

# Be nice to nettles!

by Ed Berg

Spring has arrived in full force and it's time to enjoy some nettles. "Enjoy some nettles?" you ask. "Isn't that like enjoying poison ivy or the seven-year itch?" No, Indeed! Nettles are one of the first and finest gifts of spring. Like many prickly types of our own species, you just have to know how to approach them.

Specifically, you approach nettles with gloves; throwaway surgical gloves are nice, but any solid glove will do. Nettles, i.e., stinging nettles, are covered with tiny stinging hairs called trichomes. Each trichome is like a glass hypodermic needle, complete with a little bulb of skin irritants (formic acid, acetylcholine, serotonin, and histamines) at the base of the needle. When skin brushes the leaf surface, the silica-stiffened trichomes break and inject their chemicals into the skin, and red welts instantly appear.

A few minutes cooking quickly breaks down the stinger chemicals and readies the fresh greens for the discerning palate. The easiest way to prepare nettles is to simply steam them for a few minutes like spinach, and serve with butter and salt, or perhaps olive oil and Parmesan cheese. Nettles are also rendered harmless by drying, which allows them to be used for soups during the winter.

Just about any recipe that uses spinach can be improved by using nettles. We have a thick patch of nettles around our driveway, and my wife Sara serves nettles in one form or another most evenings at this time of year, before the plants get tall. Nettle quiche is my favorite nettle dish, and I will try to describe how Sara makes this delicacy, even though she is not one given to precise recipe formulas.

## Nettle Quiche

- Pie crust
- 3-4 cups of nettle tops
- Small onion
- Mushrooms
- Grated cheese, ¼ to 1/3 pound
- Fresh tomato
- Bacon bits
- 1 ½ cups of milk
- 4 eggs

Pick the top several inches from nettle plants that are less than a foot tall. Steam the nettles for several minutes until limp.

Stir fry the sliced onion and mushrooms.

Line the unbaked pie crust with grated cheese (cheddar, Swiss, pepper jack are good). Place the steamed nettles on top of the cheese, and cover the nettles with the fried onions and mushrooms. Slice tomatoes should be arranged prettily on top, and garnished with bacon bits.

Beat or blend 4 eggs and 1 ½ cups of milk (or sour cream or buttermilk) together, and pour over the whole pie, up to the edge.

Bake at 375 degrees until done, probably 35-40 minutes. Serve warm or cold. I add a touch of Tabasco sauce, but many would consider that barbaric.

As I noted above, it is best to use the youngest (top-most) part of the young plants. You can extend the useable life of your nettle patch during the summer by repeatedly mowing it, so that there is always a fresh crop of new shoots.

As the plants mature, the stems become very stringy. Nettle fibers are used to make "nettlecloth," just as flax fibers are used to make linen and hemp fibers are used to make rope and cloth. In the First World War the uniforms of German soldiers were

made of nettlecloth, due to a shortage of cotton.

Mature nettles also contain fine crystals of calcium carbonate called “cystoliths” which further reduce their palatability.

Nettles are indeed very well-defended plants and it’s interesting to reflect on the evolutionary significance of these defenses. The stinging hairs are a great defense against most herbivores (plant eaters). The moose in our yard eat just about everything else but never seem to get to the nettles. Goats however can eat nettles with impunity, along with tin cans. Goats are indeed highly evolved creatures.

The stinging hairs are a good defense against many leaf-eating insects, but some butterflies and moths (*lepidoptera*) have apparently evolved antidotes to the stinging poisons. The caterpillars of the black and gold Milbert’s tortoise shell butterfly (*Aglais milberti*) browse the leaves with relish. At first, the young caterpillars feed together within a loose tent made of silk threads. As they grow in size, the caterpillars disperse on their food plant and eventually make cocoons among the leaves. The bristle-covered caterpillar of the red admiral butterfly (*Vanessa atalanta*), which is black with red bands and white spots feed also on nettles in Interior Alaska. (To see dozens of pictures of these beautiful butterflies on the Web, do a Google search for the names, using the “Images” tab rather than the “Web” tab. They are very popular with photographers.)

In the plant world we often see evolutionary “arms races” between plants and the critters that eat the plants. At the moment, the butterflies are ahead of the nettles, and exploit their advantage by entrusting their children (eggs and caterpillars) to the nettles’ chemical defenses. If moose, however, could eat nettles, they would eat the butterfly eggs and caterpillars along with the leaves, so the safe haven nursery would be lost.

In the next round of the arms race, nettles may evolve a new poison that protects the leaves from caterpillars. This will of course work fine until the caterpillars evolve a new antidote. Alternatively, moose might evolve an antidote to nettle poison. On

the Kenai, nettle-eating moose would be very bad news for caterpillars, and the caterpillars might have to adapt to an entirely new plant. Then again, the caterpillars might evolve a taste so foul that moose would not eat the nettles if they smelled the caterpillars in the foliage.

These examples may seem far-fetched, but in tropical rainforests chemical ecologists have documented many such evolutionary tit-for-tats by looking at the sequences of precursor molecules that must be synthesized during the production of existing plant toxins. Each of the precursors was probably a temporarily successful defense against some critter, until the critter evolved a way of breaking down that defense. Nettles and their herbivores probably have a similar chemical history, but I don’t know if anyone has looked at it.

For most people the nettle rash disappears in a matter of minutes, but some people may suffer for a couple of days. One remedy is to squeeze the juice out of the nettle plant and apply the juice directly to the rash. Jewelweed (touch-me-not) and dock often grow in wet areas near nettles, and they can be crushed and applied directly to the rash. Jan Schofield in her book *Discovering Wild Plants* (Alaska Northwest Books 1989) also advises plantain and the scruffy coatings of fiddlehead ferns for nettle rash.

Finally, I should note that nettles provide abundant seed for small birds, and birds also forage on the caterpillars and other insects such as aphids that live on nettles.

In England nettles are appreciated as an important food for wildlife, as well as for humans, and British conservation website announces May 19-28 as National Be Nice to Nettles Week (<http://www.nettles.org.uk>), with a variety of nettle and wildlife activities planned for the week. We should have such a week on the Kenai, starting with a nettle quiche competition, or perhaps with a nettle version of the Greek spanakopita spinach and feta cheese pie. Yum!

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