

Wild Foods

Everything is edible once. It's good to know which wild plants you can safely eat, which ones make good medicine, and which to avoid.

Call the Dogs off the Lions

Spring showers bring May flowers, but not all posies are a welcome sight. Although it is quite possible they arrived on the Mayflower, dandelions do not get the esteem they deserve as plucky immigrants that put down firm roots in a new land, or as a vitamin-packed culinary delight, or as a multipurpose herbal remedy.

On this latter point, the dandelion is so well-respected that it garnered the Latin name *Taraxicum officinale*, which roughly means “the official remedy for disorders.” There are many reported health benefits of dandelion, including as a liver support and for alleviating kidney and bladder stones, as well as externally as a poultice for skin boils. I don’t pretend to know every past and present medicinal use of the plant, and I strongly recommend consulting a respected herbalist, as well as your health care provider, before trying to treat yourself.



That said, the University of Maryland Medical Center has devoted an entire web page to dandelion, and it cites some peer-reviewed studies. I had previously heard that dandelion was used as an adjunct diabetes treatment, but had not found any references. However, the U of M Medical Center states that

“Preliminary animal studies suggest that dandelion may help normalize blood sugar levels and lower total cholesterol and triglycerides while raising HDL (good) cholesterol in diabetic mice. Researchers need to see if dandelion will work in people. A few animal studies also suggest that dandelion might help fight inflammation.”

I’d say that’s not bad for a weed. You can buy dried and chopped dandelion root in bulk or in capsule form at most health-food stores, or you can get it for free in your back yard, providing you don’t use lawn chemicals.

Dandelion’s common name comes from the French *dent de lion*, or lion’s tooth, referring to the robust serrations along their leaves. Leaves vary widely in appearance, though, and aside from their yellow mane, not every dandelion is as leonid as the next. Apparently, the French have a corner on the common-name market, because the other dandelion moniker is *pis en lit*, or “pee the bed,” as the dried root is strongly diuretic. More on that later.

Dandelion greens are best in early spring before they are done flowering. Harvesting late in the season is kind of like picking lettuce and spinach after they have bolted—edible, but not at their best. If you had a few dandelions take root in your garden last year, they are probably ready to uproot and eat right now. Sort of a new twist on the phrase “weed-and-feed.”

Young greens can be blanched and served in salad, or else boiled, but I like them best when chopped and sautéed. They go well in omelets, stir-fry, soup, casserole, or any savory dish for that matter. Fresh roots can be peeled, thinly sliced and sautéed. A real treat is dandelion crowns. The reason they flower so early is that they have fully-formed flower bud clusters tucked into the center of the root crown, whereas many other flowers bloom on new growth. After cutting off the leaves, take a paring knife and excise the crowns, which can be steamed and served with butter.

Roasted dandelion roots make the best coffee substitute I have ever tasted, and that’s saying something because I really love coffee. Scrub fresh roots and spread them out on an oven rack so they are not touching each other. You can experiment with higher settings, but I roast them at about 250 until they are crispy and dark brown throughout. Honestly I can’t say just how long it takes, somewhere between 2 and 3 hours. At any rate I always roast them when I have to be in the house anyway, and check them frequently after the two-hour mark. Grind them using a food processor or mortar and pestle. Compared to coffee, you use a bit less of the ground root per cup.

The beverage tastes dandy, but as mentioned, it is more diuretic than coffee or black tea. If your morning commute frequently involves a traffic snarl, choose your breakfast drink accordingly.

I have not tried dandelion wine, a tradition that dates back centuries in Europe, and so have no first-hand experience to report, but scads of recipes can be found on the Internet. Several friends and family members have tried it, with negative and positive reviews pretty well split. I have no idea if it is personal preference or wine-making skill that is so evenly divided.

Given the virtues of dandelions, it is amazing how much time and treasure our culture puts into eradicating them. It seems to verge on an obsession with some people, who drench their lawn with selective broadleaf herbicides like 2,4-D, dicamba and mecoprop. These all come with health risks, not to mention hefty price tags.

For those who perhaps take the whole lion connection too far and can’t sleep at night if there are dandelions lurking on the premises, I’ll share a secret to getting them out of the landscape. Setting the mower to cut at four inches high will not only get rid of most weeds, it will help prevent diseases, and will greatly reduce the need for fertilizer.

I say we stop trying to kill the only North American lion that is not in danger of extinction, and learn to appreciate and use it more.

A Tale of Nine Lives

The two cats at my place have survived many life-threatening traumas such as falls, fights and even the compulsory “devotions” of small children. It’s amazing the hazards they can weather. I find it disappointing that experts in the veterinary field continue to assert cats have but a single life, and that the whole nine-lives thing is just a cat tale.

But the story about cattails having (at least) nine lives is no yarn. An obligate wetland plant, the common cattail (*Typha latifolia*) is native to the Americas as well as to Europe, Africa and most of Asia—basically the planet minus Australia, all Pacific Islands and most Polar regions. It can be found growing along wetland margins and into water up to 30 inches deep, from hot climates to Canada’s Yukon Territory.

Its name comes from the brown puffy seed head it produces which resembles, um, well really a corn dog. But to avoid an epidemic of incessant laughter, the authorities went with cattail.

Aptly named or not, the cattail is truly a wonder of nature. As someone who likes to eat more than three meals a day, it makes sense that I first got acquainted with the culinary uses of cattails. The young shoots, sometimes called Cossack asparagus, are delicious raw or cooked (definitely opt for cooking them if you’re unsure of the water purity).

The thick rhizomes (tuber-like roots) are about 80% carbohydrates and between 3% and 8% protein, better than some cultivated crops. Rhizomes can be baked, boiled, or dried and ground into flour. In his book *Stalking the Wild Asparagus*, Euell Gibbons details how to process roots with water to extract starch, which I’d have to say works nicely. The starch, wet or dried and powdered, is added to flour to enhance the nutrient value of foods like biscuits and pancakes.

What I like best are the flower spikes, which are two-tiered affairs with the male (staminate) pollen-bearing spikes on top and the thicker female (pistillate) heads below. The male flower spikes wither away after they do their thing, but the female spikes mature into the corn dogs—I mean cats’ tails—we all recognize. Both spikes are edible, but must be gathered just as they break out of their papery sheaths. Boil and eat with butter as you would corn on the cob. They taste just like chicken. Kidding—they’re similar to corn.

In the fall you can gather the tails and burn off the fluff to harvest the edible, oil-rich seeds. (Confession: due to my undiagnosed Laziness Syndrome I have not yet tried this.)



It's a longstanding tradition that I and my daughter sally forth (not her real name) in mid- to late June and gather bright yellow cattail pollen. Just slip a plastic bag over the flower head, shake a few times and you're done. An acre of cattails can yield over three tons of cattail pollen, and at 6% to 7% protein, that's a lot of nutritious flour. Substitute cattail pollen for up to one-fourth of the flour in any recipe. You can use more, but experiment on a small scale before you serve it to others (a tip from my kids).

OK, we're up to five lives, I think. Euell Gibbons called cattail the supermarket of the swamp, and he wasn't kidding. You can find thousands of articles and research papers on the uses of cattails. Technically that might not get us to nine lives yet, so let's name some names.

Native peoples around the world (except as noted) wove cattail leaves and flower stalks into roof thatch, sleeping mats, duck decoys, hats, dolls and other kids' toys, to name but a few uses. Fresh leaves and roots were pounded and used as poultices on boils. Cattail fluff was used as diaper linings, moccasin insulation and wound dressings.

Today cattail swamps are created by engineers for treating wastewater, and artisans make paper from cattail leaves. And kids still have fun playing with the leaves and mature cats' tails. Here's to the many lives of the cattail. But let's try and change its name to the "corn-dog tail." The world could use more laughter.

Eye Candy and Cough Syrup

I haven't checked with an optometrist, but I may have a winter-related vision problem. When five or six months of winter-white finally give way to a mostly brown world each early spring, my eyeballs hurt—they ache for something bright in the landscape. That's probably why I plant a few additional crocus bulbs in the yard every fall, and why I search wooded areas for early-blooming native wildflowers like bloodroot and Carolina spring beauty.



But what thrills me most is how clumps of bright yellow coltsfoot flowers emerge, long before their leaves come out, from muddy roadside ditches, rail embankments and other places with a history of soil disturbance. Coltsfoot is native to Europe and Asia, but has naturalized throughout North America. Its flowers look like small dandelions, but with no leaves to go with them. Maybe it's the contrast between their color and the sepia environs, or perhaps it's their audacity at blooming so early, but these little sunbursts go a long way toward dispelling my winter eye fatigue. Many non-native plants came here accidentally, but coltsfoot was likely planted by early settlers

because of its history as a medicinal plant. We don't know if coltsfoot cheered up European settlers when the snow melted, but we do know that they used it to treat coughs and colds during winter's icy grip.

Its botanical genus name is *Tussilago*, derived from the Latin word for cough. Its common name comes from the fact that its leaves, which emerge as the flowers die back, have a shape similar to a horse's hoof.

Pliny the Elder (think Socrates, but Roman instead of Greek and slightly less ancient) treated his asthma by inhaling the smoke of dried coltsfoot leaves and flowers. In an ironic and tragic twist, Pliny died of smoke inhalation during the eruption of Mount Vesuvius.

There was a period of time in Europe when the coltsfoot blossom was the symbol for an apothecary, sort of an old-time drugstore that dispenses herbal medicine. Back in the day, those yellow flowers were virtually synonymous with healing. And following a tradition that dates back thousands of years, some Chinese today still use commercial cough syrups made with coltsfoot.

Just because something is all-natural doesn't mean it's all-benign. The truth is that herbal remedies are nothing to sneeze at. Consider digitalis, quinine and THC, potent drugs that come from plants. Because the active ingredients in herbal medicine can interact with prescription medications or exacerbate health conditions, no herbal remedy should ever be used without first consulting a licensed medical professional.

In fact there is concern about the safety of coltsfoot in some quarters. In a 1999 University of Iowa study, researchers documented an increase in liver cancer among rats ingesting large doses of coltsfoot. However, because the Iowa study concluded coltsfoot's health risk was due to one particular compound that it (the plant, not the study) contained, some German researchers are working to develop a coltsfoot strain that's free of the chemical.

Making coltsfoot into cough syrup requires supervision, but using it as a tonic for the spirit need not involve doctors. I encourage everyone to check out these splashy early-blooming flowers. You can't overdose on eye candy.

Nettles

One of my favorite plants is either highly versatile or very confused. On the one hand, professional herbivores like rabbits and deer refuse to even touch it, but many people, myself included, will gladly eat it every day it is available. While contacting it is painful, it has been proven to relieve certain chronic pain when drunk as a tea.

It is steeped in over a thousand years of folklore, at one point imbued with the power to cleanse away sin, yet medical science recognizes it as a legitimate remedy for many disorders. Some

gardeners consider it a bothersome weed, but others actually cultivate it.



The stinging nettle, *Urtica dioica*, is native to Europe, Asia, and northern Africa but has been widespread throughout North America from northern Mexico to northern Canada for centuries. Experts disagree as to the number of nettle species and subspecies worldwide. To confuse matters, many of these cross with one another to form hybrids. Although a few species do not sting, if it's nettle and it gives you a rash, it's fair to call it stinging nettle.

Nettles sprout little hypodermic needles on stems, leaves, and even their flowers. Called trichomes, these glass-like silica-based needles inject a mixture of irritating chemicals upon contact. The cocktail varies by species, but can include histamine, 5-HTP, serotonin, formic acid and acetylcholine.

So why would one place this well-armed adversary in their mouth? Well, when nettles are cooked, the stinging hairs are destroyed. Furthermore, nettles are the tastiest cooked green—wild or domestic—that I have ever had. It tastes a lot like spinach, except sweeter. Nettles can be boiled, steamed, or stir-fried. They are great by themselves or in soups, omelets, pesto, casseroles, or pretty much any savory dish you can come up with.

One of the things I really like about nettles is that they are some of the first green things to get going after the snow melts. I should mention that only the tops of young plants are harvested to eat. The good thing is that the more you pick, the more young tops will grow back. Eventually they will get too tall and tough, but frequent picking can stretch nettle season well into June.

On a dry-weight basis, nettles are higher in protein—about 15% —than almost any other leafy green vegetable. They are a good source of iron, potassium, calcium, and Vitamins A and C, and have a healthy ratio of Omega-3 to Omega-6 fatty acids. Because drying also neutralizes nettles' sting, they have been used as fodder for domestic animals. Today nettles are commonly fed to laying hens to improve their productivity.

The University of Maryland Medical Center reports that nettles can help relieve symptoms, **such as difficulty urinating, of Benign Prostatic Hyperplasia (BPH)** in men. In terms of using pain to relieve pain, the U of M Medical Center also states that research "...suggests that some people find relief from joint pain by applying nettle leaf topically to the painful area. Other studies show that taking an oral extract of stinging nettle, along with nonsteroidal anti-inflammatory drugs (NSAIDs), allowed people to reduce their NSAID dose."

As *The Cat in the Hat* said, “that is not all.” You’d think the U of M was selling nettles the way they seem to promote them. Consider this endorsement:

“One preliminary human study suggested that nettle capsules helped reduce sneezing and itching in people with hay fever. In another study, 57% of patients rated nettles as effective in relieving allergies, and 48% said that nettles were more effective than allergy medications they had used previously.”

Gardeners use nettles as a “green manure” because they are high in nitrogen. “They” meaning nettles—gardeners may contain nitrogen, but are not routinely added to soil. Nettles are also rich in iron and manganese, and can help attract beneficial insects.

What can’t you do with nettles? I guess they’re kind of like Dr. Seuss’ “thneed.” Turns out you can wear them, too. Nettles have been used for 2,000 years as a source of fiber for cloth-making. During World War I, Germany used nettle fiber to make military uniforms. I have made cordage from nettle stems using a simple technique called reverse-wrapping.

If you have a nettle patch, put away the weed killer, and consider yourself lucky.

First Blooms

One of the earliest woody plants to blossom is the juneberry. It is either a small tree or a shrub, depending on who you ask, which makes me wonder if it’s hiding something. In fact, this thing has more aliases than one of America’s Most Wanted. Various names include serviceberry, shadbush, shadblow, Saskatoon, juneberry and wild-plum, the small-to-medium size tree also answers to *Amelanchier canadensis*, its botanical name. Of those options, I prefer juneberry even though its fruit may ripen in early July in northern New York State and most of southern Canada.



It’s the first native woody plant to produce conspicuous flowers, and its white blossoms can be seen on roadsides, in fencerows and on forest edges before most trees push out any leaves. The smooth, gray-silver bark is attractive in its own right. Depending on conditions, juneberries may grow as a multi-stem clump, but more often develop as single-trunk trees reaching 25 to 40 feet tall. Not only are its early blossoms an aesthetic treat, they’re advertising the location of a source of berries that boast more nutrient value than almost any other native fruit.

Juneberries are often overlooked as a food source, partly because birds may beat us to the punch, and partly because juneberries grow tall enough that the fruit is sometimes out of reach. Because

juneberries have less moisture than blueberries, they're slightly higher in protein and carbohydrates, making them a great food for athletes and other active people.

The soft, dark purple berries have twice as much potassium and iron as blueberries in addition to large amounts of magnesium and phosphorous. They also have plenty of vitamin C, thiamin, riboflavin, pantothenic acid, vitamin B-6, vitamin A and vitamin E.

Juneberries make an attractive landscape plant, and can be used to entice songbirds like cedar waxwings to your yard. *Amelanchier alnifolia*, a species from the Northern Plains closely related to our northeastern *A. canadensis*, is better for home use, as it does not grow as tall, so the fruit will always be within reach. It can tolerate a wide range of site conditions and will thrive even in poor soils. Full sun is a must, however. Another plus is that juneberry foliage turns a remarkable salmon-pink in the fall, adding to its value as a landscape shrub.

The berries are delectable fresh, and make excellent pies. They're especially good for freezing, as they make excellent, nutrient-packed smoothies year-round. It's helpful to freeze them first on cookie sheets, and then transfer them to bulk containers. That way they don't form the kind of monolithic juneberry glacier that requires a chisel, adult supervision and a first-aid kit to break off a chunk.

Native peoples across North America valued juneberries, and European settlers followed their example. Please take advantage of this under-appreciated wild fruit. Spring is a great time to note the location of juneberry plants for harvesting this summer. For more juicy juneberry tidbits, visit www.juneberries.org.

Not Just for Breakfast Any More

"Never eat anything bigger than your head." I don't know if cartoonist Bernard Kliban came up with that line or if it's a nugget of old folk wisdom. **Certainly you should not eat anything bigger than your noggin without at least chewing it first.** But if you like mushrooms, you can find wild ones that are in fact much larger than your head.

The giant puffball, *Calvatia gigantea*, appears in late summer and early fall in pastures, lawns and deciduous forests. These brilliant white globes are the fruiting bodies of the actual fungus, which is out of sight below ground. They seem to magically appear overnight, and are typically six to twenty inches in diameter. In rare instances they have reached nearly five feet across, bigger than the heads of all but the most conceited individuals.



To be sure, fresh puffballs are inflated and puffy, but their name comes from what happens once

they mature and dry out. In that condition, a smoke-like stream of brown spores will jet from the top of a dry puffball any time it is disturbed. A puffball may produce as many as 7,000,000,000,000 spores, so it can puff seemingly forever. Back in “the day,” kids used to think it was a riot to step on these. More than likely, there’s now a cell phone app that is more convenient, and hypoallergenic.

Statistically speaking, most wild mushrooms are edible. A few, though, cause irreversible liver failure; hence it is a drag to mess up. In addition to these deadly *Amanita* species there are other types which cause gastric discomfort, some spectacularly, all the more reason to be careful. I know a couple of self-taught mushroom hunters with decades of experience who in rare cases still make a mistake. Even morels and chanterelles, considered easy to find, have dangerous look-alike species.

Fortunately for the well-being of the public I readily admit mushroom identification is not one of my strong suits, and I’m usually reluctant to make a positive ID on a specimen.

One of the few exceptions is the easily recognized giant puffball. I suppose a determined soul might be able to get it wrong, but it would take some real talent at screwing up. If you follow a few simple rules it is nearly impossible to mistake a giant puffball for anything else:

Small is bad. Remember where “giant” is part of its name? The problem is, a toxic *Amanita* mushroom when newly-emerging, before its cap unfolds, can resemble an undersized puffball. So only select ones six inches in diameter or bigger.

Perhaps the only places where white is truly better is where puffballs, tennis attire and office paper are concerned. Cut open your giant puffball. If its flesh is white as the driven, pre-Industrial Age snow, it’s good. Slight yellowing indicates it has become too mature. Eating it at this stage is not dangerous but it won’t taste as good and might give you a belly ache.

“Homogenous is next to Godliness,” as they say. Actually no one says that, but when you slice a puffball its interior should look uniform. Even the faintest outline of a stem, gills or still-folded cap means it’s not a puffball, but a dangerous mushroom. Put it down and back away slowly in case it makes any sudden moves.

However, if your find is large, and white with no “shadow” or outline inside, it is almost certainly the real deal. If it’s your first time as a wild mycophage, though, check with someone (preferably one with knowledge in this realm) before serving it for supper.

No one claims puffballs are as delectable as a morel, but I think they are on par with a grocery-store mushroom. They can be cut into strips and sautéed just like commercial shrooms. Puffballs can also be sliced and frozen for later, which is great in light of that head-size restriction mentioned earlier.

My father used to relate how, when he was little, his mother pan-fried large thin puffball slices

and served them with maple syrup like pancakes. “Heavenly,” was how he described them. One day he finally tried to recreate this delicacy. We both agreed that puffballs with maple syrup fell several steps short of Nirvana. Much better in sauce or a stir-fry, I think.

Milkweed

After the cloud-flocks of blackbirds have departed, swarming in amoeba-like fashion toward points south, and the broad chevrons of geese have mostly disappeared over the horizon, another momentous fall event begins. Yes, it’s time for one more native species to take to the air—the great milkweed migration is on.

By late summer, milkweed pods are bursting with mature seeds affixed to bundles of platinum floss that lie damp and orderly, waiting for autumn emancipation. Following a good frost each pod dries out and splits perfectly along a seam into two boat-like halves, exposing a cache of silk. The wind teases this material from the dry-docked pod halves, launching countless puffy, seed-bearing paratroopers to the wind.

Many farmers and gardeners are not impressed by such choreography, as milkweed can be a real nuisance in some crops. Not only is it a perennial, it spreads quite effectively through its robust root system as well as its migratory seeds. However, certain butterflies are happy about the white parachutes of autumn.

Worldwide, monarch butterflies are thriving, with the exception of North America. The survival of “our” monarch population depends on continual access to milkweed from their winter home in Mexico up to the Great Lakes as they move northward each spring. Recently, monarch populations have declined sharply, due in large part to habitat loss in Mexico, but also to milkweed issues. Increased use of agricultural herbicides along with continued urban sprawl have resulted in less milkweed. In addition, monarch caterpillars are being poisoned when insecticide-tainted corn pollen drifts onto the milkweed plants they’re eating.

Farmers and butterflies may soon be playing for the same team, though, because milkweed is poised to become an economically viable crop. Native peoples and settlers used milkweed for food, medicine, fiber and even sugar, and we’ve all heard how its buoyant floss was gathered during World War II and used by the military in life preservers.

But modern research is what has landed our native, latex-bearing “weed” on the economic map. The Agricultural Research Service, a division of the United States Department of Agriculture, has found a number of important new uses for milkweed.

The silky floss is already in use in the textile industry. Companies like the Natural Fibers Corporation of Ogallala, Nebraska use it in comforters and down jackets. One of the main advantages of milkweed floss compared to goose down is that it is hypo-allergenic. It’s also 10%

warmer, 20% more durable and 50% more breathable than down. As an added plus, it appeals to consumers who don't want goods made with animal products. During World War II, schoolchildren gathered floss by hand for military life jackets, but today it can be harvested on a large scale with a slightly modified grain combine.

One of the byproducts of floss production is milkweed seed, which can't be fed to livestock because it's poisonous. Research done in Illinois and Washington State found a silver lining—its toxicity makes it valuable as a pesticide against fall armyworms and certain nematodes which can devastate alfalfa, soybeans, potatoes and many other crops. In one trial, ground milkweed seed, tilled into the soil, killed 97% of destructive nematodes.

The fact that milkweed sap or latex is rich in hydrocarbons has been known for decades. Funding from the United States Department of Energy enabled a private Utah-based research firm called Native Plants (subsequently financed by an oil company) to start investigating latex as a source of crude oil.

Before it flowers, milkweed is mowed and baled using conventional farm equipment, and then processed to extract oil. The residue, which is 20% protein, can be used as animal feed. Although at current prices it is not profitable to extract oil from milkweed, that could easily change in the future.

But more work is needed before milkweed hits the mainstream. It turns out that while patches of milkweed thrive on roadsides and in meadows, when it is grown on a large scale as a monoculture, disease becomes a problem.



And then there's the question of milkweed's image. According to the founder and CEO of Natural Fibers Corporation, one of his marketing obstacles is that "weed" is in the title. Dropping it is out of the question, as the dairy lobby tells would like the term "milk" to become a registered trademark.

Cranberries

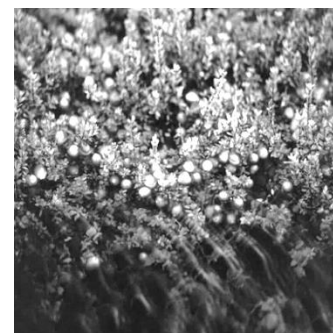
Like politics, cranberries can leave a sour taste in your mouth. But unlike political affairs, whose bitter aftertaste cuts through any amount of sweetener, the flavor of cranberries is readily improved with a little sugar.

To say a fresh cranberry is sour is like saying Paris is a nice town. In fact, it (the berry, not Paris) can have a lower pH value than stomach acid. It's almost a wonder people ever started eating them.

The cranberry, which is closely related to blueberries, is native to higher latitudes of the northern hemisphere the world over. It is an evergreen trailing vine, or sometimes a very small shrub. The name is derived from its flower petals, which are reflexed or pulled back sharply, making its pink blossom resemble (to some) the head and bill of a crane. The North American species is *Vaccinium macrocarpon*, and luckily for us it has larger berries than species in northern Europe and elsewhere.

It's important to note that the shrub known as highbush cranberry is an imposter, and is unrelated to the stuff we eat on Thanksgiving. This kind of confusion around common names happens a lot. In the plant world there are no copyright laws, which is why pointy-headed plant nerds like yours truly are fond of those fancy Latin names.

Of course we know that Native Americans made use of cranberries, and introduced them to early European immigrants. A firsthand account from the late 1500s describes how some Algonquins brought cups full of cranberries to newly arrived Pilgrims as they came ashore. I'm thinking that unless there was a bit of maple sugar in with the berries, maybe their purpose was really to discourage the migrants from staying.



The colonists took a shine to the little red sourballs occasionally known as moss berries or bear berries, and by the 1820s some farmers began exporting this new crop back to Europe. Growing them might not look like you'd expect, though—images of cranberries floating on what appears to be a lake give the wrong impression.

Wild cranberries are often found in wet areas such as bogs, but cultivated berries are grown on carefully managed upland fields. These sandy plots, laser-leveled and heavily irrigated, are surrounded by berms so the fields can be flooded with six to eight inches of water to make harvesting easier. Because berries gathered this way have a very short shelf life, they are generally frozen, canned or otherwise processed right away. Cranberries for fresh eating are usually hand-picked in dry fields.

Over the past few decades, cranberries have been touted for an increasingly wide range of health benefits as well as for their taste. It has long been known they are high in Vitamins C and E, pantothenic acid, as well as manganese, copper and other minerals. But it's their antioxidant properties that have gotten people excited.

If you saw "oligomeric proanthocyanidins" listed on a candy bar you might not buy it. But these and many other natural compounds are abundant in cranberries, and despite the scary names they're good for you. Cranberries are being intensively studied for potential benefits in treating diabetes, arthritis, cancer and other illnesses.

Research suggests cranberry juice—the good stuff, not the corn syrup-laden wannabe juice—may

help prevent calcium-based kidney stones. Moderation in all things, as too much of it may cause oxalic acid-based bladder stones.

Studies also indicate cranberry juice does prevent certain harmful bacteria from sticking to us. Seems that it's like Teflon for them. While cranberry juice has not been found effective for treating urinary tract infections, it is good at preventing them by stopping coliform bacteria from adhering to places they don't belong. Good news for your teeth, too—cranberries help keep decay microbes from glomming on to enamel, thus reducing dental plaque and cavities.

If political news gets you down, you'll be happy to hear that cranberries also help prevent ulcer-causing bacteria from colonizing human stomach lining and forming ulcers. Furthermore, their cardiovascular benefits include lowering "bad" LDL cholesterol blood levels and increasing those of the good HDL cholesterol. So if you're a news junkie, keep the cranberries close at hand during the campaign season.

Vengeful Veggies

The roots of these plants are edible and delicious; just don't touch the leaves!

It's not unheard of for people to burn vegetables now and then, especially if you're as easily distracted as I am. I'll think, the potatoes need a few more minutes, so there's plenty of time to run out to the garden for chives. Thirty minutes later I'll be weeding the sweet corn patch, sans chives, when the smoke alarm indicates the potatoes are "done." Oops.

While it seems absurd to think that vegetables might burn us, it does happen, and the latter half of summer is peak season for it. The burn is chemical in nature, and the vegetable is wild parsnip, an invasive species whose population has exploded in recent years.

Related to Queen Anne's lace, wild parsnip grows three to six feet tall, and is topped by yellow "umbrellas" of flowers which bloom any time from late June through July. Wild parsnip can be found in vacant lots as well as in yards and gardens. But because it has been so effectively spread by mowing equipment, mile after mile of it can be seen along roadsides throughout southern Canada and the US Northeast.



The root of wild parsnip is in fact edible, same as the parsnips we grow in our gardens. However, the sap contained in its leaves and stems, like the sap of giant hogweed, is phytophototoxic. The only good thing about this word is that it may help you in a Scrabble game. It means wild parsnip sap on your skin reacts with sunlight to damage proteins and cause severe burns. And by severe I mean burns that take months or sometimes years to heal, and the scars may be permanent. The sap can even cause blindness if it gets in your eyes.

It seems fair to ask why garden-variety parsnips do not burn people. They can, but they don't get a chance. Like all root crops, parsnips are biennial. In their first year they develop a robust root, which they would normally use for energy to make a tall flower stalk the second year. But we thwart their desire for offspring by harvesting them at the end of the first season (which could be their source of resentment). By harvest time, parsnip leaves are generally yellow and faded, if present at all. No green leaves, no sap, no burns.

It's a small consolation, but you will not get burned by merely brushing up against this plant, and once it is dry it poses no threat, unlike the case with poison ivy. All the same, it's probably a good idea to wear gloves and long sleeves when handling wild parsnip. If you do get sap on your skin, get indoors (out of the sun) as soon as possible and wash with soap and water.

As everyone knows, when facing a zombie apocalypse, you grab a shovel and aim for their heads. Shovels are also useful in battling the parsnip-ocalypse we now face, except you aim for their feet. Wild parsnips have taproots which are very hard to pull out, but which are easily cut with a shovel. You don't have to get the whole root; just dig as deep as you can to sever the taproot, pry the plant up and it will die. You don't even have to touch the thing.

If you're hopelessly outnumbered by wild parsnips, at least mow them to prevent them from making seeds while you muster a posse of shovel-wielding townsfolk (pitchforks and torches are optional) to help you. But do wear protective clothing and safety glasses when mowing wild parsnip, and unless you have a Level-A Hazmat suit, do not use a string trimmer on it.

Glyphosate, the active ingredient in herbicides like Roundup, works on wild parsnip. Herbicide is most effective when used on first-year plants, called rosettes, which are the ones without a flower stalk. The best time to spray is in late summer or early fall. Treating early in the season may kill the top, but often the root will live to send up another flower spike.

I distinctly remember having scorched some parsnips years ago, so I hope none of this is some kind of payback. Please try not to burn any more vegetables, lest they all become vengeful.

Working the Kinks out of Knotweed

Often termed “bamboo” because of its hollow jointed stems and impressive growth rate, Japanese knotweed (*Fallopia japonica*) is well-established in North America. As the name suggests, it’s from “away.” Native to Japan and Korea, it was imported to the US in the late 1800s as an ornamental.

In its home range it grows in some of the least hospitable sites, including—reportedly—in pure volcanic ash. Compared to that, just about anywhere in our region is a paradise. In back yards and vacant lots, along utility and rail rights-of-way and stream banks, this exotic plant thrives, forming dense thickets. Children love to play in these “forests,” but most adults aren’t keen on having to beat back the invader from their gardens and lawns. But because knotweed can provide instant privacy, some welcome it.

As invasive plants go, it could be worse. Knotweed doesn’t blister your skin like giant hogweed and wild parsnip do, or snuff out forest regeneration in your woodlot the way swallow-wort does. It’s not poisonous to animals; it is in fact grazed by deer, rabbits and even livestock. Maybe the “best” part is that it produces no viable seed.

And it has some genuine good points. It is a source of resveratrol, a compound which shows promise in the treatment of cancer and heart disease. It has also been proven effective against Lyme disease.



Its flowers, while unable to beget offspring, still produce loads of nectar and pollen, and are an important late-season nectary (I’ve been waiting a long time to use that word) for honeybees and wild pollinators. It’s also a wild edible, featured in Euell Gibbons’ seminal book on the topic, “Stalking the Wild Asparagus.” The young shoots taste much like rhubarb, and can even be made into pie.

Of course, knotweed has many strikes against it or folks wouldn’t get so agitated when you mention its name. It spreads and is very hard to eradicate. Its tough perennial roots (rhizomes) can snake underground far from the nearest plant and pop up a new shoot 60 to 70 feet away. Knotweed can be moved accidentally with soil or fill, as a mere snippet of rhizome is all it takes for trouble to start. Its tenacious roots also make it hard to kill. You can smother knotweed for several years only to have it reappear like Houdini when you yank the covering back.

When I moved into my home, the whole back side was engulfed by knotweed, as was most of the yard. For six years I mowed weekly, and by year seven it appeared I had triumphed. Then after a summer free of the weed, a number of knotweed shoots, wan and tentative though they were,

arose the following spring. I showed ‘em who’s boss, though.

Arduous as that may sound, I actually consider knotweed one of the easier invasive plants to manage on dry ground. But in riparian habitats, i.e. along waterways, it is a true monster. Its superpower? A tiny fragment of stem, root or leaf, so long as it stays moist, quickly becomes an impenetrable jungle.

Fluctuating water levels wash plant fragments downstream, creating innumerable knotweed colonies. In some stretches of the Oswego and Salmon Rivers in northern NY State, the banks are literally walls of Japanese knotweed. It restricts—sometimes eliminates—water access, and out-competes existing vegetation. Because its tops die back each fall it does not mitigate erosion the way native shoreline plants like willow and shrub dogwood do, and water quality and habitat suffer.

Knotweed infestations in riparian habitats may need to be chemically treated by a professional, but this is not the case with backyard knotweed. Chemical-free methods include repeated hand-pulling (where practical), multi-year mowing, and smothering. And possibly, nonstop pie making.

Let Them Eat Wood

A grapple-boom excavator, a termite, and a person enjoying a plate of ginger-shiitake chicken stir-fry all eat wood. Sort of. At least if you go along with my rather broad definition of ‘eating.’

A grapple boom has a powerful hydraulic pincer that can quickly reduce a wood-frame structures to splinters, usually with permission from their respective owners, by chewing through them from the top down. The houses, that is, not the owners.



Unlike carpenter ants, which merely tunnel through wet and decaying wood to make nests, termites actually ingest perfectly sound wood. Technically it is the microbial community in their gut which digest the cellulose and release byproducts upon which termites depend. No termite could survive on a diet of wood without its internal “farm” of microorganisms.

And from studio apartments to five-star restaurants, people the world over consume all manner of delectable dishes featuring second-hand wood. Although that is not generally how it is worded on the menu. Mushrooms such as inky cap, oyster and shiitake have a voracious appetite for wood, a substance that very few organisms eat because it is so hard to digest. Anyone who has tried a two-by-four meal can attest to that.

Wood is made primarily of cellulose along with varying amounts of lignin. This latter compound is to cellulose what steel reinforcing rod is to concrete. There is far less of it but it imparts a great deal of strength and resilience. Even professional wood-eating bacteria in the gut of a termite can't digest lignin—only a select group of fungi are endowed with that ability.

There are three basic groups of wood-decaying fungi: soft-rot, brown-rot and white-rot. In scientific terms these coteries are not closely related even though they have the same last name. Apparently for fungi, “rot” is like our “Smith” in that respect.

Soft-rot fungi are very common, causing garden-variety decay in tomato stakes and fence posts. Wooden ones, at least. Brown rot is less common, though at some time or other you've probably seen its handiwork. This fungus creates a blocky pattern, turning wood into miniature, spongy brown bricks. While brown rot needs moisture to do its dirty work, it is sometimes called dry rot because it readily dries out and is often seen in that condition. Both soft-rot and brown-rot fungi consume only cellulose, eating around the lignin.

White-rot fungi, on the other hand, belong to the clean-plate club, digesting both lignin and cellulose. This category of fungi can cause serious decay in hardwood trees, although a few species attack conifers. Foresters hate it, but foodies love it. It is the group that gives us *Armillaria mellea*, a virulent and devastating pathogen, but one which produces tasty honey mushrooms.

Shiitake and oyster mushrooms are white-rot fungi, although they are saprophytes, akin to scavengers like turkey vultures, rather than predator-like pathogens. So we don't have to feel guilty about eating them. Regionally, shiitake farming has, um, mushroomed over the past decade. It is a source of supplemental income for farmers and a source of fun and good food for anyone who wants to try it.

Somewhat fickle, shiitake prefer oak, beech, maple and ironwood, more or less in that order. To cultivate this mushroom, you would cut logs, or bolts, of one of these hardwoods. Bolts are typically about four feet long and range from three to eight inches in diameter. A log will bear mushrooms for roughly one year per diameter inch. A series of holes are drilled in the logs, and these are filled with mushroom “seeds” called spawn.

Oyster mushrooms are more laid back, and will grow on less-valuable material such as poplar, or even on a damp roll of toilet paper. They also can be “seeded” between stacked blocks of wood, making it easier to get them started.

Nearly all historians agree Marie Antoinette probably never said “Let them eat cake,” a saying already in popular culture before the French Revolution. The phrase was ascribed to her by opponents in order to bolster her reputation as callous and arrogant. She would have seemed far more benevolent if she had said “Let them eat wood.”

Paul Hetzler writes for The Saturday Evening Post, Ontario Arborists, North Country Public Radio, The Québec Farmers' Advocate, and others.