), 430.

procure it. I do not see why we may not have our sugar orchards as well as our cyder orchards.”²²⁴ He was also corresponding with French friends about the beginning of the beet sugar industry in France,²²⁵ but his heart belonged to maple sugar. So much so that, despite the fact that honey was one of the primary sweeteners in the nation’s early days and that Monticello had more than forty hives of bees by 1806,²²⁶ Jefferson ignored its potential. There is no mention of honey or beehives in his *Garden Book*.

Jefferson’s persistent championing of maple sugar reflects his view of himself as anti-slavery, and it reflects as well as the way in which he demonstrated this stance: quietly, obliquely, and without public fanfare. He planted maple trees, he bought and used maple sugar,²²⁷ and he proselytized among his friends, but none of those efforts required him to lay either his political capital or his national reputation on the line. Shortly after returning from his trip to New England with Madison, Jefferson exchanged letters with a mathematician from Baltimore, Benjamin Banneker, a free black who urged him to call for an end to the “inhuman captivity to which too many of my brethren are doomed.”²²⁸ Jefferson merely returned his compliments to Banneker, saying that “No body wishes more than I do, to see such proofs as you exhibit, that nature has given to our black brethren talents equal to those of the other colors of men. . . ,” while

²²⁴ Thomas Jefferson to Thomas Lomax, 6 November 1809. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/03-01-02-0516>>.

²²⁵ Lucia Stanton, “Sugar Maple” <<https://www.monticello.org/site/house-and-gardens/sugar-maple>>, 3.

²²⁶ Barbara McEwan, *Thomas Jefferson, Farmer* (Jefferson, NC: McFarland, 1991), 77.

²²⁷ In 1791, Jefferson calculated that “it takes 11. dwt. Troy of double refd. Maple sugar to a dish of coffee . . . so that sugar and coffee of a dish is worth 2 cents.” (Jefferson, *Memorandum Books*, 812.)

²²⁸ Andrew Burstein and Nancy Isenberg, *Madison and Jefferson* (New York: Random House, 2010), 231.

commenting to friends that perhaps Banneker's mathematical achievements were a result of his European ancestry or that a friend had helped him in his work.²²⁹ Almost twenty-five years later he declined to publicly support his young neighbor Edward Coles, who had a plan to liberate his own slaves and take them to the free soil of the Illinois Territory, instead urging him to drop the idea and remain in Virginia, where his voice could be heard on the subject of slavery.²³⁰

To the end of his life, even as he continued to promote maple sugar, he refused to use his influence to denounce slavery publicly. Less than three months before Jefferson's death James Heaton, a native of Virginia residing in Ohio, asked him to leave "but one single page" advocating the abolition of slavery.²³¹ In refusing, Jefferson contended that "time, which outlives all things, will outlive this evil also."²³² It was in this hopeful but temporizing vein that Jefferson spent a lifetime advocating for maple sugar.

²²⁹ Ibid.

²³⁰ Gordon-Reed and Onuf, *Most Blessed of the Patriarchs*, 285.

²³¹ James Heaton to Thomas Jefferson, 20 April 1826. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/98-01-02-6057>>.

²³² Thomas Jefferson to James Heaton, 20 May 1826. *Founders Online*, National Archives <<http://founders.archives.gov/documents/Jefferson/98-01-02-6127>>.

Conclusion

Despite suggestions in recent popular literature²³³ that Thomas Jefferson was a father not only of his country but of the maple sugar industry as well, a deeper search reveals a more complex picture. For one thing, there were numerous other factors contributing to the promotion and development of maple sugar and syrup production in the United States, such as the so-called maple sugar bubble fueled by land speculators, including some from abroad; abolitionist fervor, particularly among Benjamin Rush and his friends in Philadelphia; and economic necessity among colonial farmers struggling to wrest a living from the rocky, forested lands of New England. It is also difficult to draw a line from Jefferson to the steadily increasing amount of maple sugar and syrup produced, because no production records were kept until 1840, when the US Census Bureau began to keep them. There are no “before” statistics that might let us measure the impact of Jefferson’s promotion of the homegrown sweetener. Therefore, while Jefferson continued to advocate the use of maple sugar at home and abroad well past the turn of the eighteenth century, his influence was just one of many, and not a seminal one.

New England in general, and Vermont in particular, became a center for maple sugar not just because *Acer saccharum* grows abundantly there but because it is not farming country. Almost any hike into the New England woods will take one past the

²³³ Willard Sterne Randall, “Thomas Jefferson Takes a Vacation,” *American Heritage*, July/August 1996 <<http://www.americanheritage.com/content/thomas-jefferson-takes-vacation>>. Mary Miley Theobald, “Does Vermont Owe its Maple Sugar Industry to Thomas Jefferson and the Anti-Slavery Movement?” *Colonial Williamsburg Journal*, Autumn 2012 <history.org/Foundation/journal/autumn12/maplesugar.cfm>. Dave De Witt, *The Founding Foodies: How Washington, Jefferson and Franklin Revolutionized American Cuisine* (Naperville, IL: Sourcebooks, 2010), 142-146.

remnants of stone walls that once marked the boundaries of a farm. The stones that made such fine boundary walls also made farming difficult and unprofitable. Trees grew in abundance but their inaccessibility kept the maple sugar industry from thriving in an era when transport was primitive. Even today, much of the work of maple sugaring takes place in the deep woods. Small farmers could produce a fair amount of sugar cheaply, using just family labor, at a time of year when not much else could be done outdoors, supplying their own needs and those of neighbors and friends. Those pioneers of maple sugar production in the eighteenth and nineteenth centuries were just the sort of small farmers and householders that Jefferson championed as his agrarian ideal. Nevertheless, sugaring did not either lend itself to nor require a major industrial presence. Nor would personal intervention alone—even from so preeminent a personage as Thomas Jefferson—have been sufficient to advance the industry. It was not until the technology to produce and store maple syrup (evaporators, tin buckets and cans) began to develop in the mid-nineteenth century, coupled with the renewed awareness of the terrible human cost of producing cane sugar that came with the Civil War and America’s attempts to deal with its own slave issue, that maple sugar and syrup drew the attention of widespread commercial markets.

So if Thomas Jefferson is not the father of America’s maple sugar industry, what was his contribution? His was a sustained and eminent voice in the effort to make maple sugar the dominant sweetener in the United States. Although his initial interest was aroused by the Pennsylvanian Benjamin Rush (who died in 1813 after twenty years of silence on the subject of maple sugar²³⁴), Jefferson’s ties to Vermont, the state most

²³⁴ Stanton, “Maple Sugar,” 3.

closely associated with maple sugar, were close and meaningful. His visit to Bennington in 1791 and his subsequent correspondence with Joseph Fay stimulated his efforts to grow sugar maples at Monticello and to promote the use of maple sugar in a wider context. The men he met there—Fay, Vermont Governor Moses Robinson, and *Vermont Gazette* editor Anthony Haswell — remained lifelong Republicans and Jefferson supporters.²³⁵

Given Jefferson's sustained advocacy of maple sugar, it is interesting that his biographers devote little or no time to it. Some biographers (e.g., Dumas Malone and Gordon-Reed and Onuf) mention Jefferson's journey to Vermont but not the connection to maple sugar, despite numerous references to it in his letters. Rather, they dwell on how it cemented his friendship with Madison or on whether there was any truth to the Hamiltonian rumor that it was a political trip meant to drum up Republican support in the North. Perhaps the unsuccessful nature of his campaign on behalf of maple sugar, as well as the paradox it poses in view of his life as a slave owner, combine to relegate it to the attic of the mansion that was Jefferson's life.

Vermonters certainly have reason to be grateful to Thomas Jefferson. Theirs is the state most closely associated with maple syrup in the public's mind, and for good reason. It is the leading producer of syrup in the United States, turning out more than a million gallons in a good year, which is twice as much as its closest rival New York produces and twice the output of the other five New England states combined.²³⁶ Its Proctor Maple Research Center, a field research station associated with the University of Vermont, is

²³⁵ Wulf, *Founding Gardeners*, 96.

²³⁶ Leff, *Maple Sugaring*, 8.

renowned for basic and applied research on *Acer saccharum* and its products, with an emphasis on maintaining the continued health of sugar maple trees. In the *Proceedings of the Eighteenth Annual Meeting of the Vermont Maple Sugar Makers' Association*, an Ohio syrup producer wrote, "You [Vermont] were the first to send out the sweets of the maple tree to a consuming public, and make of it a commercial commodity, that is now eagerly sought everywhere. Go where you will, one cannot speak of maple sugar or maple syrup but the beautiful name of Vermont is at once suggested."²³⁷

No one can drive the highways and byways of Vermont without being afforded numerous opportunities to purchase maple syrup and other maple products, but probably very few people think of Thomas Jefferson when they stop. The connection between a founding father from Virginia and this most New England of products is a little-known but fascinating byway in American history. In addition, the story of his advocacy of maple sugar as a substitute for cane adds to our picture of Jefferson the slave owner who also penned the words, "All men are created equal."

²³⁷ A. R. Phillips, "Your Industry and Ours Compared," in *Proceedings of the Eighteenth Annual Meeting of the Vermont Maple Sugar Makers' Association*, January 10-11, 1911 (Montpelier: Capital City Press, 1911), 21.

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