

Nettle Root Harvesting - In the Wild and on the Farm

Michael Pilarski, Friends of the Trees Society, December 25, 2016



I was just looking at the nettle section in my 2003 publication *Growing & Wildcrafting Medicinal Plants in the Pacific Northwest* and see that I didn't cover nettle root wildcrafting or growing, so here is an essay on that lovely topic while fresh on my mind from wildcrafting nettle root this week.

What a lot of people don't realize is that there are eight kinds of nettles found growing wild in the Northwest. Two are non-native and six are native. Most of the nettle patches found in the maritime Northwest are the non-native, naturalized *Urtica dioica dioica* subspecies. The 6

native species are all varieties of the subspecies *Urtica dioica gracilis*. Some taxonomists give these varieties status as distinct species. The native species tend to have taller, more robust stems and larger leaves. I wildcraft nettle seed preferentially from *Urtica dioica gracilis* var. *lyalli* in eastern Washington for its very large seed clusters. All the nettles can be used for food and medicine. The roots I am discussing in this article harvesting are from *Urtica dioica dioica*, which is what I wildcraft and farm.

Nettle (*Urtica dioica*) is one of my favorite multi-purpose plants. The young shoots and the green seedpods are superfoods and used as medicine. Nettle roots are used for treating urinary incontinence and swollen prostate. Saw palmetto (*Serenoa repens*) fruits are the most widely used herbal medicine for prostate problems and it has been found that nettle roots used in conjunction with saw palmetto is better than either used alone. Nettle stalks contain one of the strongest fibers known and it has been widely used for cordage and cloth in many cultures. Nettles are used in hair rinses, conditioners, shampoos and hair care products. In this article we are going to focus on nettle roots.

I harvest Nettle root in late fall to early early spring. It can be harvested all winter long when the ground isn't frozen.

Wildcrafting Tools. The digging tool of choice is the **pulaski**, a fire-fighting tool which has an axe head on one side and a sharp, narrowish, grub-hoe blade on the other side. It has a standard, straight axe handle. Other tools: **Burlap bags** to stuff the roots into as one goes along. I carry some **hand pruners** with me to cut out any obvious bad sections and sometimes I have to cut runners that I can't pull. The ground is usually very wet during the harvest season and if so I am wearing a good pair of **rubber overalls** and **rubber boots**. A raincoat if raining. Light gloves are fine in good weather and dryish ground. If it is wet I like **rubberized gloves** and, if it is close to freezing, padded as well. I harvested nettle roots the other day with a woman who didn't use gloves and it was cold and wet. She is tougher than me, but a lot slower harvester without hand protection.

Nettle roots occupy ground to a depth of about 6 inches in two layers (more or less). The top layer of roots are young runners, watery, narrower than the lower roots and a light yellow, whitish or even green color if close to the surface. There are root hairs at every node and this is where the next year's baby nettle shoots are located on. Before they go to bed in the winter the runners make these teeny green shoots (about the

size of the rubber on a pencil). These miniature nettle shoots are poised ready to go early in spring. I want to harvest before these baby shoots start elongating and head for the surface.

The second layer of roots are a larger diameter and a deeper yellow than surface roots. They are more solid and have less water content so they dry down at a different rate and yield more dry root. Root don't tend to run as deeply in heavy soil as in light, sandy soils. Root diameters vary from smaller than pencil diameter to as big around as my thumb. The deeper roots being generally larger. Which type of roots have the most medicinal constituents? I would like to hear some educated opinions on this, but I will guess it is the deeper, more solid roots.

So my goal is a harvest with a good percentage of the lower strata roots. However I take all roots with me that are uprooted, even most of the small ones. They all have good stuff and I don't want to disrespect it by discarding some. The exception being that I like to leave a few roots in the disturbed area to resprout and keep it colonized. This is optional since it is hard not to miss some anyway and almost always the surrounding ground is heavy nettles and they will reinvade quickly. As long as the disturbed patches are small, dispersed and surrounded by unharvested nettles, it should only be about 3 years to being a mature stand again and this is sustainable harvesting. I base this on field observations and having grown nettles for over 10 years.

Here in Western Washington most of the nettle patches are in partial shade. I prefer patches in an open forest (usually with an alder overstory) compared to patches in the open. Patches in meadows have lots more grass and other plant roots mixed in. It is harder digging. In an area covered with forest duff the roots pull up easier, the digging is easier and there is less interference with other roots. In a shady situation you are going to run into some tree (or shrub) roots and you just have to work around them trying to minimize collateral damage.

I look for thick nettle patches and within them look where the nettles are tallest and with lots of stalks. There might be something like 10 large stalks in a 3-foot circle along with some smaller ones. I use the Pulaski to work up a 3-foot circle. Striking the least number of times to get the job done and pulling up the runner network as I go, then a few deeper strikes into the middle to make sure I am down to the lower root levels. Then it is down on my knees to sift through the soil with my hands to pull out all the roots. Special care is given to looking for runner ends going into the surrounding soil. Oftentimes another foot or two of root can be pulled out of the untilled area. This extends the harvest area beyond the 3-foot patch. The runners break off at some point and so lots of root is left in this area to keep growing. I cut or break off stem tops in the field as I harvest and try to minimize anything going into the bag that isn't nettle root. I generally make a pile of the roots from that circle on the burlap bag and put the whole pile into the bag at the end.

After bagging, the disturbed surface litter is pulled back over the exposed soil as well as surrounding litter, stems, vegetation, branches, whatever organic matter is at hand. This mulches the soil and disguises the disturbance. Part of the 'leave no trace' policy. Generally I harvest away from where it would be visible from a trail, anyway. The mulch also does two things to help the nettle patch. It protects the soil and it exposes less mineral soil for weeds to germinate in. We want the nettles to reclaim the spot in short order. If we deliberately leave some runners in the soil to resprout, we could conceivably come back during the growing season and weed those spots; blurring the line between wildcrafting and farming. Something that indigenous people tend to do.

I obtain about an average of two to 3 pounds of root per circle worked. It weighs a lot more in the field.

Processing at home.

I lay the roots out on a tarp or clean concrete surface in layers 5 or so roots thick and do a first washing. I spray the dirt off with a water hose nozzle. Flip them over and spray the underside. It would take too long to wash each one separately. After the first washing comes the first garbling. Any leaves, grasses, twigs, stems, other kinds of roots, etc are garbled out. With a hand pruners pick up each piece and inspect it visually and cut off the occasional spots with rot. Cut off all last year's aerial stems above yellow live root. I discard some of thinnest, wateriest runners as well. I cut the long shoots into sections. It ends up with the runners mostly between 12 and 24 inches long. This garbled mass is then spread out for another round of spray washing to remove remaining dirt.

The next step is to lay the roots out to drain and surface dry. Flipping a couple of times hastens the drying process. If sunny, do this in the shade. If raining, you need to do the drying under a roof.

For fresh root orders, once the roots are surface dry they can be shipped. For fresh orders I generally harvest one day, clean that same day, air dry overnight and ship the next day. Depending on the buyer, they are going to want them shipped to arrive in 2 or 3 days.

Preparing for drying

If they are going to be put into a dryer the roots have to be cut into small pieces. A machine would do it quickly but I do all mine by hand with hand pruners. I put a small pile in front of me on a table and look carefully through it for anything that needs to be garbled out or cut out. Once cleaned, I cut the thickest and most gnarly root into pieces individually. The thicker the diameter the shorter the piece. After the thick pieces are cut I grab handfuls of the long runners and cut them en masse into approximately two inch pieces. This is spread out on the drying screens in about a one-inch thick layer with a careful eye for any remaining garbling. The fresh root I ship to the medicine makers, they go over it with a fine-tooth comb doing the final garbling. If I am going to make a tincture or put it in a dryer, I have to do that fine-tooth combing. Garbling starts in the field and attends every step of the process. I timed myself on this last batch and it took me 2.5 hours to do the final garble and cut up what weighed out at 20 pounds going into the dryer. The root dries relatively quickly (for a root) in two or three days. It weighed 5 pounds coming out. The dry down rate is about 4 to 1. Four pounds of fresh root yields about one pound of dry root. You make more money on selling fresh root than dry root because of all the extra processing time and because of the large reduction in weight. I filled two, standard-sized burlap bags in 2.5 hours in this week's harvest and could only carry one bag at a time but once home those two heavy bags cleaned out to 27 pounds of garbled, surface-dried root. At a 4/1 drydown that would yield 6.75 dry pounds at the end of the drying process. So you can see there is a lot of shrinkage along the way. Between me and 2 other harvesters we got enough root to fill a 20-pound fresh order as well as put 20 pounds in the dryer.

I have just raised my price for nettle root to \$15 a pound for fresh and \$30 a pound dry. That is for 5 to 25 pound orders. Some wildcrafters charge more than this. Most big wholesalers are charging under \$30 a pound for dry nettle root, but I doubt any have better quality. Most of theirs has been machine chipped and this leads to greater oxidation and reduction in quality, compared to mine, which has never been chipped. I could charge more, but I might get less orders. I don't want to gouge my clients. I love my clients! We all have to make a living.

Farming Nettles.

Year one: I field plant nettles in rows 3 feet apart in well-prepared and fertilized soil (all organic of course). Nettles like rich soil, especially nitrogen. I lay nettle runners in a shallow trench (3 inches deep) and cover

them with soil. I lay the roots overlapping two or three thick. The first year is the most work as they should be weeded thoroughly and often. The shoots will emerge in about a 4 to 6 inch band. Once they are well up and weeded, I mulch heavily with wood chips all the ground between the rows except for the band of nettles. Apply a bit lighter next to the band of plants since later in the year some new shoots will emerge and you don't want the mulch too thick for about the first 6 inches beyond the band. This relieves the weeding work to just the band itself. No harvesting in year one. You want all the plant's energies to go into making root mass.

Year two: The 2nd spring the shoots come up in about a two-foot wide band (including through the decomposing chip mulch). There will be less weeding to do the 2nd year, but weed early and often enough to keep it clean. If the wood chips between the beds has thinned enough to allow weeds to germinate then add another layer of chips to touch it up. Year two can give spring cuttings of shoots for food or medicine plus a seed crop. If you time your cuttings right you can get fall flushes of new growth which would fetch a good price in the food market (after feeding you and yours first).

Year three: This year the nettle runners will occupy the entire soil mass and the shoots occupy all the ground that once were pathways and you have one big-ass nettle patch. If good weeding and mulching has been done in years one and two there is little weeding to do in year three. Spring shoot and seed harvests are larger than year two. There can be some fall shoot harvest. The biggest money of the whole 3 years is at hand with the fall root harvest.

Farm Harvest: I like to harvest at the end of the 3rd growing season. I have a huge root mass to harvest. In heavy ground they come up as big root mats and some deep spade work needs to be done to cut around the patches so that undercutting with a deep spade can be done from every side before lifting. The goal is to get big root mats that are small enough to be overturned and the cleaning process begun. Typically I do this in 4' by 3' chunks of root and soil which typically weight 50 to 60 pounds when undercut, edged and turned up. In a light sandy soil, it is a lot easier to get this root mat up and bigger chunks can be dug at a time. It is a bit of a wrestling match. Maybe 15 to 20 pounds of root once you get the soil off. In the wild I have never seen the massive root systems that my farmed nettles have! Nothing even close and the roots have a deep yellow color. You can see the medicine in the color. Processing of the farmed roots is the same as described above.

I keep some of the runners to replant a new patch. If I plant a new patch every year, I can get a root harvest every year from year 3 onward. I also sell the root runners as propagation material and this is another side income.

Nettles are a preferred food for some butterflies and moths. They are a dynamic accumulator of minerals, especially iron. They are an important ground cover, perform valuable ecosystem functions as well as being useful to humans. Nettle root is great medicine for the prostate and urinary tract. The market has been increasing. I enjoy nettle root harvesting immensely - in the wild and on the farm.

Long live the nettles!