



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

NEWS

Amrita + Agriculture = Amritaculture!



If you listened to Amma's birthday message this Sept 27th, you know how important it is to start growing your own organic fruits and vegetables, and for us humans to reduce our environmental impact and get back into harmony with Nature. But if you've never grown your own food before, how do you start? And if you want to improve your harvest, or your relationship with Nature, how do you do that? Through her love and compassion and guidance, Amma has provided the beginning of our answer. Introducing the inaugural Amritaculture Course!

Every week we'll have a Swami Satsang on Vedanta or Amma's teachings on Nature, several videos of an instructor in the garden, and several practical lectures to help you up your game in the garden, as well as a meditation and live Q&A! You can get to know other Amritaculture Gardeners through the Community Discussion Board and share knowledge with gardeners from all over the world. You get all this and more for \$27 per week!

Amritaculture Level 1 starts on Oct 12, 2020

Pre-order is Now Open at amritavirtualacademy.com/gardening

All proceeds support Amma's Humanitarian Activities.

FREE LIVE SESSION Oct 3 - All are welcome.

10 pm Amritapuri

9:30 am San Francisco

11:30 am Chicago

12:30 pm New York

6:30 pm Paris

8:30 pm Dubai

This first course covers the foundations of gardening, and we've already started work on a second and third course to be released in February-June of next year. This means by next spring you can have everything you need to start cultivating your own slice of paradise, growing your own food, and doing your part for the planet. In addition, there are many specialty courses in planning, including composting, seed saving, climate specialties, sacred plants, and more.

PNW Gardening

The Amritaculture Team is always looking to collaborate with other experienced and knowledgeable gardeners or nature lovers. If you have a class to offer or a contribution to make, please contact us at amritacultureteam@gmail.com. For questions about enrollment, and all other questions, email amritaculture@amritavirtualacademy.com.



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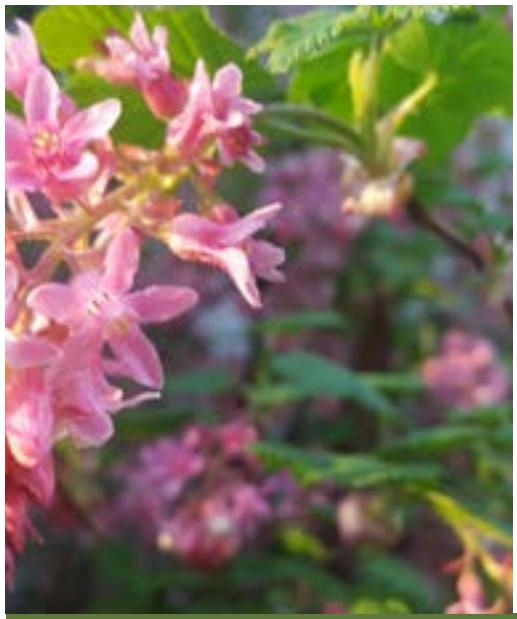
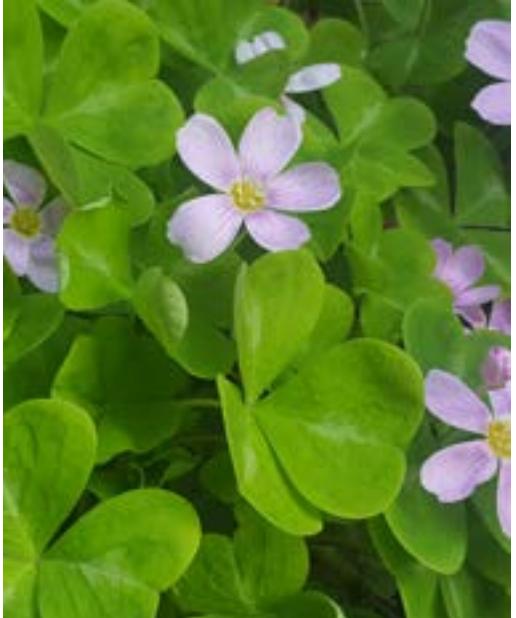
Photos of Komalam's Portland Garden- Part 1



PNW Gardening



PNW Gardening



PNW Gardening

Permaculture Principles by Josh



Permaculture is a collection of ideals, principles, and practices that seek to design and implement systems that fulfill human needs for energy, shelter, food, well-being and community in a way that also fosters the health of the ecology in which it is situated. Permaculture is primarily a system of design. Whenever we set out to accomplish something, achieve a goal, or solve a problem, we are engaged in design, the process of dreaming, planning, and implementation. Permaculture can be applied to any design situation; i.e., anytime we create something, adjust the way something works, or address a problem.

One of the founders of permaculture, David Holmgren, created a collection of 12 Permaculture Principles. Most often these are used in the context of food production systems, and if you were designing a farm or a homestead, for example, having the list of 12 Permaculture Principles next to you would be invaluable.

In this article I would like to present the Permaculture Principles in a different way. Since I believe that permaculture is a worldview that can be applied to more than just food production, my intention is to broaden the context of the principles so they can be seen and applied with a broader perspective. I'll do this by presenting the principles in three principles categories: the first category concerns the designer and their relationship with themselves, the second concerns the systems we use and interact with, and the third I will call "agents of change"; i.e., these are the principles that elucidate how to design and how to solve problems.

Relationship to Self (Internal Principles for the Designer)

Permaculture is inherently a relational system; it recognizes that systems, especially natural, ecological systems, include many parts, and that all parts should be respected in, of, and for themselves. Thus the attitude a designer should take is one of *participating in the collective ecology of relationship*. As a human, and designer, we are of course talking about changing the natural world and ecological functions to suit our needs, but Permaculture believes that we can do this in a way that respects all other life, and can even benefit all other life. So what are the

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principles for our action and attitude in this regard?

First, Observe and Interact - this is almost the definition of “participate.” If we are designing a homestead, we must be on that land, see what plants are there, what animals, how the sun shines, where there is shade and shadow, etc. And we must build a relationship with it, because soon we will start changing things in that system, and so we need to establish trust and respect that goes both ways.

This leads to the second principle, *Accept Feedback and Apply Self-Regulation*. Whenever we interact with something, we also change what we interact with. Especially when we do so intentionally in a design situation, the system will inevitably respond to our interaction, and we need to be aware of that, which is what it means to “accept feedback”: notice the consequences of your actions. Then we must “apply self-regulation”: our actions may not have had the intended consequences, or had unintended consequences, so then we must change accordingly.

Thirdly, we must *Creatively Use and Respond to Change*. This leela of Amma’s is change, so we must always be aware of that, and design for it. In practical terms, this means understanding that what we have designed may be working now but, in an instant, something can change and that design may no longer work. Most important is to be aware of this, but then we can also design with this in mind, and try to design in a way that can absorb change, and or even use it to a positive benefit.

Relationship to Other (Principles of Systems and How they Work)

An important part of relationship is considering the other, their needs and functionings. These principles provide a way of viewing systems, especially natural systems, that will help us to understand them and then make appropriate design decisions.

Firstly, we must *Value and Employ Diversity*. This is one of the fundamental principles of ecology; the great diversity of life forms, or life strategies, of food sources, of ideas, of methods, etc., makes all these systems able to function as well as they do. Modern industrial agriculture is the opposite of diversity, and we only have to look at its effects to know that “primeval, perilous sameness”(1) is not in anyone’s true benefit. So we recognize that regardless of whether we are designing an edible ecosystem or a human community, diversity is foundational to effective functioning.

This leads us to the second principle, *Integration, not Segregation*. It is not enough to just have a lot of different kinds of things; they need to interact, to be in relationship. So when we are designing, we must have an eye to how we can bring pieces together to gather and foster synergism. For instance, if you are planting 50 varieties of vegetables, and they each have their own row and each row is three feet apart, that is segregation; it is not an ecosystem. It is just a bunch of plants that happen to sort of be close to each other. It may be a diversity of types, but it isn’t a diversity of relationship, which is where the real power is. If we can integrate the elements into a community, then they can work together and we can find something greater than its parts.

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The third principle is, *Value and Respectfully Employ Nature's Gifts*. We only really need this principle because of our history over the last 10,000 or so years, when we thought we could conquer Nature and bend Her to our will. We have to realize that any system or people or ecology has its own inherent purpose and value, so we need to recognize that, be grateful for it, and if we use it in our design, we should do so in a way that is suitable to its natural gifts, a way that allows it to enhance the system and itself through its own nature.

Agents of Change (Process Principles)

Now that we have looked at the principles of a designer's self-relationship and their relationship to the system, let's look at some principles related to how design happens, and that can be used to solve problems.

The most important principle is *Design from Patterns to Details*. This means, look at the whole picture, at the system as a whole first, and then make decisions in successively smaller areas. This is especially helpful in problem solving, because we may try to solve a problem by making an adjustment which itself throws something out of balance, then we try to solve that, etc., but here we haven't looked at the system as a whole. If we look from a larger perspective, we may find what is causing the problem, or find a systemic solution that adjusts the situation while maintaining the balance and integrity of the system. One of the reasons I so appreciate Amma is that she literally has the broadest perspective possible, and inevitably "designs from patterns to details."

The second most important principle is *Employ Regenerative Strategies*. This means that we should view systems primarily as cycles and seek to design so that everything can be cycled. The original version of this principle is Produce No Waste. In natural systems there isn't anything that is truly "waste;" waste only occurs at a particular level, but when you switch levels, that "waste" becomes food. For instance, oxygen gas is "waste" for plants, because they can't use it, but obviously it is food for us; likewise, our carbon dioxide gas is "waste" for us, but food for them. This is a "regenerative strategy;" i.e., waste becomes food becomes waste, etc.; it is a cycle, and we should intend that every aspect of our design is regenerative, or cyclical. (Obviously, we humans are producing vast of amounts of stuff that can't be easily cycled, which is rightly called "waste." My own belief is that on the time-scale of the universe, all that stuff will eventually be decomposed into its constituent atoms and become something else, but that obviously doesn't mitigate its current ecological devastation, so of course we should seek to eliminate this kind of waste.)

Thirdly, we want to *Use Small and Slow Solutions*. When we make changes in systems, especially natural systems, the effects can take a while to show up, so we want to make gradual changes so that if something doesn't work as planned, we can reassess (i.e., "apply self-regulation"). We also see that sudden, large effects can throw systems very out of balance, and it can take a very long time for a new equilibrium to be reached. Of course, Nature in general tends to make its way rather slowly, altering pieces slowly but surely. We should seek to emulate Her in this as in all things.

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The last process principle is *Use Edges and Value the Marginal*. An edge is wherever two things meet, and it is an ecological truth that many interesting and important things happen at edges. More energy, more species, more interactions happen at edges so, when designing, identify, create, and use edges advantageously. A great example is how we learn and grow as humans. Most of our education for life doesn't happen in our comfort zone; it happens when we are pushed to the edge of our comfort zone and are forced to adapt and learn. Most of our true power and transformation comes from "pushing our edges." Likewise, marginal things can often get overlooked, but often have unique characteristics. Robins are rather common (and very important) birds, but it is often glimpsing the rare bird that really gets us excited. Similarly, quiet and shy people are often marginalized, yet they often have a different experience of the world and can contribute in many valuable ways if only we make space for the "quiet voices."

Finally, in my opinion, the most important permaculture principle of all is, *Cultivate Curiosity, Awe and Wonder!* This world is so diverse and multifaceted and fascinating. We humans like to think we really know things, but I think we don't know nearly as much as we think, and even in what seems so mundane and boring there can be worlds of joy, awe and wonder, if only we care to truly look!

(1) Carl Jung, Seven Sermons to the Dead, p. 380 in Memories, Dreams, Reflections

PNW Gardening

From Kristin's Garden (Seattle)



PNW Gardening

Gleaning to Reduce Food Waste by Lin (Bellevue)



Wikipedia says that gleaning is the act of collecting leftover crops from farmers' fields after they have been commercially harvested or on fields where it is not economically profitable to harvest. It is a practice described in the Hebrew Bible that became a legally enforced entitlement of the poor in a number of Christian kingdoms.

It occurred to me that in this time of Covid there must be a lot of truck farms and orchards with produce going to waste during this fall harvest season. For one thing, restaurants and hotels aren't buying the bulk produce that they were before the lockdown. For another, farm workers were among those hardest hit by Covid-19 so farmers may be running short of harvesting help.

Wanting to volunteer, I headed to the Internet and discovered there are lots of organizations that sponsor volunteer gleaning and donation to food banks. Sadly, it turned out my age disqualifies me during these days of quarantine. But other people might be interested, so I've put together some links to resources, including a couple of local food-banks that always welcome volunteers to help with packing food in the warehouse:

- Nationwide Map of Gleaning and Food Recovery Organizations <https://nationalgleaningproject.org/gleaning-map>
- Western Washington Gleaning Groups <https://lettucelink.blogspot.com/p/western-washington-gleaning-groups.html>
- Society of St. Andrew <https://endhunger.org/gleaning-network>
- National Gleaning Project <https://nationalgleaningproject.org>
- Northwest Harvest <https://www.northwestharvest.org>
- Food Lifeline <https://foodlifeline.org/volunteer>

Nature

Trip to Lake Crescent and Rialto Beach by Prarthana (Bainbridge Island)

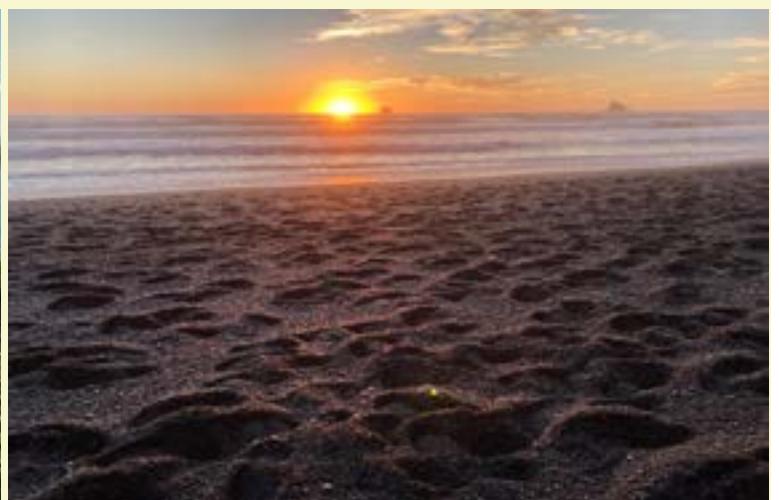
Lake Crescent



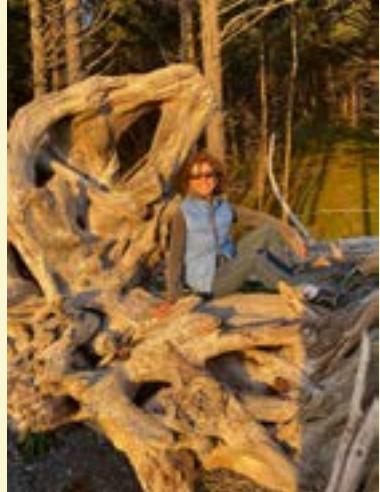
Rialto Beach



Nature



Nature



Nature

Escape to the Ocean by Sarva

It was time for a getaway in the midst of moving households and mastering life in pandemic times. So off we went to our favorite place on the coast in early September. Camping at Kalaloch, beach walks, campfires, beach meditation, until the smoke came rolling in!

At Kalaloch beach, the Tree of Life is probably the most photographed feature. For a different perspective, here is the Tree of life from above and behind.



Nature

We made a trip up the coast a little to beautiful Ruby Beach.



Beach 4, Pacific Ocean. I loved the moody sky that day.



Nature

One day, the waves tossed up hundreds or perhaps thousands of gooseberry jellyfish onto the beach. I've never seen so many at one time.



There's nothing quite like a Pacific Ocean sunset. We love to sit in the sand in the evening and just watch the show. It was a rejuvenating trip. Looking forward to some beach time again one day, hopefully soon.



Nature

Leopard Slug from Sarva in Maltby:



From Sarah in Eugene:



Nature

Our New Neighbor by Joyce (Seattle)



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

Sometime in mid-July, my husband and I were just falling asleep when we heard a strange noise that repeated at least ten times before ceasing. It sounded like hoot-hoot-hoot-hoot on a rising scale and then hoot-hoot-hoot-hoot again, the last note falling away. John grumbled about some fool keeping decent folks from sleeping and we both shrugged it off as a minor annoyance.

The next night, however, there was a repeat of the sound, and I began to wonder if we had been wrong to think it was human-made. Over the next week, the noise was repeated at various times during the night. Sometimes, it seemed as if it were coming from just below our backyard, and sometimes further in the distance, but always distinct and always the same.

Karuna, our neighbor, had spearheaded a three-year effort to clear blackberries, bind-weed, and other invasives that were choking the greenbelt behind our homes. She and her cadre of helpers planted native plants and trees in the greenbelt, and we all hoped that some of the creatures that once inhabited the area would make it their home again. Could it be that what we were hearing was the first of the returnees?!?

A friend dropped by, masked and distanced, and we sat on my front porch, enjoying the sight of a real, live, non-zoom human. We had a lot to talk about, so it was well into two hours when I remembered that my friend was a birder of some renown. I told her about the strange noise, made a stab at reproducing the sound, and asked if she thought it could possibly be a bird we were hearing. Without missing a beat, she said it was definitely a barred owl. She said she had seen them in the north end of Seattle, and had once barely avoided hitting one as it swooped past her car. She urged me to go to the Audubon website, type in “barred owl” and listen to the sound to see if it was what I had heard. And sure enough, the call on the website was identical to what I had been hearing.

Nature

I immediately got on our neighborhood listserv and informed my neighbors that we had a genuine, no-kidding barred owl taking up residence in our greenbelt. To my delight, one after another neighbor responded that they had heard the owl too and, without exception, were thrilled to know the noise they had been hearing was an owl. One neighbor said he and his family had been having a late dinner on their back deck, and saw the owl flying low, probably looking for dinner himself. Perhaps it was a result of the pandemic and being shut away for so many months but there seemed to be a universal delight in the idea that we were harboring a bit of wilderness right in our own neighborhood.

The smoky skies over the past few weeks meant our windows have been closed, and I often found myself wondering if our little owl was okay. Did she fly to another site? Did she migrate when the nights became cool? But last night, when our bedroom window was open to the night air for the first time in many days, I heard her soft hoot-hoot-hoot-hoot once again, and with a smile, fell asleep, knowing she was still there – watching in the night.



Nature

A Gift to Nature by Achala (Tacoma)

I'm house sitting for friends and they have this lovely feature in their yard!

It's basically a very large marble bowl with a solar operated fountain that floats around. Note the large stick. It's partially in the water so that flying insects have a place to land and ones that have gotten stuck in the water, have a way out.

During the day I watch butterflies, bees and birds land to drink. During the night it is used as a bathtub by the raccoons! If I go outside during early morning I can see their footprints walking back to the woods after their spa!

Water is so important to leave for all the animals to have access to clean water.

Please consider adding one to your yard. It doesn't have to be anything fancy. A bowl and a stick will do!



Nature

Response

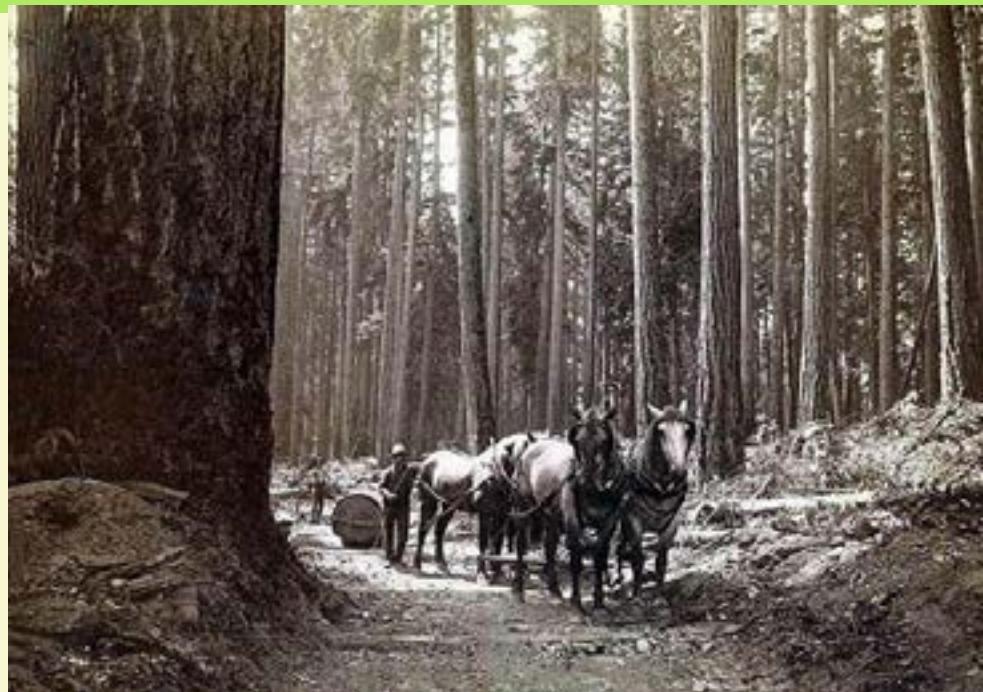
When Karuna sent this article to Lin as part of the normal newsletter editing process, she told Lin that she thought Lin might want to make one of these too. Lin responded:

I do have one! Well, it's not as nice as this... no solar fountain, and it's not as big. But it's a ceramic saucer that I fill with clean water every morning. It's so fun to watch the birds and squirrels drink and bathe (birds do the bathing). At night, the racoon that lives under the tool shed has his/her turn. In mid-summer I thought I had the cleanest juncos in the neighborhood because I was having to refill the bathtub twice a day because they'd splash all the water away.



Nature

Columbia City (Seattle) 1890



Most of the land that is now called Columbia City was heavily timbered with old growth forests in 1889. "By 1892, the town boasted 40 to 50 residences, a town hall, a handsome Knights of Pythias lodge hall, a school with 75 students, a post office, two churches, a gravitation water system, a park, numerous stores, and service to Seattle every half hour on the Rainier Avenue Electric Railway. " More information about Columbia City's history can be found at <https://www.historylink.org/File/3327> and the link located directly below this line.

Photo source: [Loaned by F.E. Scott 1890](#)

Follow up: This is what Columbia City looked like by 1908.



Photo Source: [Wikimedia](#)



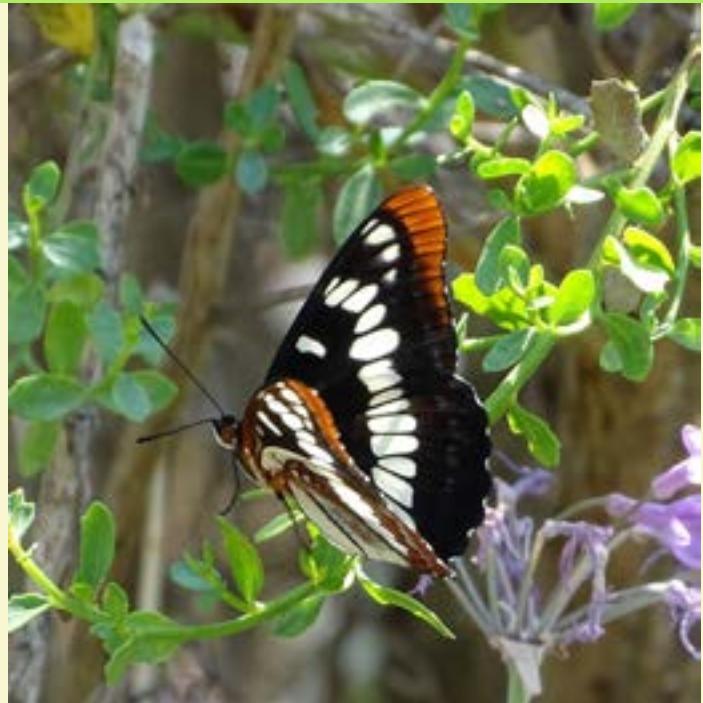
Photo Source: [Wikimedia](#)

Nature

Flying By from Cindy (California)



Red Shouldered Hawk.



California Sister butterfly



Bee and Pickerelweed



Nature



Firecracker Skimmer dragonfly



Bottlebrush and spider web



Passion flower



Does anyone know the name of the last flower? If you do, email Karuna at karunap108@comcast.net.

Photos from: [Flying By](#)

Nature

The Fascinating Fruit Fly by Karuna (Seattle)

The following is a reprinted article from this newsletter [November 2015](#) pp 13-14.



I do my best not to kill spiders, bugs, and insects but fruit flies can be so overwhelming. Even when I put my fruit in the refrigerator, at some point during the summer I usually end up resorting to trapping them with vinegar. Perhaps because the summer was so warm this year, there were more fruit flies than normal. Once, when I opened my outdoor compost bin, the swarm that emerged was so huge I could barely breathe. One day, I visited a friend's house only to find a big swarm of fruit flies in her kitchen, even though there didn't seem to be anything present in the kitchen to draw them.

During the last few months, I have written articles containing interesting facts about ants, aphids and slugs for this newsletter. I decided to do the same for fruit flies. I was astounded at what I learned about them.

- Fruit flies have red eyes and tan bodies. On their abdomens, there are black bands.
- Fruit flies become .098 inches in length.
- They flap their wings 220 times per second.
- Their eyes have 760 individual lenses. They use 2/3 of their brains for visual processing.
- Fruit flies live 8 to 10 days. During that time females may lay 500 eggs. (One article said they may lay up to 2000!)
- Fruit flies are drawn to decaying fruits and vegetables, as well as greasy items, in garbage dumps, trash cans, restaurants and homes.
- They are also drawn to anything that is fermenting. They love beer and wine.
- They are considered nuisance pests but they can transmit diseases.

Nature

- Do not eat fruits that have rotten parts as they may contain fruit fly eggs and disease.
- People who have pet geckos, chameleons, frogs and praying mantises often breed fruit flies to feed them. They must also be a food source to many creatures in the wild.
- Fruit flies have only four chromosomes but those four are similar to human chromosomes.
- Fruit flies are used in genetic research and also for studying evolution and neurobiology.
- Seventy-five percent of genetically linked human diseases can be induced and examined in fruit flies.
- Fruit flies are used in Parkinsons, Alzheimers, aging, cancer, immunity, alcohol and drug abuse research.
- Fruit flies originated in West Africa and then spread to Europe. They probably arrived in North America on slave ships.
- In 1995 three scientists who used fruit flies in their experiments won the Nobel Peace Prize!

Here is an interesting video of the developmental stages of a fruit fly's life.

<https://www.youtube.com/watch?v=DsK9R-yfgF4&feature=youtu.be>

Well, the fruit fly may be considered a nuisance pest, but it is obvious that they also provide important services to this world. I will never look at them the same again!

Photo Credit: "[Fruit fly \(Drosophila melanogaster, male\)](#)" by [Max xx](#) is licensed under [CC BY-NC-SA 2.0](#)

References :

[Drosophila melanogaster: Common Fruit Fly](#)

[Basic Fruit Fly Facts](#)

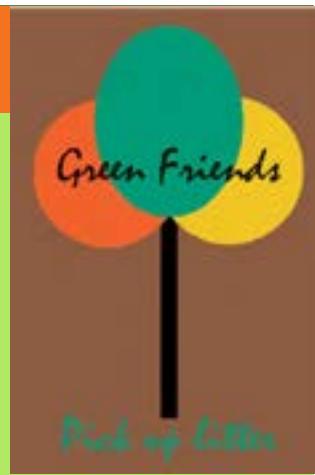
[Fruit Flies](#)

(References that no longer have active hyperlinks were removed.)

PNW Litter Project

Litter Stats

In September 2020, 21 Litter Project members and their families and friends picked up litter for 41 hours. (Average 2.9 hours; Median 1 hour; Range 10 minutes to 12 hours). We have picked up litter for 11,583 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

Interesting Information from Our Readers

From Karuna in Seattle:

[Hummingbird Babies Birth to Fledging the Nest](#)

From Tirtha G in Victoria:

[How Goats are Regenerating a Forest and Protecting this Town from Bushfire](#)

From Anonymous:

[Breaking the Plastic Wave: Top Findings for Preventing Plastic Pollution](#)