Trees, animals, birds, plants, forests, mountains, lakes and rivers — everything that exists in Nature are in desperate need of our kindness, of the compassionate care and protection of human beings. If we protect them, they in turn will protect us.

- Amma

Contents

PNW Gardening
Backyard Herbal Medicine - Blackberry
Give a Bunny an Inch and He’ll Take a Mile
Bindweed and Morning Glory
Photos from our Readers Gardens
Organic Gardening at Mountain Valley Montessori School
Our First Adventures with Hügelkultur and Composting in the province of Quebec

Tree Planting and Habitat Restoration
More Info on Tree Planting and Tree Health

Nature
Watching Evolution

PNW Litter Project
Litter Project Stats
TerraCycle Recycling Report

Interesting Information from Our Readers

GreenFriends is a global grassroots environmental movement which promotes environmental awareness and local participation in conservation efforts throughout the world.

GreenFriends is one of the projects of Embracing the World, a not-for-profit international collective of charities founded by internationally known spiritual and humanitarian leader, Mata Amritanandamayi (Amma)

To join the Pacific Northwest GreenFriends Litter Project, write Karuna at karunap108@comcast.net
Happy summer, friends. It is that exciting time again: time to practice super gratitude for that very powerfully nourishing and useful herb: BLACKBERRY.

As you probably know, there are several types of plants known as blackberry. She will grow just about anywhere, and even has a habit of taking over someone else’s space! (http://www.kingcounty.gov/services/environment/animals-and-plants/noxious-weeds/weed-identification/blackberry.aspx)

The two most common types that we are used to seeing in abandoned land here in the Pacific Northwest are the Himalayan Blackberry and the Evergreen Blackberry. Both are naturalized here and are considered invasives by Washington State. Still, blackberries are a great source of herbal medicine, and the leaves make a wonderful healing cup of tea to enjoy.

It is the leaf, roots and berry of the blackberry plant that are the focus of this article. They all provide beneficial gifts for the body. Like the raspberry, blackberry is in the rose family. The thorns that she bears are a reminder of that.

Let's Start With Her Leaves.

They contain vitamin C, mineral salts, and tannins, among many other useful constituents. Tannins are known to have great astringent action. They tighten the tissues, causing blood vessels to constrict. The leaves also contain flavonoids—powerful anti-oxidants that protect the body's cells. In addition, the leaves have anti-inflammatory and immune boosting properties. Grow your own and it will be organic too!
Blackberry leaves are easy to harvest and make a very healing and restorative tea. If you take time this summer to dry the leaves, you'll have tea all winter long even when she isn't available in the garden.

**Her Fruit.** Probably everyone has eaten the yummy, ripe, juicy fruits of the Blackberry. Blackberries are healthy and can be eaten fresh, or be dried easily for winter consumption. I love to add her to kombucha for flavoring. Because of the beautiful blue/purple color of the fruit, you'll know she has anti-oxidants that help prevent cancer. In fact, blackberries are near the top of the best foods you can eat for anti-oxidant value! The chemical that does this work is anthocyanin, a type of polyphenol that is found in very high concentration in the fruit. The berries also contain manganese, which is great for brain function. Studies show manganese helps improve short-term memory. The fruit also has high levels of Vitamin K, a nutrient that helps regulate hormones and healthy blood pressure.

**Her Root.** Blackberry root, like the leaf, is filled with astringent tannins. Sometimes the body uses diarrhea as a way to remove a toxin from the body, and Blackberry root tea or tincture can help relieve it, along with getting to the underlying problem so the body can heal.

**Highlights of Medicinal Use of Blackberry.**

- Astringent: tightens the tissues, especially in the intestines, and protects the skin. Will help stop minor bleeding if used as a poultice.
- Leaves can be used as a gargle to help relieve sore throats and mouth ulcers
- Tea of the leaves can help relieve diarrhea
- Powerful anti-oxidant
- Promotes healthy skin
- Improves and maintains brain function
- Helps regulate menstrual flow
- Reduces inflammation, fights infection, and boosts immunity
- Good for cardiovascular system
- Helps heal hemorrhoids

Blackberry is such an important herb for backyard herbalists! There is no need to get a start of her from a friend; she will show up on her own in time. This herbalist has chosen to plant the "thornless variety"; it is a great way to have the benefit without the pain of the poke. Very highly recommended.

When you get ready to harvest Blackberry, please take the time to talk to her and listen to what she is saying to you. Sing to her! Gather a group of friends to go foraging for her. Please be sure to choose a spot that is away from the road's splash and fumes, and make sure the area hasn't been sprayed with pesticides—especially in August and September when her berries are ready. One of my favorite things to do is to pick some of the leaves and make an herbal bundle to share with a friend. Everyone loves the gift of a sweet bundle of fresh tea leaves!
Here Are Three Quick Easy Ways to Start Using Blackberry Intentionally and Medicinally.

Before you gather the herb, remember to thank the plant for its medicine, and always give something back. What you give back is up to you: maybe a chant, song or a simple message of gratitude. Or you can return the used portion of the herb back to the base of the plant. That is also a loving action.

1. HERBAL TEA. Cut off four to five Blackberry leaves and mince them into small pieces to release the magical herb’s essence. Boil water, turn off the heat and add the minced leaves, then let her infuse 10 minutes before drinking. You can either strain the herb out, or just enjoy the pieces when you drink the water. After all, they are edible. Herbal water is much better tasting and healthier than just plain water, and it tastes as great cold as it does hot. Think about adding a berry or two to intensify the flavor. It is amazing how fresh and stimulating Blackberry is!

2. HERBAL INFUSED SALAD. Pinch off a few sprigs of baby blackberry leaf shoots and gently add them to your next salad or smoothie. Enjoy the benefits! http://www.wildplantforager.com/blog/spring-foraging-how-to-eat-young-blackberry-leaves

Plus a Bonus.

My new summer favorite: make blackberry popsicles for that hot summer day! Simply put blackberries and water into the blender, then fill the popsicle cups and freeze. High nutrition will be available to you in a cooling format in 3-4 hours.

As with many plants, always remember herbs are medicine, so please use with care! Pregnant women should use special caution with herbs. Be careful where you gather them in order to avoid car exhaust or chemical contaminants.

I hope you will take time to establish an enjoyable connection with Blackberry and with our Mother Earth by experiencing Blackberry’s herbal leaves and drinking infused tea water consciously and intentionally. Happy Herbing!
Give a Bunny an Inch and He’ll Take a Mile by Lin Rose

He was so cute. If I’d been able to hold him, he’d have fit in the palm of my hand. We met when he hopped up to my glass front door and peered inside. For me, it was love at first sight.

Still, it must have been his mother I chased out of my vegetable garden after she’d nibbled my newly-planted lettuces to the ground, along with my newly-sprouted peas—occasioning quick erection of a fence.

But the nut doesn’t fall far from the tree. After I’d been feeding baby bunny carrots and lettuce for two weeks by my front door, I went out to water the vegetable garden and who should be inside the fence? You guessed it. He’d been able to squeeze under the gate, which explained the earlier disappearance of the peas’ attempt at second growth along with my tiny kale starts.

Luckily, baby bunny doesn’t seem to like the garden lettuce now that it’s turned bitter after bolting, and he leaves the mature chard and kale alone. I hope it occurs to him that chewing the garden of the hand that feeds him is a bad idea. Grumble grumble.
Ammma always says we should focus on the good in others so, first, here's what these invasive plants are good for:

- Morning glory roots and leaves can be used as a natural dye, for a soft yellow color, or a stronger yellow if alum is added as a color fixer.
- The flowers attract beneficial insects.
- You can use pieces of morning glory stem as garden ties.
- You can feed it to your worms.
- Some say morning glory is beneficial added to compost – but be sure you’ve removed flowers and seeds.
- Morning glory can also be used to make a nutritious compost tea for your garden.
- Morning glory leaves are said to be edible on some internet sites; but be careful if you try it, as other sites say they have a purgative or laxative quality.
- They do have lovely flowers. Try to appreciate them.

After spending many hours on the internet reading about bindweed and morning glory, I’m beginning to suspect they may be aliens from outer space, here to conquer the earth. And they’re pretty successful!

I’ve learned that bindweed and morning glory are two similar-looking but different plants, both with trumpet-shaped white flowers, from the Convolvulaceae family (from the Latin word *convolvere*, which means ‘to wind’). The family is not all bad -- it also includes beautiful colored annuals that people actually choose to plant and grow, as well as sweet potatoes, among many other species.
Morning glory, also known as ‘hedge bindweed’, has a bigger flower, usually white or pale pink. It’s a climbing vine that twists around your plants and chokes the life out of them. The scientific name is *Calystegia sepium*.

Morning glory may appear to die in the winter, but it is just resting, waiting. The roots, which are actually underground stems called rhizomes, are still very much alive.

Field bindweed is a perennial that grows on the ground, and is native to Eurasia. The small white flowers are one to one-and-a-half inches long. It is considered even more difficult to get rid of than morning glory. It is also known as “wild morning glory” or *Convolvulus arvensis*.

One website said bindweed was native to eastern North America, while another credited its origins to Europe. Whatever—we’ve all got it now, and it’s been called one of the most noxious weeds on the planet.

The best way to get rid of morning glory and bindweed, without the use of chemicals, is to keep pulling it up by hand, and/or digging up all the roots you can find. Know, however, that any remaining piece of root will likely regener-
ate. Also, sorry to tell you this, but the roots can grow as much as 30 feet deep—but most of it is usually found in the top two feet of soil.

If you don’t have a big bindweed problem yet, pull up any you see (in fact, offer to help your neighbours keep their yards clear – because their bindweed will become your bindweed). With the extensive, never-ending root systems of these plants, fences are no obstacle. Especially, do not permit bindweed to flower and go to seed.

Some advice from the internet:

- Do not rototill – it will create many more bindweed plants.
- A thick mulch or heavy plastic covering might slow it down, might even kill it if left on 3 to 5 years. But root systems can grow very long, and simply grow past it.
- Repeatedly snip it off at the root, or at least cut it before the plant reaches 8 inches. This is said to exhaust the plant, forcing it to use all its root energy without being able to photosynthesize. But you must be very, very, very persistent. A couple of people said they’d been doing this for two or three years and were seeing results.
- Pouring boiling water on it will kill the plant, but not the root. You can also do this persistently.
- Advice from an expert: “Lower your expectations.”
- Another said, “The best way to get rid of it is to move.”
- A theory to consider: “The world is held together with bindweed, and if it all went we’d be in trouble.”

Horrifying facts:

- The seeds of this plant can reportedly remain viable for 30 to 60 years in the soil. (Someone pointed out that no scientist has a career longer than that, which may mean they last even longer.)
- A rather frightening post on the internet: “I just took up some weed cloth that has been on a section of my garden for several years. The soil underneath is almost as hard as rock, but when I manage to dig it out -- slowly, from the edges -- I’m finding thick bunches of still-living bindweed roots throughout.”
- Scientists report that the seeds of field bindweed can live up to 60 years, and the roots can grow up to 30 feet deep.
- Field bindweed can develop roots and rhizomes of from 2.5 to 5 tons per acre.
- Even with herbicides, bindweed can’t be controlled with just one treatment, or even in just one season.
- Each flower produces up to four seeds. In one season, a single plant can produce up to 300 seeds.
- One person noted that she used Roundup on the morning glory, and tomatoes 10 feet away died. When she dug up the tomatoes, she found their roots had fused to the morning glory roots.
- “This is the weed that pushes many a gardener over the edge into using chemicals.”
- Several writers warned of the danger of buying manure from an unknown source because bindweed seeds may be lying in wait in the manure.
- Someone said, “I have a flower bed by the front door, and every time I go out, I pull handfuls of blooming bind weed. Three times a day. It’s better for my gardening self-esteem if I think of it as picking bouquets to cheer up the trash bin.”
PNW Gardening

Claimed on the internet to work against bindweed:

- Get a goat. And if they eat it before it flowers, the seeds won’t be in their manure. In fact, cattle, goats and sheep can eat it, but it may be toxic to horses.
- Keep chickens. They will peck away all the new growth and the bindweed will finally die.
- One person claimed to have a game with neighbouring children once a week, where the winner who had dug up the most bindweed roots received prize money.
- “Pulling the weed has become strangely therapeutic. In three months of pulling, I’ve gone from about 20 plants a day to 5 weak little sprouts today.”
- Enrich the garden with calcium or gypsum.
- One person said he covered his vegie garden in about 3 inches of shavings from fir wood. The bindweed only came up in a couple of areas where it was thin.

Possibly good news!

- There may be an organic solution: bindweed gall mites, which you can buy in some states or possibly have shipped to you. The mites are said to work better in dry areas. However, bindweed gall mites can take a few years to make a difference, and they are considered a treatment, not a control. But it’s something, right?

- Another writer (on a 17-year-long-and-still-going thread about bindweed) claimed to have ‘fabulous results’ by planting Mexican or French marigolds. Apparently marigold roots secrete a chemical that kills bindweed. The writer suggested buying heirloom marigolds so you can keep their seeds to plant next year.

In short, eradicating bindweed takes dedication, lots of persistence, and lots of patience. Interestingly, these are all qualities Amma considers very important for us to develop. Perhaps we should consider bindweed as our friend on the spiritual path!

References:

Field bindweed
King County bindweed fact sheet
U of California bindweed factsheet
17-year-long thread on removing bindweed
Youtube video on bindweed gall mites
PNW Gardening
Photos from our Readers Gardens

From the Maltby Garden:
From Mechas’s garden in Bellevue:
From Lalita’s Garden in Lasqueti Island, BC:
PNW Gardening

From Sarah’s garden in Eugene:
PNW Gardening
Pure Organic Gardening Photos from
Mountain Valley Montessori School, North Bend
These adventures started right after a very inspiring 5-day course on the "Soil Food Web" given at Amma’s San Ramon ashram last winter by Dr. Elaine Ingram. The focus of that course was understanding the biology and structure of soil, the importance of building good soil rather than continuing to use practices which result in depleting the soil steadily over time, and the method of making hot compost as a first step in building good soil.

Some cousins and I have begun working on some property on the south shore of the St. Lawrence River in eastern Quebec province. Since more of us in my generation are beginning to retire, we now have more time, more resources, and more person-power to tackle projects. With an increasing interest in food production, we began with a couple of kitchen gardens, the beginnings of a little food forest, and the planting of several dozen fruit, nut, and other trees, plus many berry bushes (mostly raspberry, blueberry, strawberry, gooseberry, currents, and strawberries).

This year we acquired two new fields. They are close to our houses, which makes them particularly attractive to cultivate for our food production project. They have been used at some point within my memory to grow hay or similar crops, so we were not faced with particularly difficult terrain to prepare.

Trees in the first field needed to be cleared in order for us to make use of a shed that was already there. We are in a "patrimoine" (a heritage designated area), so it is not always straightforward to get permits to build what we would like, and we will definitely need this shed for various tools, equipment, and supplies. We hired someone to cut all the poplars down, chip up as much as possible, and buck the remaining logs into 4-foot lengths that we would dispose of so we could start planting good compost-making material like alfalfa, rye, buckwheat, etc.
We used the wood chips for mulch around trees and shrubs we have planted, and for some sheet mulching of several new smaller beds.

The second field, right next door, provided the perfect place for disposing of the lengths of poplar. Its sandy soil definitely needed some organic matter added, which we did by using the hügelkultur method. That entailed digging 3-foot wide trenches and piling the poplar logs into them, along with brush, twigs, leaves, and hay, and covering everything with backfill. Poplar rots very quickly, so all this biological material will soon make planting beds rich in nutritional value. In addition, the soil will remain loose instead of getting compacted, and will retain more water than the surrounding sandy portion of the field.
First, we dug a trench with Belle, our little tractor...

...then everyone got into the action and added the logs

.... and the brush
...and hay and leaves... and a bit more sandy soil...

We are planning to start off with some good nitrogen-fixing pioneer type crops next year, then hopefully we will add a bit more diversity the following year. We will also make several more beds this summer.

ALL ADVICE for how to proceed going forward, would be SINCERELY APPRECIATED.

Online information is available if you’d like to learn more about the technique. For example: Hugelkultur are no-dig raised beds with a difference. They hold moisture, build fertility, maximise surface volume and are great spaces for growing fruit, vegetables and herbs. Hugelkultur, pronounced Hoo-gul-culture, means hill culture or hill mound. Oct 17, 2013

The Many Benefits of Hugelkultur | Permaculture magazine

Our next project, with Elaine Ingham’s course in mind, was to make good compost with all the available biological material we had on hand, such as wood chips, fallen leaves, and grass and clover clippings.
An optimal mix of brown material (like the wood chips and fallen leaves) for carbon content, and green material (like the grass, hay and clover) for nitrogen content is what produces the required temperatures within the compost pile, and with lots of grace, is what will give the desired result after being turned several times.

...and that plus the grasses we cut down in the two fields, was used for our first ever hot compost experiment.

We have now turned the compost pile twice. Its perfume is wonderful, and the temperatures are able to be managed quite well. Anticipation of all the great stuff we will be able to do with that compost is high!

Our greatest delight has been that we are moving towards not wasting anything, at least as much as possible.

There is still lots to do this year, but already I can’t wait to see how this all turns out next year! We have so much gratitude for all of Amma’s grace in these adventures, and for all the help in various forms that’s been showing up!
Planting trees

Someone recently asked Amma how best to prepare for our uncertain future. Her reply was: "Plant trees."
She has been suggesting that for several years, so let’s share our tree-planting stories. Maybe those ideas will help
inspire others and give us all ideas on how and where we can plant more trees and keep trees healthier!

What have you been doing to plant trees? Let us know!

Improving tree health: stop the smothering!

Apparently up to 80% of trees may have been planted too deep, and this can impair their health.

The root flare -- the base of the tree that flares out into the roots, is part of the trunk, which needs to be exposed to
the air and not covered in dirt. Dirt or mulch covering the root flare holds moisture, which permits disease or rotting
to occur. This problem can begin at the nursery. When the tree is planted, the unsuspecting buyer plants it at the
same too-deep level that it was in the pot, or -- worse yet -- even deeper.
Here's a video with instructions on how much root flare one needs to uncover. (Palm trees, if you have any, do not
have root flare, so don’t worry about them.) The 'Dirt Doctor' says uncovering root flares can noticeably improve tree
health in just one growing season:
https://www.youtube.com/watch?v=4eFxsX5wZBk

Another problem that can begin in the nursery is called 'root girdling', where roots grow on top of the trunk flare, then
begin to encircle the trunk. This can happen when a tree is kept too long in a container and the roots begin to grow in a circular manner.

The encircling root becomes embedded as both the trunk and root grow thicker, then begins to cut off the flow of water and nutrients up the trunk, and the flow of sugars and carbohydrates down to the root, eventually killing the tree.

Girdling roots can occur either above or below ground. Symptoms of girdling roots can be stunted growth, the die-back of twigs, and leaves turning color or dropping earlier than those of other trees. Learn more here:

https://www.youtube.com/watch?v=IcUHNXdo19E

Removing the soil from root flares, or cutting girdling roots, should be done very, very carefully. It’s very easy to damage these surfaces, especially if they’ve been too damp for some time. One writer suggested using the care you’d use on an archeological dig! I’d suggest reading up on these techniques before attempting it, or hiring a professional.

Let the competition end!

Consider removing grass and ground covers around trees. Turf and other things planted in the tree’s drip zone are competing for resources, and can also result in over-watering of the tree.

One of the best things you can do for tree health is to mulch with wood chips or bark mulch (but not up against the trunk). Even a large tree can benefit from mulching the entire drip zone.

http://hort.ifas.ufl.edu/woody/remove-grass.shtml

http://hort.ifas.ufl.edu/woody/mulch-on-declining-tree.shtml
I found myself working on an organic farm. One morning I went in the barn and heard the sweetest little cacophony of birdsong. When I looked up I saw a mama swallow coming to feed her three little birds. I watched them for the next three days being fed and learning how to fly. On the fourth day they had flown the nest! What a delight to have witnessed their evolution! I sit at night watching the swallows catch their meals in flight knowing these three little birds are part of the bug eating team!
PNW Litter Project Stats

In August, 31 Litter Project members and their friends picked up litter for 51 hours. (Average 1.6 hours; Median 1 hour; Range 1 minute to 10 hours) We have picked up litter for 8878 hours since the project began in July of 2011.

TerraCycle Recycling Report

Namaste Friends,

For several years now, our Seattle area satsangs have participated in recycling items that are not currently being recycled by city waste programs through an organization called TerraCycle. They have a strong web presence and I encourage you to check them out. [http://www.terracycle.com/en-US](http://www.terracycle.com/en-US)

Currently our satsang is collecting three items:

1. granola bar wrappers
2. plastic cereal bag liners
3. cigarette butts

So far we have collected and diverted from the landfill:
- 4,147 granola/energy bar wrappers.
- 732 cereal bag/cracker bags (the wax papery type).
- 331,224 cigarette butts.

Our thanks to everyone who is participating; this shows incredible love for the planet. Please ask your friends and neighbors to give these items to you. You can drop them off in the east side of the garage at the Maltby property. We are paid a very small amount by Terra Cycle, so we save up the items until we have the proper required amount to send in. For example, we need 15 pounds of cereal bags before we can send them off. That is why you probably haven't heard much about it lately. So far, we have raised $22.81 for the Maltby property.

I know we can improve our efforts! You are all amazing people!!

If anyone is interested in getting more involved in this Seva, contact me (Visala) at 206-861-5917.
From Achala Devi in Tacoma:
I’m trying to learn about a new medicinal herb and/or plant wherever I go. Here’s a new one I’d like to share. It’s called wild oat straw. Although I did not get to harvest them while they were green, they still hold medicine and will make a fine tea!

http://www.cshs.com/herbsOfMonth/oats.html

From Priya in Seattle:
Thought you’d appreciate this reminder of the resilience of Nature.

Trees That Refuse to Give Up No Matter What