



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

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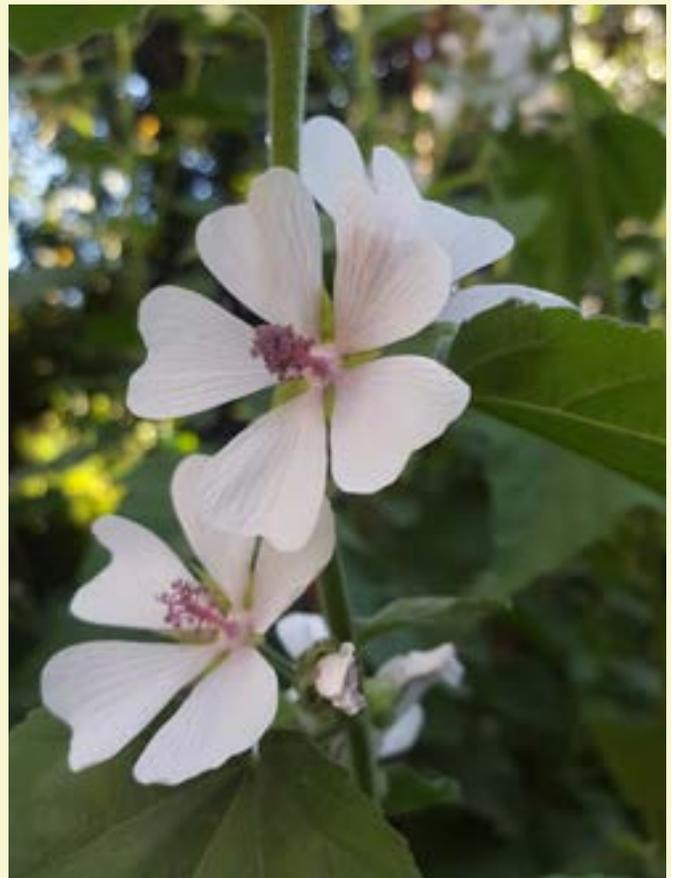
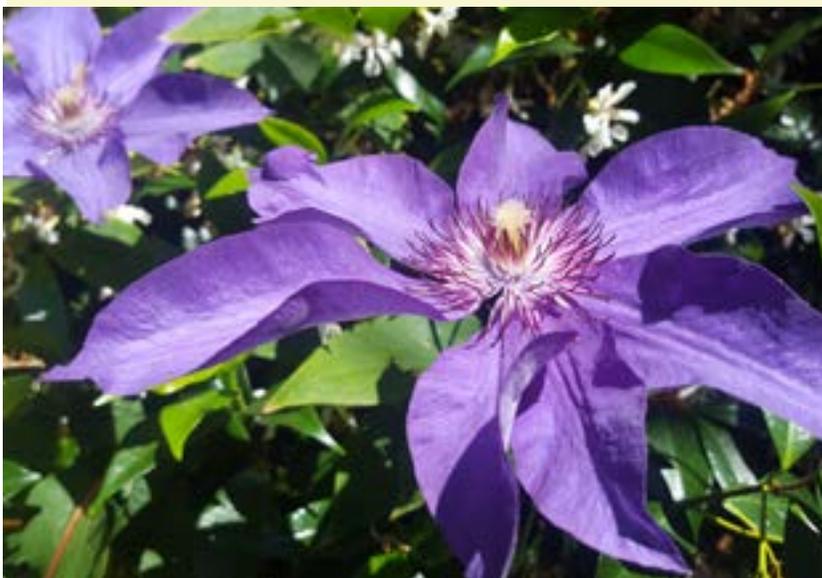
GreenFriends is a global grassroots environmental movement which promotes environmental awareness and local participation in conservation efforts throughout the world.

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)

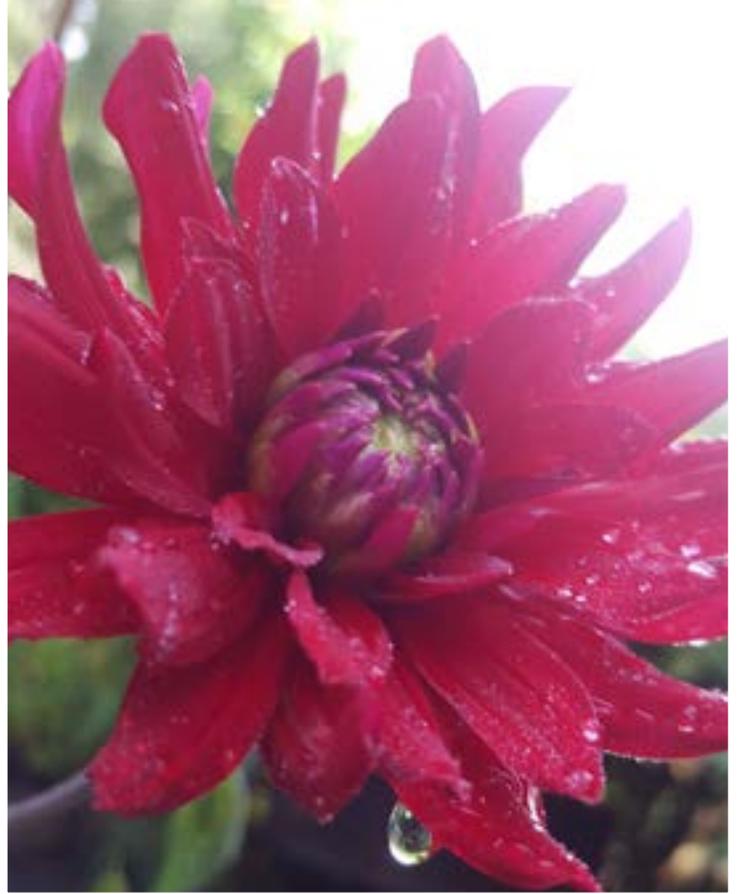
To join the Pacific Northwest GreenFriends Litter Project, write Karuna at [karunap108@comcast.net](mailto:karunap108@comcast.net)

# PNW Gardening

## Photos of Komalam's Portland Garden- Part 2



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## Garden Update: October Glory by Prarthana (Bainbridge Island)



Still growing: Kale (3 kinds) arugula (2 kinds), chard, broccoli, and brussel sprouts.



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## An Afternoon at the Bellevue Botanical Gardens by Lin (Bellevue)



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## Basic Methods of Permaculture Design by Josh (Indiana)



Permaculture is applied ecology. Ecology is how life exists -- the relationships in and between everything that causes what is to be. Understanding the way ecology works and intentionally applying it to human endeavours while benefiting the whole network of life is permaculture.

That is the big picture. In this article, we will zoom in a little bit, and look at how to begin the process of making a permaculture design. While the permaculture perspective can be applied anywhere, this article will consider the most common permaculture case: designing a system that includes an element of food production. This could be anything from a homestead, to a market garden, to a home garden in your backyard.

### **Vision**

Again, we are going to start by looking at the largest pattern we can, which is the vision, or goal for your permaculture design. It is important to have a vision, and to be both as broad and specific as you can be, because this will help drive your design.

Perhaps you want to have a homestead and achieve as much self-sufficiency as possible, or you want to have a homestead that can serve as an experimental and educational opportunity for others. Or perhaps you simply want to have a garden in your backyard: is it mostly for food, or beauty, or the pleasure of good work, or the education of your child? It could be for all of these reasons and more.

Vision isn't static, and will change as you start with the practical work of design and implementation. It is important to consider what your vision and goals are, and to check on these every once in a while.

Next we will look at three different processes that really inform practical permaculture implementation and that are

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the basis of the design process.

## Sector Analysis (Environmental Conditions Analysis)

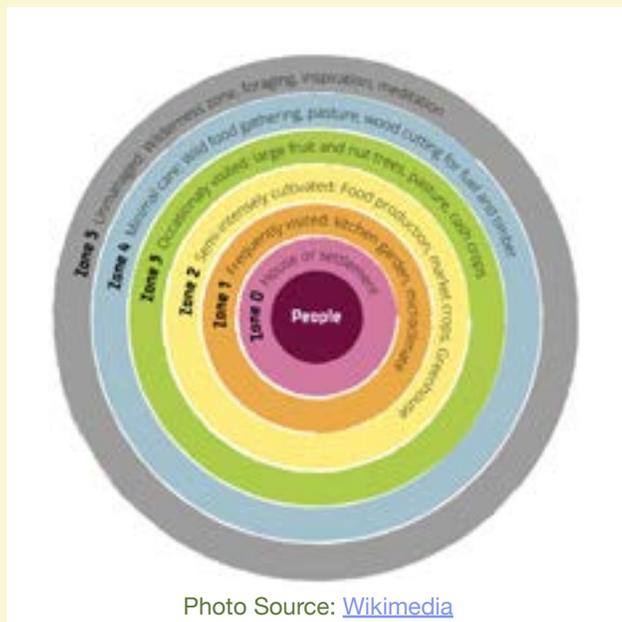


Photo Source: [Wikimedia](#)

The word “sector” is just a fancy name for an environmental condition that is beyond your control, is usually generated off-site and somehow flows through your permaculture area. Examples are the sun, wind, rain/moisture, noise, pollution, the movement of wildlife, elevation (i.e., gravity), etc. These forces generally originate elsewhere than your site, and tend to have a direction (which may change during times of day or year) that they approach or flow through your site.

Most often, a designer will create a map of the area, which can include the zones (see below), that shows the various sectors and their directions,<sup>1</sup> The simplest sector to analyze is the sun.

We want to know how it affects our permaculture area; i.e., when

it rises, when it sets, the angle in the sky, so that we can know which parts of the area get how much sun when, and what the quality of the light is. Of course, this information about the sun changes every day, and that difference is usually marked on a sector map. Once we know it for every day of the year, it isn’t likely to change significantly during our lifetimes.

Other sectors may take more observation, and may be more prone to change. For example, winds often have general characteristics. They may mostly come from a certain direction at one time of the year, and a different direction at another. It is more important to understand and track these movements, as wind can have an effect on many elements of a permaculture system. We may be able design elements in such a way to take advantage of the wind, avoid it (such as avoiding creating wind tunnels), or perhaps we need to design an element that affects the wind, such as a windbreak.

Essentially, sector analysis is about knowing your place. In an ideal world, we would be able to be with the place where we want to do permaculture for even a year or more before actually implementing any changes. This would really help to begin understanding the sectors present and how they influence the place. Of course, sector analysis is something we can do anytime, and should always be in the process of doing, because we can always learn about natural forces and how they affect our area. Also, with climate change, old patterns may not be true anymore, and patterns may change even in our lifetime.

<sup>1</sup> I wasn’t able to find an example I could include in this article, but there are many examples on the internet.

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## Zone Analysis (Human Energy/Impact Analysis)

Whereas sector analysis starts with natural forces, zone analysis starts with humans. A permaculture area will be divided in six zones, labelled zones 0-5. Zone 0 is the center -- from a human perspective. This doesn't mean it is necessarily the center of the property, but it is the center of human activity, so most often it is the house or dwelling.

Zones have to do both with human impact and human energy relationships. As for impact, zone 0 is often the most impactful, because humans live there with their busy lives, etc., while zone 5 is designated as wilderness area. Humans may go there, but the idea is to let nature have its way in zone 5.

As for energy, this means conserving human energy and using it most effectively. For example, a kitchen garden with herbs and vegetables is a place you may go multiple times a day, so it should be very close to your kitchen, ideally right outside the door. If it were far away, it would take a lot of energy to walk there multiple times, and to carry back vegetables, etc. A kitchen garden would be in zone 1, right near zone 0. As the zones get farther out, they take less time and energy investment on a daily basis. For example, if you have a market garden and/or greenhouse, that may be in zone 3. You may go there once or twice a day to do the necessary work but you aren't constantly going back and forth, carrying tools and supplies, etc.

If you are simply trying to create a garden in your backyard, you may not have all the zones on your property, but it is still helpful in getting to know your larger context to think about where you might find the other zones. Is there an orchard or small ponds/streams nearby (zone 2), any fields where farmers grow staple crops (zone 3), any pastures or woodlots used for production purposes (zone 4), and where are there wild areas near you (zone 5)?

## Needs-and-Yields Analysis

This type of analysis is a way of thinking about the relationships of various elements of your permaculture system. You might have a vegetable garden, and herb garden, a small pond, some compost piles, etc. How can these different elements interact, and we can design them or place them in such a way to increase their synergy, and perhaps decrease your energy input?

For each element you would make a list of things that it needs as input and what it gives as output. For example, a garden needs seeds and compost and mulch. It outputs vegetables, organic matter, and potentially seeds. A compost pile needs organic matter, and it yields compost. You need food, and yield waste scraps. So here you can see there is a cycle between the garden, you, and the compost pile. The garden gives food, you eat it and create waste, the waste goes to the compost pile, which gives compost, which goes onto the garden, etc. So having a kitchen garden and compost pile in zone 1, right near each other and the house would be an effective design, since garden, house, and compost intimately interact.

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This is a simple example to show the idea. In a complex permaculture system, you may have many different elements, so listing the needs and yields of each one can help to design cycles that can help the system function, and can also help decide the placements of elements: if you have two or more elements that have a lot of complementary needs and yields, you might place them close together, since they have close relationships.

### Bringing it All Together

While we might go about each of these methods individually, to create an actual permaculture design, we have to integrate them and use the information collected from all to design our system. While the zone analysis is the only one that has something specific to say about where to place elements, it is ultimately the least important in placing elements. I think the sector analysis is the most important in this regard.

For example, if you have a great spot for a kitchen garden in terms of zone analysis, but that spot doesn't get enough sun, or is too windy, then it really isn't the right spot for the garden. So all of these different elements have to be considered and balanced in order to create an effective ecological system.

*Comments from Josh about the first photo: "It is a daikon radish. I live in Indiana, on the north side of Indianapolis. Our soil has a lot of clay, and also rather compacted probably from the construction of the development where I live... the daikons bust through soil and if you leave them to decompose in the ground, they basically "till" the soil naturally!"*



Photo Source: [Wikimedia](#)

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### Sneha's Garden in Alaska by Prarthana (Bainbridge Island)

In September, I visited my daughter Sneha and son-in-law, Aaron. They are building an off-the-grid family compound in central Alaska 45 min north of Denali National Park, 1 1/2 hr from Fairbanks. Sneha and brother-in-law Pat have planted a garden that provides their vegetables and herbs. Much of the yield will be preserved when their root cellar is completed next year. They are also cultivating mushrooms on birch logs.



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## Nature

### Nature Photos

**From Sarva in Maltby:**



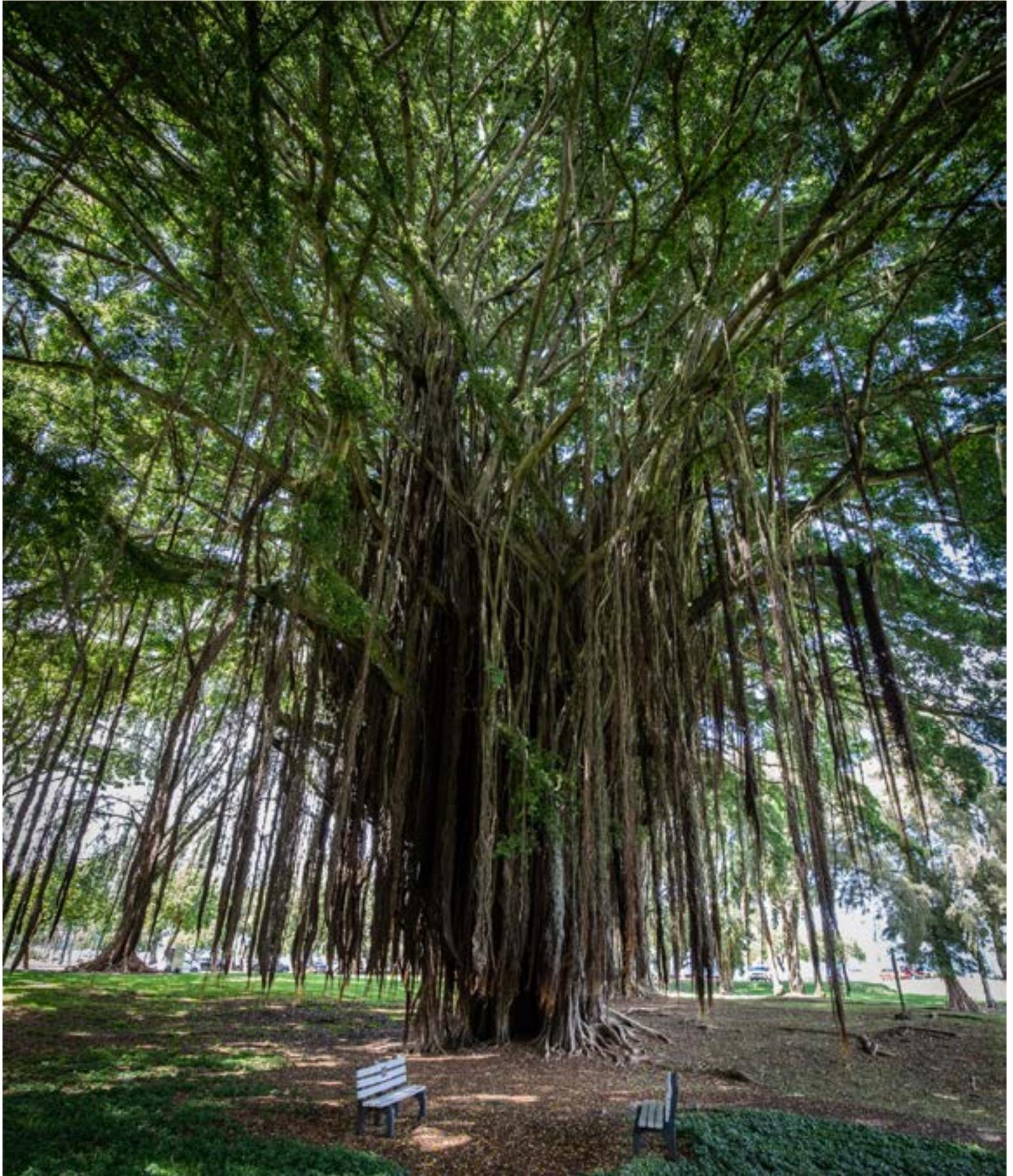
**From Lin in Bellevue: Park Seva**

While there was still a little blue sky showing I took a walk in the park across the street and around the block. The clouds were so beautiful! I took my clippers and garden gloves with me and spent about an hour pulling ivy off trees. Felt good to be breathing clean fresh air and giving the trees a break.



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### Banyan Tree Picture from Hilo, Hawaii by Eric (Redmond)



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### A Thought-Provoking Question by Lin (Bellevue)

It's easy to love Nature—to plant flower gardens and trees, to walk forest trails, to revel in the beauty of our national parks. But does Nature love us back? Liz Gilbert asked that question in her book *Big Magic*. She pointed out that love is a reciprocal relationship. And it got me thinking. How would I know whether Nature loves me back? Is there any evidence?



Image by [manfredrichter](#) from [Pixabay](#)

But how was I going to get rid of them? I was relieved they'd ignored the poison an exterminator set out, and I didn't have the heart to use snap traps. Mother Nature unexpectedly sent a more natural method. A cat. That seemed to do the job, and I was greatly relieved to be rat free.

Had Nature come to my rescue in gratitude for my weeding the gravel driveway by hand instead of using weed killer? For sharing my vegetable garden with the bunnies instead of chasing them away? For layering the garden's soil with compost to grow healthy plants and keep pests in balance instead of using insecticides? For feeding the birds and refreshing their bathwater every morning? Those were some of the ways I showed Nature my love for her.

Her love radiates continuously to us in the form of the natural world through trees, plants, flowers, birds, and creatures large and small. She is the first place I turn when needing comfort and reassurance. The peace and quiet joy she radiates are all I need to slow my mind and soothe my emotions. But, even after my surprising rescue by a rat-dispersing cat clarified that Nature surely loves me, I still wondered whether Mother Nature's love was personal. Does she love me individually?

I searched my memory for evidence, settling on the year I'd hiked to the fire lookout on Mt. Rainier on the Sunrise

Well, it seemed she responded to my plea when rats overran my yard this summer. Was it because I sympathized with them? It wasn't really their fault that they'd encroached on my home because their own homes had been upended by nearby light rail construction.



Image by [ivabalk](#) from [Pixabay](#)

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side. I remember standing on the ridge gazing across at Mt. Rainier. Its snowy dome filled my whole field of vision. Overcome with reverence for the beauty of creation and the timelessness of the mountain, I sank to the shaley ground in awe. Beneath the shade of my wide-brimmed straw hat, my eyes closed into peaceful meditation.

Apparently I wasn't the only one appreciative of a little shade. When I opened my eyes, there was a pipet, a little brown bird, napping peacefully next to my hip in the shadow cast by my body. I was touched by its innocent trust. Nature was surely loving me back. How else could I explain it?



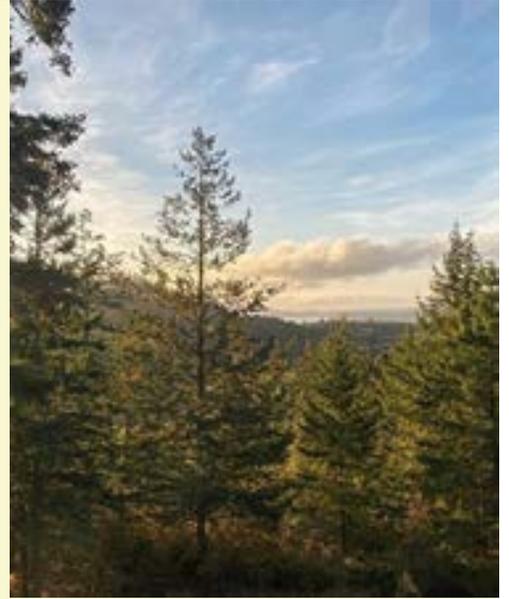
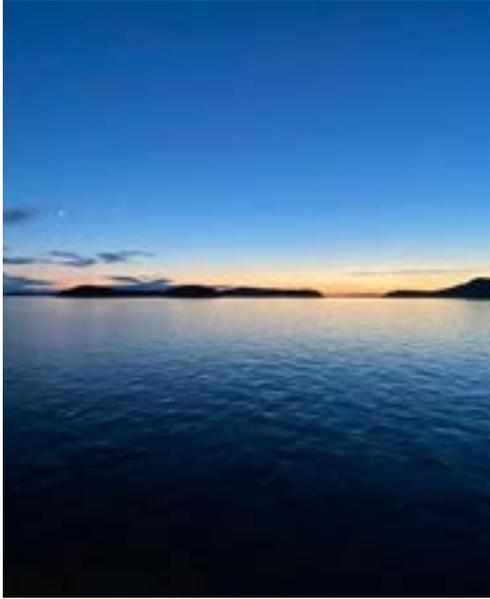
Image by [GS.S](#) from [Pixabay](#)

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### Trip to Orcas Island by Eric (Redmond)



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# Nature



## Nature

### Cleaning the Air by Achala (Tacoma)

The most intense period of wildfires on the West Coast this summer placed a dense cloud of smoke over Washington for two weeks. I turned my box fan into an air purifier by attaching a MERV-13 furnace filter to its intake side with a long bungee cord. I found the idea on Facebook. I kept it running on medium for 9 days. I'd say it worked! It's hard to see in the photos, but a significant amount of gray grime accumulated on the filter.

If you try it yourself, consider getting one of the more expensive MERV-13 HEPA filters to maximize the size and volume of particles it traps. I will now have both the fan and the filter on hand, ready to go in an emergency.



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## Wild Grizzlies by Cindy



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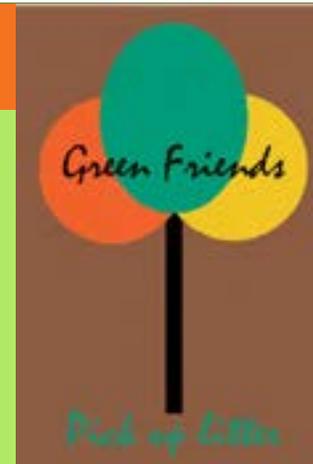


[Wild Grizzlies](#)

## PNW Litter Project

### Litter Stats

In October 2020, 25 Litter Project members and their families and friends picked up litter for 77 hours. (Average 2.9 hours; Median 1 hour; Range 2 minutes to 18 hours). We have picked up litter for 11,660 hours since the project began in July of 2011.



### TerraCycle Stats

We have sent TerraCycle 356,874 cigarette butts since 2013. [TerraCycle is an organization that recycles items which are normally considered unrecyclable.]

### Litter Pick-up Thoughts by Shawn (From Seattle but for now living in Florida)

Some random thoughts during a litter pick-up walk in a lovely and conservative Florida town

“Slow down, s l o w d o w n... and make the intention.... Service... meditation”... mantra mantra mantra... “Lots of Trump signs around here”... “I feel like a scaredy-do-gooder with this mask on but I will make it a spiritual exercise in humility”... mantra mantra mantra... “Oh, some scattered styrofoam pieces all over the place, ... some stupid person did this, well - I’ve made some messes in my own life, so am cleaning up my own mess”... mantra mantra mantra... “I hope someone from the Housing Association sees me so I can get some credit and realize that I am the same guy they almost kicked out a few months ago”...mantra mantra mantra”... “Oh, there’s some cigarette wrapper stuff in the tall grass. Careful, there might be a snake like the one last week”.....mantra mantra mantra... “Here comes someone, they’re gonna think I’m a dork with this mask on... this mask thing has become a political thing”... mantra mantra mantra... “Am gonna keep the mask on and stick it to them... or maybe they will think that they should wear a mask also. Holding this grabber and trash bag makes the mask fit in”... mantra mantra mantra....”Oh, there’s that enchanting singing again by those birds... I never really understood this whole-love-of- birds thing, but I am growing more charmed by these song birds every week... there’s hope for me yet... picking up these cigarette butts is my gift to them”.... mantra mantra mantra... “I should record their singing and submit the audio to Karuna along with that poem I heard by Emily Dickinson, yeah... ‘Hope is the thing with feathers’... Everyone will be impressed and they’ll think I’m cool”...mantra mantra mantra