Pacific Northwest

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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 <u>Embracing the World</u>, 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 pnwgreenfriends108@gmail.com

For The Tree Planting and Habitat Restoration Project write:

Ananya ammasananya@comcast.net

PNW Gardening Bhuvaneshwari's Prasad

Aum Amriteshwaryai Namah

Dear GreenFriends and Family,

I am so happy to have been asked to write a column for the GreenFriends. It will be a great opportunity to reflect on and share the many beautiful experiences that life has to offer while living on a small farm.

So many of us have learned so much through working close to Mother Earth, and there are many wiser than me. I will try to share with you all some of the inspiration I feel.



Madhurima and I have 4 children and we all live together on a small island off the West Coast of Canada. We rent a 20 acre property with a 4 acre garden and orchard. We have been gardening all through our adult lives and it has always been a part of our children's life experience. Amazingly, it just keeps getting more beautiful. I will share, in each month's column, a little bit more about our life here.

Late winter has been a time of unseen possibilities. Now the returning light is noticeably longer

each day, and the mornings have renewed vigour. Migratory birds are returning, buds are swelling on the fruit trees and the first herbs are emerging from the brown earth. The tree frogs are singing all night now and orange bellied newts are migrating to their breeding grounds. Look out for them while driving, they move very slowly! We could all benefit by moving that slow sometimes!

We have been pruning for the past two weeks. It's like combing the fruit tree's hair. Pruning is very meditative as we tune into the energy flow of the tree. A tree through which the energy flows freely, and in which all the elements combine in harmony, gives abundant fruit. Careful and loving touch is an important part of the nutrition we give back to the plants that feed us.



In our greenhouse little sprouts are beginning to show - arugula, mizuna, spinach and mesclum greens! It is so exciting to see them all appear! They will feed us their vibrant and juicy leaves until mid-May when it's time to bring in the tomatoes, cucumbers, hot and sweet peppers starts and the sweet basil.

This week we harvested our last overwintering leeks and made a delicious potato leek soup. We also went and harvested stinging nettles from one of the sacred patches where they grow in abundance. Gathering nettles is part of the culture here as they are known to be among the most nutritious and medicinal plants on Earth. They grow in the most fertile of natural forest soils, where plants have decomposed for centuries. They are perennial and return each spring. The vitamins, minerals, enzymes and medicinal alkaloids in green plants that grow in fertile soil are so power





organisms make the fertilizer for us right in their own backyard! They also sequester Carbon tax free. Stable carbon remains in the humus lending its characteristic dark color. Organic compounds contain Carbon, Oxygen and Hydrogen.

Take care of and feed those precious little microorganisms in your soil by keeping them warm, moist and covered. Feed them with nutrient rich mulches from any clean composted organic waste. They are mediators of the elements, the microcosm of Great Goddess Bhuvaneshwari.

Jai Ma! Mark Braatan Discovery Island, British Columbia, Canada



In Praise of Peas, Delicious and Nutritious by Lokesh Bruce Green

One of the delights of early summer are the first mouthfuls of fresh shucked peas, sweet vibrant green spheres bursting with vitality. The sugar in peas starts changing to starches when picked. Peas eaten hours or days after they were picked will not taste anything like the ones you grow in the garden. Peapods are botanically a fruit, containing seeds developed from the pea flower ovary, and are as tasty as any of the other fruits we harvest.

Garden Peas

The garden pea, *Pisum sativum* is a species in the fabulous Fabaceae/ Legume family. Its relatives include beans, peanuts, licorice, lupins, broom and alfalfa. Peas where one of the first cultivated plants, used for thousands of years in its dried form, prepared as a staple food through the seasons.

Rhizobia bacteria

Peas form a mutually beneficial relationship with Rhizobia bacteria. Interacting in root nodules, the bacteria converts nitrogen from the air into a form the plants use to build amino acid protein, making peas amongst the best sources of vegetable protein.

The Rhizobia bacteria is not always present in soil peas haven't been grown in. Packages of pea innoculant can be purchased at garden centers. The peas are soaked, and the inoculant powder added to coat them, then planted. At



the end of the season you can dig up the roots and check for the swollen nodules. They should be left in the soil and will provide nitrogen for the next crop.

Shelling peas, Pisum sativum

Fresh garden shelling peas were introduced in France and England over three hundred years ago. Eating peas green, immature and fresh, became a fashion. The English have carried forward with their passion for the pea. With succession planting, today's varieties are available providing fresh peas from May to October.

Snow peas, Pisum sativum var. saccharatum

We are all familiar with the snow pea used in stir fry dishes. The Chinese and French developed the mange tout "eat all" snow peas with a flattened pod, sweet when young, that are often cooked in a stir fry. Oregon-bred varieties such as the Oregon sugar pod and Oregon giant are disease resistant vigorous 3 ft. plants that can produce sweet grazing treats thru the summer.

Sugar snap peas, *Pisum sativum var. macrocarpon*

These edible pods with thick sweet tender pods and small peas were bred in Idaho during the 1970's from a cross between a mutant shelling pea and a snow pea. Newer varieties like Sugar Daddy and Cascadia are shorter and more disease tolerant. These varieties tolerate more extremes of temperature than other types and the 6 ft. vines can produce over a long period of time, although they may not be as tasty as the original.

Growing

To enjoy these fresh peas, start seeds early. Times vary depending on soil, microclimates, and seed variety. In some locations seed can be planted in fall and overwintered. I sow mine indoors in February. Green shoots will appear in a week or two. I transplant them a week or two later after hardening them off by placing them in a sheltered spot outside for a couple of days to acclimatize them to garden conditions before transplanting. Depending on space I sometimes then plant seeds of another variety in a prepared row.

Peas are delicate vining plants, with dainty tendrils supporting plants two to ten feet tall. They like a lighter soil to grow in. Because the roots are shallow and easily disturbed, weeds should be controlled with mulch rather than hoeing.

Peas are happy to grow close together. Planted in a two foot wide row, a five foot long bed of well grown Tall Telephone or Oregon Sugar pod, will give you handfuls of peas for weeks. I plant mine one to two inches apart in two rows on either side of a support structure, 20 -25 peas per foot. I make sure the soil is loose. I add some compost

and ashes from my woodstove the week before planting. If the plants aren't thriving they can be side dressed with an organic amendment mix or sprayed with fish/kelp mix.

The delicate tendrils have a hard time holding up the climbing variety on a fence or netting. I tie twine horizontally along the row every couple of feet to keep the vines from cascading over themselves.

Harvesting

A week or two after flowers appear is the time to start sampling. Shelling peas are sweet and tender when small. As they mature, they become starchier and harder. Snow peas and sugar snap's get sweeter as they mature. Many have a fibrous string like a zipper along one edge that needs to be pulled off. Check every couple of days and keep picking the climbing varieties to keep them producing. If you let the pods mature, the plant will stop producing flowers thinking it has accomplished its task of procreation.

Picking is a two handed job, if you try pulling the pod off with one hand, you can easily break the delicate vine or







uproot the whole plant. Hold the stem of the pod in one hand and snip or pinch off with the other. At the end of the season let some pods mature for next year's seed. To do that, let the pods turn brown thru the summer and then pick them before the fall rains. Store them in a clean and dry space.

Pea shoots

Pea shoots, long popular in Asian cuisine, are increasingly being used in salad mixes and as garnishes. Gray's Dwarf sugar is recommended for tender shoots and attractive flowers. Try eating both the new growing tips and the flowers of the varieties you grow.

Dried Peas

These were a commonly grown type for millennia but they have fallen out of favour with home gardeners. There are only a couple of varieties available from seed companies. With their nutritional value and adaptability we may see a resurgence of their use as we move deeper into food security. The peas are smooth not wrinkled like garden peas, apparently due to the starch/sugar balance in the seeds. Peas with more starch dry uniformly forming a smooth spherical skin. High sugar peas dry less uniformly, forming a wrinkled surface.

Other Peas

We commonly refer to plants in other species as peas.

Sweet peas, *Lathyrus odoratus*, are an annual filling our gardens with their sweet spicy scent and pastel hues. They are as much a fascination in England as garden peas, with dozen of cultivars available.

Perennial peas, *Lathyrus latifolius*, are vigouous vines whose bright pink flowers I see every summer along our country roadsides. Unfortunately they are not fragrant like their annual cousins.

Black eyed peas, *Vigna unguiculata*, a variety of cowpea, are grown in the southern states and Caribbean. They are more similar to our beans than peas. Eating them to start the New Year is considered lucky in many cultures. Pigeon peas, Cajanus cajan, cultivated for 3,500 years in tropical and subtropical Africa and India, are used as a staple food and animal fodder. Grown as a subsistence crop on marginal land, they drought tolerant with short-lived perennial and annual varieties available.

Chick peas, *Cicer arietinum*, also known as garbanzo beans, are the main ingredient in hummus.

Asparagus pea, *Lotus tetragonolobus*, a tropical plant native to Papua New Guinea, is sometimes grown as a warm season vegetable for its young winged pods tasting of asparagus and pea. They get too tough to eat raw as they mature. I have eaten the soft gel and immature seed, pressing them out like artichoke flesh.

Look at online seed catalogues and you will find a type and variety that suits your needs. I hope you enjoy the diverse pleasures of peas.

Lokesh Bruce Green is a plantsman stewarding plant communities on Saltspring Island in British Columbia, Candada lokesh.green@gmail.com



PNW Gardening A Call for Aloe Diversity

I have been stoking the fire of Aloe awareness and a gentle warmth is exuding—more people growing more different species of this incredibly useful herb—I'm encouraged.

The plant resists commercialization, because Aloe products are, quite frankly, inferior to the fresh aloe that one can use directly off the windowsill. (Fast degradation of mucopolysaccharides in aloe products.) Therefore, this is really the people's herb, and begs a personal relationship instead of a quick buy in a bottle. How refreshing, and how earth-friendly!

Growing

Starting sometime last year, we grew out over 40 species of aloes from seed, and I'm noticing that if one really wants fast growth, then a shaded place in the greenhouse is really the best. For the most part the plant wants to have a dry root system (we water deeply only once a week), but if the air is warm, humid and at about 40% shade, then the plant is spurred on to fast growth. Leaves expand, essential juices are enhanced, resulting in more medicine, faster.

Here are some photos and more information on one of the best.

Aloe arborescens. (Krantz Aloe) Family: Asphodelaceae Hardiness: to 22 degrees F.

History

Perennial succulent native to South Africa. Growing up to 8 feet tall, the plant flowers coral-red in the fall and/or winter. Plants produce one or more upright stalks with the showy rosettes perched on top, leaves rimmed by large, soft and harmless spines, filled with gel, also laden with the yellow anthroquinone known as "aloin."



Use

Like Aloe Vera, Aloe arborescens is a preferred species for production of aloe gel, which contains alantoin and speeds healing of open sores, cuts and scratches quite noticeably. It is great for treating sunburn.

Aloe arborescens is listed in "Aloes of South Africa" as one of the four main species used medicinally. The leaves of the plant, containing both the anthraquinone-laden underskin and the gel, are used in making anticancer medicines for treating advanced stages of cancer—after metastasis. This activity is attributed to 3 different mechanisms: anti-proliferative, immunostimulatory and antioxidant.

https://www.facebook.com/pages/Horizon-Herbs/348837717347

https://www.horizonherbs.com

by Richo Chec, Horizon Herbs, Williams, Oregon



Teaching the Children Learning Nature by Heart by Aishwarya Murray



Claire, meeting a Western Redback Salamander

Most of my early childhood memories are from outdoor adventures. I remember playing in a backyard full of cottonwood tree fluff, roaming around in the forest behind my house, making birch syrup and collecting edible mushrooms with my parents, and walking by myself to school even when I was five years old. I climbed trees, swam in creeks, and took every opportunity to 'go play outside'. When I was a bit older, I started attending interpretive programs at parks, gardens, and aquariums and became inspired to become a biologist when I grew up. I did eventually get a biology degree, and came full circle when I put it to use teaching children about nature.

I soon learned that childhoods like mine were no longer a reality for most kids. Children who arrived at the nature programs I led in parks were often very knowledgeable about issues like endangered species or pollution from having read about them in books or learned about them in school, but were scared to go in the forest or get dirty. I even had one class attend a beach program only to be told by the teacher we had to stay away from the ocean because there was no lifeguard present.

Many of the programs I led had defined messages I was supposed to get across to the kids, like the importance of eelgrass beds, or the conservation of Pacific salmon, or particular rules about taking care of wild spaces such as staying on trails and not collecting dead and dying wood for campfires. Teachers who attended school programs wanted their curriculum included in the program as well, so my colleagues and I found fun and creative ways to help kids learn about photosynthesis, or the salmon life cycle, or the importance of fresh water.

However, there was always something that didn't quite sit right with me when I told children about climate change or

Teaching the Children

invasive plant species. To be honest, I would often 'accidentally' leave out the messages about conservation in favor of letting the kids spend a few more minutes catching bugs in a pond.

Then I found a book called Beyond Ecophobia: Reclaiming the Heart in Nature Education, by David Sobel, that spoke to what I was feeling. "What really happens", he asks, "when we lay the weight of the world's environmental problems on eight and nine year-olds already haunted with too many concerns and not enough real contact with nature?"

What happens is that nature becomes a scary place. It's hard to connect with something if all you know about it is that it is unhealthy. It's even harder to connect if you feel guilty about not taking better care of it.

As an analogy, I offer the story of my relationship with my grandmother. She is almost 97 years old and up until recently it had been six years since I had seen her. My cousin often sent me updates about Grandma's health, along with the occasional warning that if I did not reconnect with her soon I might regret it. Somehow, these warnings and updates just made me feel guilty, and if anything made it harder to think of visiting my Grandma. I remembered her as a strong, feisty woman, and I felt nervous about seeing her looking old and frail.

What finally made me visit her? I had gone to a family event where I had hoped to see her, but she didn't attend because she wasn't able to make the trip. I told a friend of mine about this, and in the conversation I told a funny story about a car ride with her and my mother. My friend responded with "I think you want to visit your grandma." I felt a wave of emotion when he said this. Within a few weeks, I was in my Grandma's living room, getting a huge hug.

I needed help restoring my relationship with my grandmother, but it wasn't facts about her health or guilt-inducing reminders that encouraged me to spend time with her – it was remembering how she makes me feel.

As I continue to work with children in nature, I become more convinced that the key to restoring our relationship with nature is through something similar to what my friend did for me with my grandma. Children, or adults for that matter, won't be motivated to save the environment through facts, but they just might be if we help them develop a love of, and a relationship with, the natural world.

Teaching the Children





It can be as easy as simply spending time with children in nature, and modelling an enthusiasm for the outdoors. Kids learn from role models, and you don't have to know a lot about nature to pass on a positive attitude towards it. If you are a gardener, dig in the garden with your kids, and don't be afraid to get dirty. If you like books, read a favorite book with your child outdoors under a tree. If you're an artist, take paper and crayons out into the backyard and draw pictures of flowers together. If you're science-minded, learn the names of local plants and animals. Go for walks together and explore your local parks. Make a big pile of leaves in the fall, and jump in it. If you're feeling adventurous, and have the opportunity, climb a tree together, or build a fort.

Even very young children can be introduced to nature. When my nephew was a baby, and I was lucky enough to babysit, I used to carry him around my brother's backyard looking at and talking to plants, and letting him touch and feel the textures of different leaves.

Encouraging kids to have a relationship with nature isn't just good for the environment, it's also good for children. Contact with nature – and unstructured nature play like jumping in leaf piles or tree-climbing – has also been shown to increase attention and reduce anxiety in children. Nature supports all of our needs, and being connected to it can feel as nurturing as a big hug from your Grandma. Once you feel that, working to protect and take care of it comes naturally.

Stories and Reflections



From Margaret on Olympic Peninsula:

My daughter and I grew a fantastic garden this year! It's the second year I've been doing it and it is so much better this year! Last night we ate Brussel sprouts and beets from the garden, and we have an endless supply of tomatoes and lots of other veggies still going strong! The freezer is full of blackberries, plums and pears and we squeezed apples for cider this year. I'm so happy with our progress! Nirmukthi gives us her compost from the cafe and I hope that next year will be even better! (This piece was written last October.)

From Lin in Bellevue:

These photos of the sky over Greenland's ice sheet are stunning. The author/photographer said "This project was an experiment: I wanted to see if it was possible to make a photographic series with almost no visual information." http://proof.nationalgeographic.com/2015/02/16/what-does-nothing-look-like

From Donnelle in Edmonds:

Stunning pictures of Mongolian girls with their eagles: <u>http://inhabitat.com/mongolian-girls-and-their-golden-eagles-</u> <u>carry-on-a-cherished-6000-year-old-tradition/mongolian-ea-</u> <u>gle-hunters-by-asher-svidensky-6/?extend=1</u>

From Premarupa in Amritapuri:

The roof top garden next to us and the grounds around our building are very inspiring. I did a lot of flower gardening before we came to Amritapuri and now I can grow some spinach and help a little with the gardens which are growing veggies for Amma's Tuesday prasad lunches.



Upcoming Celebration!

This is the 44th issue of our GreenFriends newsletter. There have been so many wonderful articles written during that time. They are all archived, but if you want to find one of those articles, you have to go through all of the old issues. Needless to say, that is not a functional system.

We are in the last stages of creating an index. The articles will be listed by categories. That way if you are looking for ideas on how to "Save the Earth's Resources" or want to read about a "Gardening" topic, you can go to the index and find the articles that have been written about those topics in the past.

We hope you find the index helpful. Who is "We?" You will find out in the next newsletter!



PNW Litter Project

Kick Butts Work Party is Saturday March 14

We will once again be picking up cigarette butts in the International District in honor of Kick Butts Day <u>http://www.kickbuttsday.org.</u> Our event will be 10:00 to 11:30 on Saturday, March 14.

The work party staging area will be at Hing Hay Park at Maynard & King Street in Seattle. Parking can be a problem so it is best to come early.

Please check in and check out with Shirley or Karuna at Hing Hay Park. (Know that the "Park" is not a green park with lots of trees; it is an inner city park where the ground is mostly covered with bricks!) You can get more information about the park and the location at: <u>http://bestseattleparks.com/parks/hing-hay-park</u>



PNW Litter Project Stats

Thirty seven Litter Project members and their guests reported picking up 82.5 hours of litter in February 2015. The average pick up time was 2.39 hours; the range was 2 minutes to 18 hours and the median was 1 hour.

Members of the project have picked up litter for 6179 hours since the project began in July 2011.

TerraCycle credited us with turning in 139,534 cigarette butts in 2013. We have turned in 55,200 butts so far this year for a total of 203,724 butts since we started sending them to TerraCycle in January 2013. (We also collected the 5 gallon jar of cigarette butts we use for the litter project display.)





PNW Litter Project

From Kirtana in Seattle but visiting Brazil:

Two years ago, the taxi drivers at the healing center I live near in Brazil thought I was nuts as I spent hours on my hands and knees one Sunday afternoon (in the rain!) happily collecting over 5,000-6,000 cigarette butts from what I considered holy ground. I think the drivers were embarrassed, actually, since they sheepishly kept asking if I was okay and had definitely been instigators in a lot of the butt-tossing. I also collected countless bags of other garbage



on the property over that time and felt I'd barely made a dent but knew I was being watched each time. The garbage piles seemed endless. Then last year I returned and was shocked to see the change. The center must have used a bulldozer to clean the place and also created a designated smoking area. Upon returning this year, I noticed that "no smoking" signs have been added, and there are paid workers to pick up the garbage. The center even has at least one of those handy litter grabbers to use. The litter situation has improved at least a stunning 90% since two years ago. I certainly can't say I created the change, but I became a big believer in knowing that doing our small part really can make an enormous difference in Divine hands!

From Sheila in White Rock, BC:

I have been picking up litter up in my usual place on the extension of West Beach, White Rock. Also if I see litter on any other part of the beach, I take the bottles or plastic to nearest litter bin.



PNW Litter Project

From Tip in Tacoma:

Over the past year, The News Tribune (The McClatchy Company) has tossed millions of unwanted plastic bag wrapped advertisements upon private and public property on a weekly basis. Many of the bags are left to decay in the street where they are washed away by rain directly into Puget Sound via our storm drains. The environmental damage to our Sound as a result is undeniable. Plastic particles are killing our oceans. Stop this indiscriminate trashing of our streets and our Sound by making The News Tribune deliver these "circulars" only to those who have personally requested it. Freedom of the Press is not freedom to mass-litter, especially with plastic. Let's take a stand for what is right.

If you are willing to sign a petition to help with this issue go to:

http://petitions.moveon.org/sign/stop-the-tnt-adbag-trashing?source=s.em.mt&r by=12554187

From an anonymous reader:

One of our readers alerted me (Karuna) that a new study about plastic in the ocean had come out. He saw it in a tech magazine! <u>http://www.techtimes.com/articles/32587/20150213/study-shows-new-soaring-levels-of-plastic-in-our-oceans.htm</u>. Since that article didn't include sources, I looked around for one that did. This link goes to a fairly comprehensive review: <u>http://ecowatch.com/2015/02/16/8-million-tons-plastic-dumped-into-oceans</u>

Here is a sample of the type of information you will find in the ecowatch.com article: In 2010 it is estimated that 4.8 to 12.7 million metric tons of plastic debris washed into the ocean. This plastic came from 192 different coastal countries. That's enough to cover every foot of coastline in the world.



GreenFriends Projects in Amritapuri Banana Circles by Karuna Poole



When I visited the Amritapuri Gardens in January, I was fascinated by the banana circles. Banana circles are a permaculture technique that is most often used in tropical and subtropical regions. They help create humus and water retention where soils are either sandy or heavy clay.

I liked this description of banana circles:

"Papaya, banana and coconut circles are developed by digging pits up to two meters in diameter (for papaya and banana – 3 m for coconut) and approximately 1 meter deep. They are then filled with dampened, compacted organic mate-

rial to a height of 1 meter above ground. Up to seven plants of the appropriate type are then grown on the rim of the pit. Taro or other moisture loving plants may be grown in the inside edge, as sweet potato along the outside edge to provide a living ground cover and mulch, as well as additional food production."

Banana circles also are a way to compost organic materials, produce food, and utilize grey water. They are filled with microorganisms.

I learned something else in researching this topic. I always thought bananas grew on trees. Turns out it isn't a tree, it is a plant. I was even more surprised when I read this information from The Permaculture Research Institute:

Did you know that banana palms are actually a grass? Also, each plant only gives fruit once, so after you have cut the bunch of bananas down you can remove the whole plant at ground level. By this time, there should be new suckers coming up — only allow a couple of these to grow, as too many will make your bananas overcrowded and they won't fruit well.

GreenFriends Projects in Amritapuri



When I first looked at the banana palms in Amritapuri, I was astounded by how fast they grow. The first picture below was taken on the day the palm was planted. The second and third pictures are of banana palms three or four days after they were planted.

For more information:

http://permaculturenews.org/2014/04/08/banana-circles http://permaculturenews.org/2008/06/23/build-a-banana-circle http://www.homegrownediblegardens.com/banana-circlemulch-pit-guilds.html http://www.mitra.biz/joomla/index.php/writingssustainability/3050-howtobananacircle https://treeyopermacultureedu.wordpress.com/chapter-10-the-humid-tropics/banana-circle

Here are some other pictures of the Amritapuri Banana Circles.





