



Introduction



Early in the seventeenth century, two armies sailed from Europe, bound for North America. They landed at the same time and place, and encountered the same conditions. One army struggled for survival, suffering an enormous casualty rate. The other invaders quickly established a foothold on the coast and within a few years had spread far across the continent, increasing their numbers at an exponential rate.

Humans made up the first group of invaders — the ones that almost died off. The details of the other invasion aren't in the history books, but it really happened. The wildly successful invaders were plants — the sometimes beloved and often despised lawn plants we call dandelions.

Dandelions. Whether you love them or whether you hate them, dandelions are, perhaps, the most familiar plant in the world. They're the one species of plant that just about anyone can identify at a glance, as familiar to humans as the dog.

This most common of plants is now despised as a weed by many, but it wasn't always that way. Dandelions were once a valued commodity, purposely transported by humans across oceans and continents. Americans today spend forty billion dollars annually on lawn care, and a hefty part of that budget goes to the attempt to eradicate dandelions — the very plant that was brought to this country by its earliest European settlers, who prized the plant for its medicinal





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powers and nurtured the cheerful golden flowers for their beauty. Not too long ago, prize-winning dandelions were exhibited at county fairs — one variety was patriotically christened the “American Improved.”¹ Gardeners used to weed out the grass to make room for the dandelions.

What happened? In an amazingly short space of time — less than one human life-span — this loved garden flower became the most unpopular plant in the neighborhood. Thirty million acres of the United States are now lawns, and an estimated eighty million pounds of pesticides are used on them annually.² Probably no other plant in the world undergoes such a barrage of deadly chemicals; humans have attempted to exterminate dandelions with a passion that’s usually reserved for cockroaches or tarantulas. Yet the dandelion remains.

How does the dandelion do it? What’s the secret of its success? In these days of environmental destruction, thousands of species are on the verge of extinction. Not just California condors and blue whales. Plants are in peril, too; wild orchids and ferns, painted trillium and pink lady-slippers: whole species are declining in spite of frantic efforts to preserve them. An estimated 100,000 species of plants are in danger of extinction worldwide.³ It might be worth our while to examine how it happens that the dandelion can thrive, sometimes in the most inhospitable of habitats, defying humans’ best efforts to get rid of it.

Dandelions are fast growers, the sunny yellow flowers going from bud to seed in a matter of days. But they are also long-lived — an individual plant can live for years, so that the dandelion lurking in a corner of the playground might be older than the children running past it. Dandelion plants have long roots, which sink deeper and deeper into the soil through the seasons. Dandelions have sunk their roots deep into history as well.



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I have prowled many a library, searched the dusty shelves of bookstores, and surfed the Internet in search of information about dandelions. Finding information wasn't a difficult task. There's so much material on dandelions that I was often in danger of drowning rather than surfing. I discovered tips for growing bigger and better dandelions, and sure-fire methods for exterminating them. I read of myth and fact, lore, magic spells and love charms; of dye made from dandelion roots and rubber made from dandelion sap; recipes for such delicacies as dandelion chicken Alfredo, dandelion ice cream, and dandelion wine; and some of the world's most ancient prescriptions recommending dandelions as infallible remedies.

I think it's fair to say that no other plant in the world has been linked with such a wildly diverse assortment of cultures and times. Early American Shakers advertised Extract of Dandelion as a liver tonic; Japanese gardeners formed dandelion horticultural societies to celebrate the beauty of the golden blossoms. Arab and Chinese physicians wrote of its medical benefits a thousand years ago, and herbalists swear by it to this day. Greek philosophers, ancient Jewish rabbis, Native American shamans, New England witches, . . . to each of these, the dandelion showed a different face, gave a different message. Children, gardeners, botanists, exterminators; Pilgrims, Persians, Egyptians, twelfth-century Benedictine monks — all have bent over this little roadside weed and considered it well, pondering how it could fill their own particular need.

Let us join them.

Notes to Introduction

1. Sturtevant, E. Lewis. *Edible Plants of the World*. New York, NY: Dover Publications, 1972. In 1871, no fewer than four varieties of dandelion were exhibited at the Massachusetts Horticultural Society, under the names



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French Large-leaved, French Thick-leaved, Red-seeded, and the proudly-named American Improved Dandelion.

2. Wargo, John. *Risks from Lawn Care Pesticides*. North Haven, CT: Environment and Human Health, Inc., 2003. Environment and Human Health, Inc. (EHHI) is a non-profit organization made up of doctors, public health officials, and policy experts dedicated to the reduction of environmental health risks to humans. See more at <http://www.ehhi.org/reports/lcpesticides/summary.htm>.

3. This estimate of threatened species is that of Botanic Gardens Conservation International (BGCI), a professional organization of botanic gardens across the world, dedicated to the study and preservation of rare plant species. See more at <http://www.bcgi.org>.



Chapter I

Putting Down Roots

*Massachusetts
About 1621*

A woman kneels in the rich, dark soil of a garden. Golden sunlight pours down on the freshly-turned earth, and the comforting warmth helps her to forget the cold. After a winter filled with hardship, death, and sorrow, it had seemed as if the sun would never shine again. But now the grass is green-ing, and spring has come at last.

She crumbles the soil between her fingers, preparing it carefully for the seeds. It is vitally important that these seeds grow: she is planting an herb garden, of plants carefully chosen for their healing powers. She lifts her tired eyes and scans the forbidding tangle of trees crowding close to the huts of the little settlement. Here there are no doctors' offices or apothecary shops, only wilderness. The plants she grows in her garden will be medicines that might make the difference between life and death for her family in this terrifying New World.

She etches a furrow in the fertile soil, then carefully sprinkles in a row of tiny brown specks. She pats the soil over them lovingly, murmuring a prayer over the precious seeds: a heartfelt prayer that dandelions will grow, where before there was only the barren grass.



The overcrowded little vessels beat their way across the icy waters of the North Atlantic, and the storms were fierce. The passengers were seasick and miserable, cramped below decks in the damp, smelly hold, and as they tossed on the rough seas the voyagers tried desperately to keep their children and their possessions safe and dry — especially what was perhaps the most important possession of all: seeds. These travelers were headed for a land filled with unplowed and fertile soil — a whole New World — and they were planning to put down roots.

They were not the first Europeans to invade North America, by any means. But most of the previous comers — the fishermen and fur trappers, and the gold-hungry settlers of Jamestown — were just passing through, grabbing whatever resources the new land would yield, and heading for home to cash in as quickly as possible.¹ In 1620, with the sailing of the *Mayflower*, a new type of invasion began along the beachheads of the New England coast. Whole families embarked for the New World, and they intended to stay; they packed up the kids, and the dogs and chickens; they brought tables and chairs, pots and pans, blankets and cradles. And they made sure to pack the tools of farming: shovels, hoes, and axes.

These travelers, so far separated from us in time, came from an environment that in many ways was similar to ours: an ordered world of houses and streets. Many of them came from towns or cities, places where you could run to the bakery to buy a loaf of bread, or go to the theater to see a play; you could call a constable for help if there was trouble, or stop by the doctor's office to pick up medicine if your kid happened to be sick. Their world was constructed, organized; it was a human-dominated environment, a controlled landscape, with the arable fields carved into small postage-stamp

plots that had been plowed for generations. The wilderness had long ago been beaten back, pushed out of sight and all but forgotten.²

But the dim green coastline they were approaching presented a very different scene from the skyline of church spires and tall buildings they had sailed from. The passengers on the first ships to approach the New England coast must have turned to each other with blank faces and frightened hearts when they saw what confronted them: a wilderness of trees. In those days, it's said, a squirrel could travel tree to tree, from Cape Cod to the Great Lakes, and never need to set a paw to the ground; east of the Mississippi, most of the continent was one big forest.

The word "wilderness" has a pleasant ring to my twenty-first-century ears; the idea of heading off into a wilderness sounds enjoyably adventurous when it's enclosed within the boundaries of a national park. But in other centuries, "wilderness" was a noun generally preceded by adjectives like "hideous" and "desolate."³ The first European settlers saw the forest as a dismal place, full of "cruell, barbarous, and most trecherous Indians" skulking in the shadows.⁴ North America was full of the promise of wealth, but its wilderness was an obstacle to be overcome; this wild new land was not a congenial place for humans, or a good habitat for the plants they needed to grow in order to survive — plants like dandelions.



How did dandelions, a Eurasian plant known to botanists as *Taraxacum officinale*, get to the New World? No one knows for sure. Theirs was a quiet invasion. Legend has it that the Pilgrims first set foot on Plymouth Rock, and the big gray boulder is a monument today, enshrined under an

imposing imitation of a Greek temple. But no stone marks the spot where dandelions first came ashore.

The ships that crossed to the New World were often filled with rocks and earth for ballast, which was then dumped dockside. The piles of dirt contained seeds, dandelion seeds almost surely among them, and soon the little yellow flowers probably were poking out of the sandy soil near bays and rivers. Other dandelion seeds undoubtedly infiltrated the new environment in more subtle ways, arriving in pantcuffs, rolled up in socks, or stuck in a cracked boot sole.

But dandelions came not only as stowaways. They traveled first-class as well as steerage, having been invited on board as welcomed passengers, so to speak. Dandelions were one of the very first Eurasian plants to invade the Western Hemisphere—and some arrived in carefully wrapped packages of garden seeds.



Why on earth would anyone plant dandelions?

Well, you can eat dandelion greens, of course. But seventeenth-century folk didn't favor leafy vegetables much, being mostly no-nonsense meat-and-bread eaters, although in springtime they occasionally enjoyed a mess of "sallet herbes."⁵ And the stern Puritans were not much given to indulging in dandelion wine. Dandelions were neither food nor drink — they were medicine.

While the men did the heavy work of cutting down the trees and plowing, gardening was the women's chore. In the newly-cleared sunny spaces, they set themselves to create herb gardens, little square-edged plots seeded with familiar, home-like plants — small and hopeful patches of order in the chaos of the wilderness. The herb gardens were filled with plants that were the housewives' indispensable medicine chest. Some plants

were potentially life-saving remedies, others were cures for the little ailments of life, the botanical equivalents of Pepto-Bismol, Kaopectate, aspirin, sleeping pills, and Band-Aids.

All parts of the dandelion plant — leaf, root, and flower — had been known for millennia as efficacious remedies against a host of ailments, and were hailed in popular “herbals,” or books of plant lore, as powerful medicine.⁶ The anxious wives and mothers, facing so many hardships in the New World, eagerly planted the seeds of such useful plants. Although no one understood why dandelions were good medicine, everyone knew that they worked. Dandelions’ golden blossoms were considered one of the most useful flowers in the garden.

There’s an old saying about how to choose the plants for your garden: “Some for use and some for delight.” The versatile dandelion brought not only healing, but joy.

The early settlers planted dandelions for the same reason that modern-day travelers take refuge at a McDonald’s or a Holiday Inn: when you’re far from home, the greatest comfort lies in the familiar. The American wilderness was terrifying — often lethal — *terra incognita*. So, almost from the hour they landed, the European settlers began the task of making the New World as much as possible like the Old World they had fled.

To the bewildered children who had been uprooted from their old life, everything must have seemed alien. Even the very flowers in their dooryards were unfamiliar, and the homesick youngsters must have missed daisies and buttercups, red and white clover, Queen Anne’s lace, and dandelions — none of which were found in North America till humans brought them. The cheerful face of the dandelion provided a sweet reminder of home.

When a child blows on a dandelion puffball, the gray globe shatters, and the seeds fly high. Depending on the wind, the little gossamer parachutes can travel a few feet or hundreds of miles. A single dandelion flower head could produce two hundred seeds, and a germination rate of ninety percent is not unusual. The dandelions were on the move.

Soon there was no need for anyone in the New World to plant dandelions. No garden fence was ever built that could contain the aggressive little plants, and they began elbowing their way into fields, roadsides, and pastures. Within a few years of their arrival, dandelions were solidly entrenched in their new empire. The human immigrants spent long, exhausting years of toil to build a life in the wilderness, but the dandelions made themselves right at home. A botanical survey of New England in 1672 reported them as well-established plants.⁷ Spaniards also brought dandelions to the New World as medical herbs, importing them into California and Mexico; the French introduced them into the wilds of Canada. Soon the little rosettes of jagged-edged leaves were spreading from the edges of the continent towards the heartland, springing up behind the settlers like green-and-yellow footprints.

It's interesting to speculate on the thoughts of the continent's original inhabitants as they began to notice the small invader moving inland from the coast. They quickly learned of its healing powers; Native American nations across the land, from the Algonquians of eastern Canada to the Aleuts of Alaska, adopted the dandelion into their pharmacopoeia as soon as it made an appearance in their neck of the woods.⁸

But it isn't recorded if any of the Wampanoag or Algonquian, Iroquois or Cherokee felt a sense of unease at the persistence of this flower that sprang up like magic as

soon as the newcomers cut a tree or plowed a meadow. There's no way to know if the First Peoples recognized in the cheery little dandelion an omen of changes to come, a warning that everything in their world was about to shatter, like a dandelion puffball in a hurricane wind.

Notes to Chapter 1

1. Kurlansky, Mark. *Cod: A Biography of the Fish That Changed the World*. New York, NY: Penguin Putnam, 1997. European fishermen had likely been visiting the New England coast, well known to be a fabulously rich fishing ground, for centuries before permanent European settlements were established in the region. Kurlansky suggests that Basque fishermen had been fishing off the New England coast long before Columbus "discovered" the New World.
2. Willison, George F. *Saints and Strangers; Being the Lives of the Pilgrim Fathers, & Their Families, With Their Friends and Foes*. Orleans, MA: Parnassus Imprints, Inc., 1945. While most of the passengers on the *Mayflower* came originally from small farms and villages in England, some of them had been living for years in the pleasant Dutch city of Leyden, a thriving commercial center of some 80,000 people.
3. Bradford, William. *Of Plymouth Plantation*. New York, NY: Random House, 1981. First published in 1856 as *History of Plymouth Plantation*. William Bradford was one of the leaders of the "Saints," as the Pilgrims called themselves, and a passenger on the *Mayflower* in 1620.
4. *Ibid.*
5. Travers, Carolyn Freeman, ed. *The Thanksgiving Primer*. Plymouth, MA: Plimouth Plantation, Inc., 1987.
6. John Gerard's classic, *The Herball; or General Historie of Plantes*, written in 1597, and William Turner's *A New Herball*, published in three parts in 1551, 1562, and 1568, were two well-known books that praised the dandelion's medicinal benefits.
7. Josselyn, John. *New-England's Rarities Discovered*. Boston, MA: Massachusetts Historical Society, 1972. First published in 1672. Josselyn made a methodical survey of the plants of New England, distinguishing native plants from "plants as have sprung up since the English Planted and kept Cattle in New-England."
8. <http://www.ars-grin.gov>, a website of the US Department of Agriculture's Agricultural Research Service.