Tapping nature’s bounty: science and sugar maples in the age of improvement

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Trees played a critical role in shaping the natural and human landscapes of colonial North America.¹ It could be difficult, in fact, to escape their presence. Sprawling woodlands covered much of the eastern half of the continent, beginning with the dense spruce and fir stands of the northern boreal forests of Canada, which blended into white pine, hemlock, birch and aspen as one moved further south before giving way to a complex mosaic of northern and central hardwood forests that blanketed New England in a patchwork of oak, chestnut, hickory and pine. This mosaic of trees became even more intricate within the mixed deciduous forests that stretched from the mid-Atlantic to the western Great Lakes, while the southern pinelands covered over 90 million acres of the southeast in longleaf pine, loblolly pine, oak and hickory.² More than simply a colourful backdrop, these forests actively shaped the human drama that unfolded during the colonial era. For natives and newcomers alike, woodlands provided a wide range of essential resources for everyday life, from fuel and lumber to clothing, medicine and food. Indeed, trees constituted such an integral part of their mental and material world that the late historian Brook Hindle sought to reconceptualise the period as nothing less than a ‘wooden age’. Like stone and bronze in earlier ages, wood had become more than an essential medium: it conditioned the very structure of life within these communities.³ And nowhere was this point more visibly demonstrated than on the Great Plains of the nineteenth century, when Euro-American settlers, as well as eastern tribes forced onto reservations, confronted the vast expanses of open grassland and discovered just how difficult it was to

2. Ann Sutton and Myron Sutton, Eastern forests (New York, 1985); Steve Nicholls, Paradise found: nature in America at the time of discovery (Chicago, IL, 2009), ch.7.
sustain themselves and their traditional way of life in a world without trees. If we are serious about the concept of a ‘wooden age’, and about trying to recover the ‘lost world’ it suggests, then we will need to carefully reconstruct the role of trees in shaping the social, economic and cultural terrain of eighteenth-century society. This project will require looking at trees in a different light: seeing them as dynamic elements of the past, whose particular characteristics were meaningful to eighteenth-century contemporaries in a way that is often lost to our modern sensibilities. Indeed, the focus will have to shift from abstract categories such as ‘trees’, ‘forests’ or even ‘wood’, to a more nuanced analysis of how different eighteenth-century groups perceived the value of particular species, growing in particular areas, with their own particular dynamics. We must, to reverse our modern saying, ‘lose the forest for the trees’. For not only did each species have distinct ‘personalities’ and characteristics that contemporaries studied closely, but the very details that stood out as meaningful depended upon whether it was being viewed in religious, aesthetic, commercial, scientific or even political terms. As the articles in this volume by Steven King and Aaron S. Allen demonstrate, we have much to learn by examining how particular craftsmen like Antonio Stradivari used the spruce trees growing in the Paneveggio Forest to create their renowned musical instruments, or how women like Harriet Wilder, living in south-east England, used the bark from this same spruce (Picea abies) to create a healing paste to treat severe rheumatism. Unpacking the layers of meaning that surround each story not only reveals how an intimate knowledge of trees spoke directly to the aspirations and anxieties of diverse individuals in the eighteenth century, but also underscores just how much this knowledge was rooted in the particular dynamics of local culture. The ‘mysteries’ of artisanal production, like the workings of ‘domestic medicine’, were complex endeavours that generated different sets of cultural experiences and judgements about how to work with the Norway spruce (as we commonly refer to Picea abies today). So like an ethnographer, whose aim is a ‘thick’ description of the intricate conventions that provide meaning and context within a specific cultural setting, scholars need to reconstruct

5. For illuminating models of this approach, see Conevery Bolton Valencius, The Health of the country: how American settlers understood themselves and their land (New York, 2002); and Richard White, The Organic machine: the remaking of the Columbia River (New York, 1996), ch.1.
6. It is worth pointing out that the Norway spruce also became a favourite tree of eighteenth-century improvers, who planted it widely throughout northern Europe, Britain and America. Charles Sprague Sargent, The Silva of North America, 14 vols (Boston, MA, 1891-1902), vol.12, p.24.
how these ‘webs of meaning’ shaped the way certain groups understood, valued and interacted with the trees they encountered in their daily lives.7

This article explores such issues by tracing the career of the North American sugar maple (Acer saccharum), a tree that attracted intense scientific, commercial and political interest throughout the Anglo-Atlantic world of the eighteenth century. To be sure, the sugar maple had long been a valued resource among indigenous communities as well as early colonists, who possessed a rich working knowledge of its distinct properties. But over the course of the eighteenth century, this local knowledge, along with the diverse practices it sustained, was increasingly overshadowed by new webs of meaning emanating from the realm of scientific ‘improvement’. By mid-century, the prospects of making large quantities of commercial sugar from the tree’s sap had become a focal point within a series of trans-Atlantic campaigns that sought to promote scientific research, experimentation and the diffusion of useful knowledge as the keys to ensuring societal progress. Those who embraced this world view, and who succeeded in making ‘improvement’ central to the agenda of the Anglo-American Enlightenment, argued that nature’s true bounty was waiting to be tapped by those with the scientific know-how to use natural resources more effectively.8 And while scholars have long noted how these ideas spurred wide-ranging experiments in agronomy and imperial botany, particularly with regard to tropical crops, few studies have examined the distinct campaigns that targeted the northern regions of the globe, seeking to foster a more enlightened brand of forestry that would unlock their true potential.9 If plants like tobacco or sugar cane could transform the torrid zones into fountains of wealth and power, then certainly improvers could introduce new species of trees, develop better techniques of forestry, or discover new industries that would harness the potential resources of the northern hemisphere. Inspired by such visions, a coalition of scientists and civic-minded improvers began experimenting with a wide range of arboreal projects, hoping to build a common stock of knowledge and discoveries that could be employed by enterprising groups on both sides of the Atlantic. And it


9. In addition to the works cited above, see Schiebinger, Plants and empire; Schiebinger and Swan, Colonial botany; and Lisbet Koerner, Linnaeus: nature and nation (Cambridge, MA, 1999).
was out of this larger context that the sugar maple emerged as a potentially transformative tool in the service of enlightened improvement.\textsuperscript{10}

Since sugar had played such a dominant role in the political economy of the Atlantic world, the implications of developing a rival industry in the north were potentially momentous. With millions of trees already growing freely throughout North America, all that was needed to unleash a veritable sugar boom, advocates claimed, was the right kind of encouragement, instruction and coordination. And these were precisely the resources – the intellectual and social capital – which the realm of scientific improvement could provide.\textsuperscript{11} Such support would encourage Americans to begin creating their own maple-sugar industry that would not only break the powerful Caribbean monopoly, but also in the process reconfigure the geopolitics of the Anglo-Atlantic world. For precisely this reason, opponents of slavery began to take the lead in promoting maple sugar by the 1790s, arguing that it would provide the ultimate blow to the institution of slavery by offering a free-labour alternative to the plantations of the West Indies.\textsuperscript{12} Like a providential gift, the maple tree would ‘drive out the sugar produced by the tears and blood of slaves’, in the words of one enthusiastic abolitionist.\textsuperscript{13} Indeed, the 1790s witnessed the birth of a veritable cult of maple sugar, in which newspapers, almanacs, pamphlets and poetry revelled in the transformative potentials of the tree.\textsuperscript{14}

By examining the apotheosis of the sugar maple, we can begin to shed new light on the centrality of trees to certain visions of progress that arose during the Enlightenment – to understand, in other words, how the ‘wooden age’ helped fashion the ‘age of improvement’. If science was at the heart of this new culture of improvement, it is important to recognise that trees were at the heart of the ‘new science’. From its very inception, the Royal Society of London had been deeply involved in a variety of studies and experimental projects dealing with trees.\textsuperscript{15} It was


\textsuperscript{11} See, for example, \textit{Remarks on the manufacturing of maple sugar [...] collected by a society of gentlemen in Philadelphia} (Philadelphia, PA, James & Johnson, 1790); and David Humphrey, \textit{A Poem on industry} (Philadelphia, PA, Mathew Carey, 1794).

\textsuperscript{12} Benjamin Rush, \textit{An Account of the sugar maple-tree} (Philadelphia, PA, 1792).


\textsuperscript{14} On the boisterous cult of maple sugar, see E. Jones, \textit{The Acer saccharinum} (London, 1832); and Helen Nearing and Scott Nearing, \textit{The Maple sugar book} (New York, 1970), ch.1.

only fitting, therefore, that its first published work was John Evelyn’s monumental Silva, or a Discourse of forest trees (1664). ‘Within this late Age’, Evelyn mused, ‘[Trees have been] wonderfully improv’d, increased and searched into, and [seem] by the Divine Wisdom, to be an inexhaustible Subject for our disquisition.’\(^{16}\) It was exactly the kind of useful subject that became a central focus of the new science championed by the Royal Society and its many admirers.\(^{17}\) That trees took decades, even centuries, to reach maturity only made it all the more necessary to apply the methodical tools of science to improve their management. ‘Timber cannot be raised like Money upon a sudden Emergency, not even upon Government Security’, one contemporary decried.\(^{18}\) And the eighteenth century accordingly witnessed impressive campaigns to introduce new species of trees, to improve forest ‘plantations’ and to experiment with a range of arboreal industries. In fact, the careful stewardship of trees became a widely celebrated form of patriotic service, connecting individuals to the future welfare of the land, the nation and posterity. ‘To plant trees’, the twentieth-century landscape architect Russell Page once famously remarked, ‘is to give body and life to one’s dreams of a better world’, and few moments in history are more associated with dreams of a better world than the Enlightenment.\(^{19}\) But it is important to ask why people were willing to dream in such a fashion; why they were willing to imagine a world capable of being improved one tree at a time. After all, projects like the maple-sugar campaigns could not have existed unless individuals were willing to invest their time, resources and hope in such endeavours. So we need to understand how these groups were able to mobilise resources in innovative ways, inviting contemporaries to engage in new forms of collective action and collective imagination. As this article tries to reveal, the culture of scientific improvement used trees to generate new kinds of intellectual, social and political capital that empowered a generation of reformers to pursue their ambitious goals of transforming the world.

**Knowing trees through thick and thin**

To appreciate the changes brought about by the culture of scientific improvement, it is important to situate its practices within a broader historical context. Eighteenth-century science, after all, was neither the first nor the only way of generating a detailed knowledge about the sugar

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maple. Before European contact, the diverse communities living in the north-eastern forests had developed their own complex oral traditions and ceremonial practices that enabled people to make sense of the tree and its unique properties. Tapping sugar maples, in fact, required a deep knowledge of how one was supposed to interact with the various *manitou*, or ‘spirits’, that inhabited a given landscape – be they trees, plants, animals or other supernatural elements.20 For the Ojibwe of the Great Lakes region, the sugar maple was so intertwined with their sense of identity, place and history that they called it ‘Nin-au-tick’ (‘our own tree’).21 Yet in an important sense, every tribe could claim it as their ‘own tree’, because each developed their own stories to explain why the tree exuded its sweet sap, how people discovered it, as well as how it should be harvested and used. Each village, moreover, had to weave its sugaring activities into distinct cycles of seasonal mobility, subsistence and kinship, so that a Menominee community, living in northern Wisconsin, had a noticeably different relationship to the sugar maple from a Lenape clan gathering around a sugar bush in central Pennsylvania.

The same is true for what we might call the vernacular knowledge that early colonists developed over time. There was a striking richness and diversity to the way local communities understood the sugar maple, a fact revealed in the sheer variety of names and experiences that emerge from the historical records. Settlers talked about rock maples and mountain maples, fire maples and curly maples, Virginia maples and sugar maples – each name reflecting how different characteristics of *Acer saccharum* resonated with particular groups. Early waves of New England farmers trying to clear their fields confronted the ‘rock’ maple, whose incredibly hard wood left a lasting impression on their bodies and memories. Others were more impressed by the flammable qualities of the wood, causing it to be singled out as one of the most desirable kinds of firewood sold in colonial America; while certain contemporaries were enamoured by the brightly coloured foliage that stood out so dramatically in the autumn.22 Even settlers who had little interest in using the tree quickly learnt one important characteristic: sugar maples tended to grow on rich soils with proper drainage, making ‘sugar-tree land’ far more


22. Much of this vernacular knowledge of trees was recorded in eighteenth-century travel accounts – one of the best being Peter Kalm’s *Travels into North America*, 2 vols (London, T. Lowndes, 1772).
valuable than the poorly drained glacial tills that supported other trees. Thus, contemporaries assigned a wide range of qualities, attributes and even names to this one tree, reflecting the diversity of their experiences and values.

What is perhaps most striking about this information is how much the knowledge of both indigenous and colonial communities was rooted in these local contexts. To borrow a term from anthropologists, we are dealing with a kind of ‘thick’ knowledge that is so embedded in the tacit values and assumptions of a particular setting that it has layers of meaning which are often lost outside that specific context. And it was here that certain strands of eighteenth-century science offered a noticeable break from the past, by emphasising new paradigms of enquiry, and new knowledge-making practices that sought to transcend the local by focusing instead on the universal categories, patterns and processes of nature. The goal was to render thick knowledge thin – to remove the layers of culture, judgement and context so that any individual could ‘know’ trees without having to know any of the rest. And it was this particular movement within eighteenth-century science – by no means universal, but certainly influential within the emerging networks that linked the scientific, commercial and genteel communities – that spoke directly to the concerns of improvers, who also sought to break down barriers to the free flow of knowledge, specimens and experimental projects.

This shared goal helps to explain why the field of scientific improvement was both remarkably modest and incredibly ambitious in the ways it tried to construct knowledge. On the one hand, these naturalists drew much sharper boundaries between what was deemed knowable and what was not, eschewing metaphysical questions about why nature behaved in a certain way in favour of more limited enquiries into the patterns of how nature operated. This boundary was reinforced by new rhetorical conventions and knowledge-making practices that enshrined the ‘fact’ as the fundamental building block of legitimate scientific knowledge. So, whereas previous generations of natural philosophers would have seen little value in merely cataloguing trees, measuring their leaves and crown, or comparing growth rings to height, many eighteenth-century practitioners believed that accurately counting, classifying and cataloguing

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were at the heart of any truly scientific endeavour. At the same time, however, many scientists were dramatically increasing both the scale and the scope of the information they intended to survey. The sheer range and diversity of material studied by eighteenth-century naturalists were quite remarkable compared to those of their predecessors, no doubt fuelled in part by the era’s growing networks of communication and global trade. But such an expansive scope – a commitment to exploring and cataloguing the full breadth of the physical world – also reflected an important shift away from the priorities of earlier generations of naturalists whose work was so deeply rooted in the study of locality and place. Indeed, those scientists whose work and activities were increasingly connected to the world of improvement approached knowledge in a strikingly different fashion from the earlier chorographic tradition that sought to capture the local essence that defined a region’s flora, fauna, weather, antiquities, inhabitants and customs. While the chorographic approach would continue to flourish in many quarters throughout the eighteenth century, it was the very richness of detail, the attention to particularity, and the embedded judgement of the writer that made it so problematic to the goals of scientific improvement. By carving up the natural world into these diverse microcosms, scientists had made it virtually impossible to compare or integrate knowledge from one setting to another, preventing the kind of thin information that could be used irrespective of place.

To appreciate how trees like the sugar maple were transformed into thin facts – rendering complex phenomenon both intelligible and useful to distant observers – we would do well to consider the work of the mid-century naturalist Peter Kalm (1716-1779). A close disciple of Carl Linnaeus, Kalm travelled to North America in 1748 at the bequest of the Swedish Royal Academy of Science. His trip was intended to expand the boundaries of both knowledge and improvement by producing a careful botanical record of North American trees and plants that could boost the agricultural economy of Sweden and Finland. Accordingly, he was expected to gather the most promising botanical specimens while diligently recording the local knowledge of inhabitants as he travelled throughout Canada and the northern British colonies. Kalm was par-

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27. On the chorographic tradition in Britain, see J. G. Mendyk, *Speculum Britanniæ*: regional study, antiquarians, and science in Britain to 1700 (Toronto, 1989).

particularly interested in studying the sugar maple, hoping it might provide Scandinavian countries with their own domestic source of sugar, thereby freeing them from the expense of and dependency on Caribbean markets. At the time, however, the tree was still something of a mystery to Europeans, and Kalm complained about the relative paucity of sources, which he described as ‘either very brief, incomplete, or, from what I have heard and read, inaccurate’. In the course of his travels, he had the opportunity to study many sugar maples up close, and to canvass local residents about their knowledge of the tree and the process of refining its sap. In 1751, Kalm produced a detailed article for an academic journal that sought to fashion these observations into a more factual record of the sugar maple, something that could be transmitted and relied upon by others. Kalm measured elements like the volume of sap in relation to the inches of snow and the temperature; he calculated the ratio between a tree’s age, its size and the amount of sap it produced; and he even recorded the relative speed with which maple sugar melted in hot tea as compared to ordinary cane sugar. Nowhere was this peculiar mix of curiosity, disciplined observation and rigid quantification more evident than when Kalm spent a morning climbing through a series of trees to discover if dew in fact covered both sides of their leaves, and to see whether the moisture varied according to height.

To be sure, modern audiences might well question the scientific value of such material – with its heavy focus on minutiae and its descriptive rather than analytical quality – but it was precisely the kind of information that many contemporaries sought to create. As they studied the sugar maple and other trees, natural philosophers like Peter Kalm worked to break their findings up into discrete and manageable units of information that could be recorded and transmitted to others. And by privileging such observations, rather than discerning insights or judgement, Kalm was producing exactly the kind of thin data that could be integrated into the growing stock of empirical knowledge made available through the overlapping networks of science and print. The culture of scientific improvement, in other words, helped spin new webs of meaning that conditioned how certain groups interacted with these trees, creating a shared set of categories, measurements, vocabulary and pri-

orities. And the deeper implications of this change could be found in the lists, tables and catalogues that began appearing in the literature of improvement, underscoring how new ways of systematising knowledge could lead to new ways of ordering and appropriating the natural world. The 1729 edition of John Evelyn’s *Silva*, for instance, began featuring new tables in the appendix which arranged the various trees by useful categories, such as the different soils or growing conditions they required. As this appendix and others revealed, a thin knowledge of trees could be rearranged so as to reveal new patterns and potential uses. Authors, in fact, increasingly sought to organise this data into ever more useful lists and charts, mapping out how specific trees could be employed to satisfy any particular need: to provide shelter or forage for livestock, to secure the eroding banks of rivers, to provide high-quality timber and so forth. Indeed, later works even began including cross references to the page numbers of prominent nursery catalogues, so that readers could know exactly where to purchase specimens to begin their improving projects. By 1779, James Meader’s *The Planter’s guide* dispensed with textual discussion altogether, instead relying on nothing but tables to convey the relevant information about trees in an organised and usable format. The accompanying engravings, which portrayed the various species of trees aligned perfectly in order by their relevant qualities – looking like elements arranged neatly on a periodical chart – underscored just how dramatically these texts had disentangled trees from their local setting and context. Trees were now movable tools in the panoply of improvement, and the sugar maple could be found on lists in faraway places like Ireland, where locals were being encouraged to experiment with it as well as other useful species. Indeed, to leave the world of ‘rock maples’ and *Nin-au-tick*, and begin tracing *Acer saccharum* within these tables, catalogues and lists, is to witness a profound shift in the way certain eighteenth-century groups interacted with the world of trees. By mid-century, the overlapping networks of science and print had expanded to such an extent that enterprising groups felt empowered to appropriate knowledge and objects from around the globe, placing the use of natural resources at the very heart of their larger vision of societal progress and reform.

33. See for example, James Justice, *The British gardener’s new director, chiefly adapted to the climate of the northern countries* (Dublin, John Exshaw, 1771).
The political ecology of improvement

As we have seen, the merger of science and improvement encouraged people to view elements of the natural world, particularly trees, as pieces on a chessboard, capable of being deployed by those with the knowledge and connections to do so. And one of the goals of the scientific community was to put these resources into the hands of worldly improvers, developing an economy of knowledge that allowed enterprising groups to access the vast amounts of information and material that had always remained closed off to outsiders because of cultural, geographic or occupational boundaries. In this respect, the realm of scientific improvement constituted a significant change in who would have access to natural resources; how these resources would be used; and to what larger purpose. The use of trees, in other words, was tied to deeper issues about how certain groups could appropriate nature to bolster their own authority and power within society. This political ecology of improvement was a crucial feature of the maple-sugar campaigns, which actually unfolded in three distinct phases, each revealing in its own way how trees could be employed as a potential tool for restructuring the economic and political order.

The first phase occurred in the decades surrounding mid-century, the very period when Kalm and others were busy incorporating the sugar maple into the intellectual networks that were creating the world of improvement. For Britons, this was a particularly turbulent period when the intensification of imperial rivalries, warfare, economic competition, aggressive protectionism on the Continent, not to mention their own political and religious instability, fed anxieties about the future prospects of the imperial nation. The Caribbean region, in particular, emerged as a growing source of apprehension because of the costly diplomatic and military entanglements surrounding its defence, leading Benjamin Franklin to quip that England and France would be better off ‘throwing Dice’ to see who would get to keep all of the sugar colonies, in which case ‘the Loser in the Throw would be the Gainer.’36 Within this context, many Britons became convinced that the northern portions of the empire had been woefully neglected, and that they could yield much of the wealth and resources that had come from tropical colonies. By the 1740s, a series of new campaigns began promoting discoveries and improvements in the commercial fisheries, whaling, salt production and mining that would help develop these ‘Northern Indies’, as some boosters began calling these regions.37 Even more attention was directed

37. Henry Ellis, Voyage to Hudson’s Bay (London, H. Whitridge, 1748), p.ix; James Sterling,
towards fostering an enlightened brand of forestry that would encourage
the making of pot ash, pearl ash, naval stores, sericulture, commercial
orchards and perhaps the biggest prize of all, maple sugar. The goal was
to rejuvenate the empire and ultimately the nation, by freeing Britain
from the military and moral quagmire of the Caribbean.

Yet the advent of the American Revolution altered the meaning and
import of maple sugar for a new generation of colonists, who seized
upon it as a crucial tool in the patriot boycotts of British commodities. In
1765, amidst the heated Stamp Act controversy, widely published ac-
counts from northern Massachusetts trumpeted news of the ‘great Im-
provements [...] in the [Maple] Sugar-making Business’ whereby a single
person could now make ‘upwards of 600lb’ per season. Authors were
quick to drive home the political implications, explaining that ‘we might
be able at last to supply ourselves with these Articles [sugar and molasses],
and no longer have Recourse to our West India Neighbours.’38 A
Connecticut writer was even more pointed, noting that, since Caribbean
planters had supported Parliament, ‘it will therefore be necessary to
shew them of how much importance we are, by distressing them [the
West Indies] for want of our trade.’ ‘Our maple trees’, he continued,
would be absolutely critical in this regard since they ‘produce very good
sugar and molasses’. The campaign for maple sugar, in fact, invited
ordinary colonists to connect their daily activities to larger political
goals, a point which the Connecticut writer emphasised when he
acknowledged that ‘farmers can do more towards regaining and sup-
porting the liberties of this country than any other set of men, whatever’,
since they alone could ensure the success of ‘our non-importation and
non-exportation agreement to England and the West-Indies’.39 Such
claims underscored to the public how a maple-sugar industry had the
potential to rearrange the commercial and political balance of power in
the Anglo-Atlantic world. And we often tend to forget that a significant
portion of the American boycott, as well as colonial animus, was directed
squarely at the Caribbean islands because of their refusal to join the
mainland cause. Yet, despite the patriot efforts to develop a full-blown
maple-sugar industry in America, the disruptions of the war, along with a
variety of technical problems, appear to have kept production confined
to limited areas of New England, where it mainly supplied household
demands.

An Epistle to Arthur Dobbs (London, R. Dodsley, 1752); and Guenther, ‘Enlightened pursuits’,
ch.4.

38. Boston news-letter, 4 July 1765. This piece was widely reprinted throughout America and
England.

The third, and by far the most significant, push to encourage maple sugar began in the early 1790s, when a coalition of civic-minded improvers, abolitionists and entrepreneurs joined forces to rejuvenate this project. The subject appears to have percolated within the American Philosophical Society as well as several agricultural clubs in Pennsylvania and nearby states, who were searching for different ways to encourage farmers to make better use of their trees. Since the demands of agricultural labour were at their lowest point in March, precisely the time when most maple trees had to be tapped, it seemed like a perfect activity for rural households. Yet refining sugar was a complicated matter, which is why it seemed appropriate that these learned societies and agricultural clubs take the lead in sponsoring experiments, research and correspondence to figure out exactly how maple sugaring could become a viable side industry. Such interest began to spill outside these organisations as members like Benjamin Rush started to publicise their ideas in local newspapers, in transatlantic journals and among their circles of friends and colleagues. By the early 1790s, several new organisations had been formed specifically to promote the potentials of maple sugar, ranging from the genteel ‘Union Society for promoting the manufacture of sugar from the maple tree’, to the more ambitious Holland Land Company, which purchased over 3 million acres of land in western New York to tap the lucrative potentials of the emerging maple-sugar market. As groups began publishing estimates of the total amounts of maple sugar that could be produced in America – calculations essentially endorsed by scientific organisations like the American Philosophical Society – the ambitious scope of this project became quite clear to contemporaries. Audiences throughout England and America soon learnt that no less than 135 million pounds of maple sugar were waiting to be tapped each year from the forests of New York and Pennsylvania alone, a startling figure which suggested that there was real substance behind the claims of promoters that it could actually provide an alternative to slave-grown sugar cane. Cultivated by yeoman households, maple sugar would ensure the triumph of free labour, republicanism and material prosperity, confirming that most enticing of Enlightenment views that there was really no need to choose between pleasure and progress, self-interest and the improvement of society. The ‘discovery’ of maple sugar was proof that both nature and history were conspiring to usher in an era of greater progress and freedom for humankind.

We know, of course, that such prophecies never came to pass. The sugar maple did not set slaves free, as many contemporaries believed it would. By the war of 1812, Americans would be producing nearly 10 million pounds of maple sugar a year, helping improve the family budgets of many northern households, but falling far short of the
amount needed to challenge the primacy of Caribbean sugar cane. Still, the maple-sugar movement revealed how the ideology of improvement could weave together strands of science, civic collaboration and a providential nature into a powerful vision that spoke to the anxieties and aspirations of many. So, despite the differences that marked each phase of the maple-sugar campaigns, they all drew upon nature to legitimise and sustain their larger goals of transforming society. These movements, it should be underscored, emerged largely outside the formal arenas of politics and the state. Yet each boldly assumed a new public role for private citizens, whether reconfiguring the empire, building a new nation or dismantling the political economy of slavery. In significant ways, then, improvers positioned themselves as arbiters of social and material progress by claiming to hold the key to unlocking nature’s true potential. More than just a material resource, trees helped improvers carve out new arenas of civic engagement and new roles for public service that altered the landscape of power and authority within eighteenth-century society.

Such a story, to be sure, is quite different from other narratives of the eighteenth century, which sometimes focus on how the Enlightenment’s ‘rationalising’ approach towards trees found its fullest expression in market capitalism and the state. According to many scholars, the goal of bringing greater efficiency, order and utility to the natural world led either to the cold calculus of the marketplace, treating trees as abstract commodities to be extracted with ruthless efficiency, or to the hubris of government bureaucrats and planners, whose brand of ‘fiscal forestry’ reduced the complexities of living forest preserves to the narrow logic of revenue streams and resource maximisation, with equally destructive results. The tree could serve either as an instrument of economic capital, helping to underpin the burgeoning world of market exchange, or as a source of political capital, helping officials consolidate state power and, in some cases, imperial agendas. Either way, the use of trees was increasingly tied to these larger visions of how the market or the state would serve as the true engine of societal progress. In other words, each used trees as the foundation for establishing very different political ecologies. True enough – yet, as the career of the sugar maple has shown, the eighteenth century witnessed another approach that arose independent of the state and the market, carving out a popular realm which combined scientific projects, civic engagement and republicanism to articulate a markedly different vision for the social, economic and

political role of trees. Perhaps contemporaries asked too much of trees
in this respect. But it is hard not to marvel at the growing confidence and
aspirations of a generation of improvers who believed that they pos-
sessed the power to make the world anew – to paraphrase the tax
collector turned scientist turned revolutionary, Thomas Paine.41

Bradford, 1776). Paine writes: ‘We have it in our power to begin the world over again’
(p.87).