

KNOTWEED
[long version - latest revision, June 2026]

This newsletter is about **KNOTWEED**, which is such a troublemaker for some people, especially if they live along a body of water. Research has yielded what seems like an effective solution for eradicating a reasonable size area of it. NOW, June-July -- or soon -- is the time!

When we assumed the care of our village park in East Nassau, it had some beautiful features--a line of tall canopy trees and a handsome creek--and some challenges, including a large area of degenerating asphalt paving, some beds of poison ivy and a healthy stand of Knotweed.

Knotweed--that problem non-native plant! It is native to Asia, where it is less intrusive. Here, it takes over aggressively and crowds out our native plants, changing the ecology and lowering diversity. It has some uses-- medicinal, and as a food source for insects and even humans--but there is simply too much of it. So this is about getting rid of it.

It is not to be confused with **Bamboo**.

Our committee debated best practices in managing the Knotweed even as we simply cut it down at the base and removed it. This wasn't wrong, but our **timing** could have been better, as we discovered. Our patch had diminished simply through regular cutting.

We had studied other possible controls:

What we wouldn't do

Pulling: Works only temporarily and on very young shoots. You get the shoot out but the plant will simply grow more of them.

Digging out: In general, very difficult to impossible. It works only with very young/small/new plants, and the entire rhizome (underground horizontal stem) must be removed. In mature plants, the roots extend down as far as 3 meters (10 feet) and the rhizomes extend out as far as 20 meters (65 feet).

Mowing: A neighbor mows them when he mows his lawn. This seems to work for him, but the plant is still very much alive and may react by extending its roots and rhizomes ever farther, in an effort to send up shoots elsewhere. Fragments that have stuck to the blades of the lawnmower can also spread the plant.

Weed-whacking: This does cut down the stems but doesn't kill the roots or rhizomes and may scatter fragments from which additional plants can grow--especially problematic if the fragments fall into water and are carried downstream to take root in on a hospitable stream bank.

Smothering with black plastic, or "tarping": The plastic would need to remain in place for about five years, unsightly unless covered with a layer of mulch, not much better. And knowing what we do, now, about the harm of plastic, we don't want to use it when there are alternatives. It is labor-intensive, and the soil underneath is altered ("cooked") so that it must be rehabilitated afterwards.

Spraying with herbicide: In general, since part of our mission is to promote a healthy environment, we want to avoid the use of toxic chemicals for any kind of control because of long-term effects, downstream harm, and so on. In the case of our park, since the Knotweed grows so close to the creek, we want to be particularly careful.

A knowledgeable friend's suggestion

The most sensible idea so far, we thought, had been offered by a friend who belongs to a Knotweed group across the river (they not only work to eradicate it, but also make jam and other products with it). With one important modification, this method of control became the one we adopted after a little more research.

He said: let it grow as high as it's going to get, and then--this will be toward the end of June, into July and maybe throughout July--**cut it before it flowers**. Let it grow again, in September, and cut it again, when it is about to start withering. Then paint the stubs of the stalks with herbicide. The herbicide will enter the plant

system and be drawn underground. We saw the logic of that, but, besides choosing not to use toxic chemicals, we thought hand-painting each stub would be very labor-intensive and unpleasant.

Confirmation

Then we found a meticulously researched study published this year (by ten authors!), on how to manage Knotweed. It confirmed our friend's method but *without* resorting to herbicide as the last step. Cutting Knotweed in late June-into July and removing regrowth in early September before it starts dying, it concluded, "would optimize the use of time and labor to deplete carbohydrate reserves." The study can be found at Researchgate.net, the article entitled "Seasonal Nonstructural Carbohydrates in the Crown and Rhizomes of in situ populations of Japanese Knotweed. April 2025." Weed Science - 73. We were convinced of this method, not only because of how meticulous the study was and how thoroughly the biology was explained, but also because it *made sense*.

The aim of the method

What we want to do is **kill the source** of the plant's growth--its **crown, roots, and rhizomes**. We don't need to use herbicides to do this. It can be done safely by **starving** the underground plant structures. Herbaceous perennials **store carbohydrate** (the plant's food) in their crowns, rhizomes, and roots between growing seasons. (Crowns are the woody enlarged area where root, rhizomes and stems meet.) If the food is emptied out of the underground food storage areas (rising to be used to grow the stems, leaves, and flower buds) and is not later replenished (with freshly created food descending from the leaves, etc.) and if this goes on for long enough, it will die. So, here is our plan of action:

Step #1: End of June, into July. When the Knotweed stalk has reached maximum growth and developed a bud, we cut it at the base. By doing this, we have cut off a good deal of the plant's food. If we wait too long to cut, the food created by the leaves will begin traveling back down into the underground plant structures, forming a reserve for next year. By cutting the top growth--everything above ground--when it is full of food, we have left the underground parts of the plant very low on food.

Step #2: Early to mid-September. With the food energy that remains the plant will send up more shoots--though not as many! Again, we watch for maximum growth. At the point where the top growth is about to start withering, we cut it down to the ground again. Again, we are removing the source of fresh food that would have traveled down into the crown, roots and rhizomes for next year. The underground structures now have even less carbohydrate to support the plant.

That's all for this year--it doesn't take hours and hours of work! One session of cutting, depending on how large your patch is, does not have to take more than a few hours, depending also on how many people you have to help out. At our last work session at the park, one adult and one enthusiastic ten-year-old accomplished it in about an hour. The stalks are easy to cut with a long-handled lopper. They make a nice crisp crunch.

But be patient: the process will take about three years

It is important to **persist** on this schedule **for three years** to achieve results. The patch should look quite clear by then, but you will want to **check it again** for stray regrowth in **years 4 and 5**.

If, by the time you read this, you have already cut your Knotweed earlier in the season, no harm done, just extra cutting. We recommend starting the schedule now anyway--cutting what has regrown as soon as it is high, and cutting again in September--then proceed on this twice-a-year schedule for two more years. (If your "patch" is enormous and you choose not to tackle it with pesticides, you may just have to resign yourself to letting it alone, keeping in mind the benefits it does have for some insects. Another method that may work is to bring in goats to eat down the stalks--**early in the season when the stalks are young and tender**, similar to asparagus. This, too, will have to be done multiple times.)

Disposal: what to do with the pile of stalks

One way: Bag all the plant materials in thick black plastic bags, seal tightly, leave in direct sun for about a week, allowing stems and rhizomes to dry out thoroughly. Then take to the landfill or empty and burn (not

allowed in our area).

A better way: We are not in favor of burning, even if it were allowed--bad for air quality. And we don't need to add to the landfills. Although the conventional advice is that Knotweed is difficult to compost, and that piles on the ground risk rooting new plants, in our experience this has not been true. What we have been doing is piling the stems on the ground, letting them dry naturally for several weeks, and then removing them to the top of an existing compost or brush pile. If the plant parts are dry and do not touch the ground, there is little danger of their taking root.

We will continue with our experiment at the park and report back. And we will be very interested to hear about your own experiences with Knotweed if you care to share them--just reply to this email!

Updates: two additional experiences with Knotweed removal

Wire mesh: A.

We sent A. a link to a description of removing Knotweed using wire mesh, which strangles the stems. The link is here: <https://www.jksl.com/japanese-knotweed-treatment/japanese-knotweed-meshtech-treatment/>

A. had already learned of the grid method of removal (she belongs to a Knotweed group) and she is giving it a try. She cuts the patch to the ground, lays down chicken wire, and allows the stalks to grow up through the chicken wire. When the stalks thicken, they will be girdled by the wire, sending a signal back down to the root system that this is not a good place to grow. She said she would use it on a larger patch if the wire mesh weren't so expensive. We will await results from this experiment. As for disposal, she reports that she seems to be able to safely compost on site if she allows it to dry thoroughly.

Major muscle from outside, followed by sheer persistence: C.

C. describes discovering a huge patch of Knotweed in the spring, on property she had bought the previous winter. She employed some drastic methods of removal followed by sheer persistence:

1) First she had the Knotweed professionally removed and burned. 2) Then she had the company remove the top two feet of soil from the site, including Knotweed roots, and bury it in a pond that she needed to fill. 3) For the next two years, the Knotweed did continue to come up in its original site and also in the former pond area. But 4) She kept mowing and 5) It is gone for now, though she knows that if she stops mowing it will most likely come up again.

Moral:

The persistence of the Knotweed can be successfully countered by the persistence of the humans who would like to see it gone. Persistence without chemicals does work.

By Lydia Davis and the Climate Committee of the Village of East Nassau