



THE LEAF

LYNN VALLEY GARDEN CLUB

Established 1943

December 2018

President's Message – Anna Marie D'Angelo

Christmas activities seem to come on all at once with a vengeance every year. I always think I am going to start early and be prepared so I don't get slammed but no matter how hard I try to be ready in advance, it seems like there is always so much to do. I think they call this a "first world problem," *ie* don't complain. I will say that I am envious of anyone who has gotten it so that they don't feel overwhelmed and can simply enjoy this wonderful season.

Most of our gardens are put away to bed for winter by now, notably plants tucked away in garages and sheds or covered up for the cold weather. If not, there is always next year. Hey, that may be one of our 75th anniversary messages to share with the public about gardening: "There is always next year."

Looking forward to seeing everyone on Thursday, Dec. 13, for our Christmas party, the first in our new roomy meeting space. Don't forget to dress 'festive' as door prizes will be given for the tackiest Christmas sweater, nicest Christmas outfit and best unique Christmas item worn.

So that you are not overwhelmed at the last minute, below is the list of what to bring for our craft and munchies social. I suggest you put everything in a bag now beside your front door -- don't want to forget! -- except for your food contribution and it will be a snap on Thursday night leaving home for the party. For those not attending, may you have a Merry Christmas, or whichever winter holiday you hold dear, and have an enjoyable festive season.

Everyone else, see you soon!

Xmas party to-bring list:

- A savoury or sweet "finger food" dish;
- A mug;
- Eating utensils if you don't want to use plastic cutlery;
- **Some share-able greenery for the centerpiece craft;**
- Pruners for the centerpiece craft;
- A teacup and saucer if you want to use that for your centerpiece instead of the festive red plastic bowl that will be supplied.
- ...and of course something for the **Food Bank**... can't forget others at this time of year.

LVGC MEETINGS

3rd Thursday of each month (except July and August) at
St. STEPHEN'S Church
1360 E 24th Street
North Vancouver

Please note that meetings start promptly at 7:15 PM

PARTY DEC 13

January 17
MICHAEL DENHAMER
THE EDIBLE GARDEN
RPROJECT

FEBRUARY 21
MARGARET NAKAHARA
ORCHIDS FOR THE HOME

Mailing Address:

Lynn Valley Garden Club
P.O. Box 16053
1199 Lynn Valley Road
North Vancouver, BC
V7J 3S9

<http://www.lynnvalleygardenclub.org>

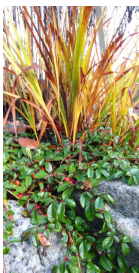


Photo credits go to:
Sue Callahan, Ginette
Handfield, Rita Marshall,
Hiromi Matsui, Bruce Tennant

- President
Anna Marie D'Angelo xx
- Vice President
Hiromi Matsui xx
- Secretary
Jackie Morris xx
- Treasurer
Ginette Handfield xx
- Membership
Judy Sullivan xx
Susan Huber xx
- Members at Large
Rita Marshall xx
Daphne Page xx
Doreen Dew xx

- Committees
Newsletter Editor
Maria Issa xx
- Plant Table
Norma Buckland xx
- Hospitality
Carole Cobbett xx
Susan Nicholls xx
Maggie Davis xx
- Sunshine / Door Prizes
Shirley Lawson xx
- Website
Aline Burlone xx

Executive Meetings

1st Wednesday of the month
Next Meeting: Jan 9, 7:30 PM
Chez Aline Burlone
xx

Next Newsletter Deadline
January 11, 2019

If you have material to delight your fellow members - please submit it *via* the time-honoured routes or email to <mailto:lynnvalleygardenclubnewsletter@gmail.com>

Thanks to all who contributed to this edition: and to Bruce Tennant for the photo below



We are skipping most official reports as there was no Exec meeting this month: why? Because there are no issues, we have \$\$, YOU HAVE REMEMBERED TO RENEW YOUR MEMBERSHIP (right? If not, see below and just fill out the form at the end of this newsletter!), the voting was done and everyone is looking forward to:

The Lynn Valley Garden Club Annual Christmas Party!!!!!!



Membership Renewals

- Judy Sullivan & Susan Huber

LVGC has 117 members registered for 2018 and over 80 of our current year members have renewed their registration for 2019. Thank-you very much!

For those who have not yet renewed, a membership renewal form is included with The LEAF - please complete the form and bring it along with payment to the December meeting - Judy and Susan will have a Membership Table open at the Christmas Social to accept renewals. Alternatively you can mail your form and payment to: Lynn Valley Garden Club , P.O. Box 16053, 1199 Lynn Valley Road, North Vancouver, B.C. V7J 3S9

Please note that the registration fee applies to a calendar year, from Jan 1st to Dec. 31st of each year. Until Dec 31, 2018, there are 5 vacant member spots available for New members in 2019. A Wait List will be used if the vacant spots are filled prior to January.

Starting in January 2019, new or past (renewing) members will be accepted equally, to fill vacant spots on a "first come first served" basis.

Membership Cards go to the printers in time for the January 2019 meeting, which may be motivation to renew before the end of the year!

Any questions? email: lvgc.membership@gmail.com or call Judy or Susan



Treasurer's Report
Ginette Handfield

Bank balance: \$ 9,276.45
Cash on hand: \$ 342.35
Total \$ 9,618.80



"If you wish to be happy for one day - get drunk! If you wish to be happy for one year - get married! If you wish to be happy for a lifetime - plant a garden!"

Many LVGC members make fall their traveling time – and Ginette is somewhere in Australia but sends us this: “I have been traveling in Western Australia for the past two weeks. I thought of sending you a couple of photos for the Leaf if they turn out OK. In Western Australia they know that Christmas is near when the Christmas Tree blooms. Called *Nuytsia floribunda*, the Christmas Tree is a root hemiparasitic, which means that it gets some of its nutrients from its hosts by attaching itself to their roots, but it can also carry out its own photosynthesis. Another Christmas symbol, mistletoe, is



also hemiparasitic, but it attaches itself to the stem of the host plant. I have to say that it is quite something to see all the blooms everywhere in December.

We have learned a lot about bees recently, but have you ever seen a *natural beehive*? I came across this one in a limestone outcrop on the banks of the Margaret River, south of Perth. “



Last month's presentation by Dr. Elizabeth Elle talked about bees and habitat loss. This, unfortunately brings us to:

“The Insect Apocalypse: What does it mean for the rest of life on earth?”

-Brooke Jarvis, The New York Times Magazine, 11/27/2018

“Sune Boye Riis was on a bike ride with his youngest son, enjoying the sun slanting over the fields and woodlands near their home north of Copenhagen, when it suddenly occurred to him that something about the experience was amiss. Specifically, something was *missing*.

It was summer. He was out in the country, moving fast. But strangely, he wasn't eating any bugs. For a moment, Riis was transported to his childhood on the Danish island of Lolland, in the Baltic Sea. Back then, summer bike rides meant closing his mouth to cruise through thick clouds of insects, but inevitably he swallowed some anyway. When his parents took him driving, he remembered, the car's windshield was frequently so smeared with insect carcasses that you almost couldn't see through it. But all that seemed distant now. He couldn't recall the last time he needed to wash bugs from his windshield; he even wondered, vaguely,

whether car manufacturers had invented some fancy new coating to keep off insects. But this absence, he now realized with some alarm, seemed to be all around him. Where had all those insects gone? And when? And why hadn't he noticed?

Riis watched his son, flying through the beautiful day, not eating bugs, and was struck by the melancholy thought that his son's childhood would lack this particular bug-eating experience of his own.”

The article goes on to describe experiments done by Riis and his Danish partners that in the same place, with the same nets, for the same time of exposure, less and less insects are caught each year.

In the United States, scientists recently found the population of monarch butterflies fell by 90 percent in the last 20 years, a loss of 900 million individuals; the rusty-patched bumblebee, which once lived in 28 states,

dropped by 87 percent over the same period. With other, less-studied insect species, one butterfly researcher told me, “all we can do is wave our arms and say, ‘It’s not here anymore!’” Still, the most disquieting thing wasn’t the disappearance of certain species of insects; it was the deeper worry, shared by Riis and many others, that a whole insect world might be quietly going missing, a loss of abundance that could alter the planet in unknowable ways. “We notice the losses,” says David Wagner, an entomologist at the University of Connecticut. “It’s the *diminishment that we don’t see.*”
[...]

A 1995 study, by Peter H. Kahn and Batya Friedman, of the way some children in Houston experienced pollution summed up our blindness this way: “With each generation, the amount of environmental degradation increases, but each generation takes that amount as the norm.” In decades of photos of fishermen holding up their catch in the Florida Keys, the marine biologist Loren McClenachan found a perfect illustration of this phenomenon, which is often called “shifting baseline syndrome.” The fish got smaller and smaller, to the point where the prize catches were dwarfed by fish that in years past were piled up and ignored. But the smiles on the fishermen’s faces stayed the same size. The world never feels fallen, because we grow accustomed to the fall.
[...]

Entomologists also knew that climate change and the overall degradation of global habitat are bad news for biodiversity in general, and that insects are dealing with the particular challenges posed by herbicides and pesticides, along with the effects of losing meadows, forests and even weedy patches to the relentless expansion of human spaces. There were studies of other, better-understood species that suggested that the insects associated with them might be declining, too. People who studied fish found that the fish had fewer mayflies to eat. Ornithologists kept finding that birds that rely on insects for food were in trouble: eight in 10 partridges gone from French farmlands; 50 and 80 percent drops, respectively, for nightingales and turtledoves. Half of all farmland birds in Europe disappeared in just three decades. At first, many scientists assumed the familiar culprit of habitat destruction was at work, but then they began to wonder if the birds might simply be starving. In Denmark, an ornithologist named Anders Tottrup was the one who came up with the idea of turning cars into insect trackers for the windshield-effect study after he noticed that rollers, little owls, Eurasian hobbies and bee-eaters — all birds that subsist on large insects such as beetles and

dragonflies — had abruptly disappeared from the landscape.
[...]

But the crux of the windshield phenomenon, the reason that the creeping suspicion of change is so creepy, is that insects wouldn’t have to disappear altogether for us to find ourselves missing them for reasons far beyond nostalgia. In October, an entomologist sent me an email with the subject line, “Holy [expletive]!” and an attachment: a study just out from Proceedings of the National Academy of Sciences that he labeled, “Krefeld comes to Puerto Rico.” The study included data from the 1970s and from the early 2010s, when a tropical ecologist named Brad Lister returned to the rain forest where he had studied lizards — and, crucially, their prey — 40 years earlier. Lister set out sticky traps and swept nets across foliage in the same places he had in the 1970s, but this time he and his co-author, Andres Garcia, caught much, much less: 10 to 60 times less arthropod biomass than before. (It’s easy to read that number as 60 percent less, but it’s sixtyfold less: Where once he caught 473 milligrams of bugs, Lister was now catching just eight milligrams.) “It was, you know, devastating,” Lister told me. But even scarier were the ways the losses were already moving through the ecosystem, with serious declines in the numbers of lizards, birds and frogs. The paper reported “a bottom-up trophic cascade and consequent collapse of the forest food web.” Lister’s inbox quickly filled with messages from other scientists, especially people who study soil invertebrates, telling him they were seeing similarly frightening declines. Even after his dire findings, Lister found the losses shocking: “I didn’t even know about the earthworm crisis!”
[...]

The European Union already had some measures in place to help pollinators — including more strictly regulating pesticides than the United States does and paying farmers to create insect habitats by leaving fields fallow and allowing for wild edges alongside cultivation — but insect populations dropped anyway. New reports call for national governments to collaborate; for more creative approaches such as integrating insect habitats into the design of roads, power lines, railroads and other infrastructure; and, as always, for more studies. The necessary changes, like the causes, may be profound. “It’s just another indication that we’re destroying the life-support system of the planet,” Lister says of the Puerto Rico study. “*Nature’s resilient, but we’re pushing her to such extremes that eventually it will cause a collapse of the system.*”



The farm.... Nov 20, last day on the farm.....

Today it's cold, wet and miserable. What a difference a day makes in the weather. Yesterday I was washing vegetables: kale, kohlrabi and lettuce and another volunteer was harvesting broccoli, getting these items ready for the North shore food bank... Harvest House. The farmer, Haydn, was busy in the field and the farm education co-ordination, Michael had a group of elementary school kids learn all about kale. Their teacher was busy keeping everyone in line and on topic. One of the kids spotted a bird by the compost and a few of the kids rushed over to see it... We had a number of volunteers doing some field-work as well: a busy, well-rounded day.

In the early summer I did weeding, harvesting and plant thinning, and later in the summer I did veg washing, bundling for the farm market, and flower bouquets. During the summer kids' camps did classes on the farm, their assignment, "who is eating the kale". Very excited kids like to show us volunteers *all the bugs* they found. The urban farm is organic so there is lots of natural bird life as well.

I am looking forward to volunteering next year: it is a small plot of heaven.



Xmas cards!

--Jackie Morris and Courtney Mitchell

We thank everyone who handed us or dropped off cards for the WISH Society Christmas Party. The Widows' Network outdid themselves with a garbage bag full! Every packet, large or small, is much appreciated and contained gems that are sure to delight the women at the party. We have a lovely selection to offer them!

We have just heard that the WISH party is on Dec. 13, the same night (again) as our LVGC crafts party. We will attempt to come to the 2nd half of the LVGC party.



Plant Sale Surprise

- Hiromi Matsui

We were tidying up after the Plant Sale and there was a last, lonely plant under the table. Rosemarie Adams said that it was a very nice plant. It looked a bit undistinguished to me, but on her recommendation, I scooped it up and took it home. Then I waited. And waited and waited and waited. Still green and prickly, but not much action at all.

And then in the dark part of the daylight is short, I saw something Yes, it has finally blossomed and it Tears".

Wikipedia says "*Billbergia nutans* is Brazil, Paraguay, Uruguay, and as an ornamental plant, and it is bromeliads grown. It is a durable can often withstand several periods grown on the side of another plant pot of soil on its own. Either way, it takes the majority of its moisture

Due to its easy to split and share called the Friendship plant. New a year, and the brilliant colors of the plant lovers' homes. This plant has



year, before Christmas, when pink... Could it be a flower bud? is quite lovely. "It" is a "Queen's

an epiphytic bromeliad native to Argentina. This plant is often used probably one of the most common house plant because this bromeliad of neglect." "It is capable of being as a non-parasitic life form, or in a roots always remain shallow and it from the leaves and flowers.

nature, *Billbergia nutans* is often shoots are produced multiple times flower are always appreciated in an average lifespan of three years."

A hardy plant that produces beautiful, exotic flowers. Yesss!!



Does anyone have spare plant pots – not pot plants - ?? !! Please pass the info to the LEAF and we will connect those with to those who wish.



... and while you are plotting
your Plant Sale-ish potting
there are plants you should not
think to put in a pot
but dump in the compost for rotting →



Why So Many Cubans Grow Their Own Food *Sourced by Rita Marshall*

- Suzanne Cope

For decades, activists have promoted urban agriculture on the outskirts of Havana.

Vilda Figueroa and José Lama live in a small ground-floor apartment a few blocks from the main avenue in Marianao, a neighborhood on the outskirts of Havana. There, the aging couple are surrounded by their work of the last two-plus decades: shelves of homemade food preserves; a table with dozens of publications; and photos of the two of them, on national television for their cooking show or teaching classes about food.



Lama and Figueroa founded the organization Proyecto Comunitario Conservacion Alimentos (Community Food-Preservation Project) in 1996 with a goal to help the most vulnerable Cubans provide their own food and

preserve it for consumption throughout the year. But they also hoped to change Cuban food culture through education on nutrition and all aspects of food production.

This was during the “Special Period in Time of Peace,” when Cuba’s food security dropped

precipitously following the fall of the Soviet Union. Figueroa and Lama hosted classes for Cubans who wanted to learn how to garden, cook, and preserve food for their families.

Havana has a densely populated city center with little green space. Neighborhoods farther from the center, like Marianao or Diez de Octubre, and the rural-feeling outskirts of Havana Province are where Figueroa and Lama have spurred change. Where there is space, small gardens and farms have appeared. This has increased the supply of produce and improved food security, even for those in the denser central areas who don’t have space to garden. Farming the outskirts of Havana has resulted in real progress for the entire city, with studies showing that today, almost 90 percent of the produce consumed in Havana province is grown there.

While nearly one-third of Cuba’s land is used for farming, the vast majority of that land historically was used to produce sugarcane, most of which was exported. Small farms and personal gardens were not part of the larger culture, Figueroa says. Most of the country’s farmland was dedicated to sugarcane plantations.

For many years, Cuba imported most of its food, to keep land devoted to growing its primary export. During the first few decades of Fidel Castro’s rule, the Soviet Union underwrote the country’s needs, paying a premium for sugar and providing food, petroleum, machinery, and other goods in return. But when the USSR fell in 1989, Cubans were forced to become self-

sufficient quickly.

“Before 1989, the Cuban intake was about 3,000 [calories per day] and 90 grams [3 ounces] of protein, of which about 45 percent was animal protein,” Figueroa says. “Two years later, in 1991, the intake was down to 1,800 [calories] and only 50 grams [1.75 ounces] of protein and was mainly vegetable protein. People were losing weight, and it was very stressful.” The average Cuban lost about 20 pounds at that time.

After teaching themselves – initially from a resource book that came out during World War II – Figueroa and Lama helped make small-scale food production part of Cuban culture.

Figueroa had earned a doctorate in nutrition from the University of Havana and had traveled internationally to study nutrition for farm animals. Even prior to the beginning of the “special period,” she had started a personal organic garden, then quite rare on the fringes of Havana.

After teaching themselves – initially from a resource book that came out during World War II – Figueroa and Lama helped make small-scale food production part of Cuban culture, a process that had a lot of government support. They popularized the farming and eating of produce like cassava, which can thrive in the tropical climate of Cuba and is highly

nutritious. They developed recipes and cooking techniques, such as ways to make cassava flour and banana flour for bread or cake (since wheat isn’t grown in Cuba). They teach fermentation, drying, and canning, which can provide extra income for people who make small batches of sauces or jams to sell at their local farmers’ market – now legal, under recent changes in the law.

They have done all this with a focus on person-to-person education and have insisted on remaining an independent entity, even as they work closely with large institutions like the Cuban government and the international Slow Food organization. Their favoured approach is to teach “promoters,” as Figueroa calls them: people who learn from Figueroa and Lama and bring that knowledge back to their neighbourhoods. Food security in Cuba has greatly improved, but remains an issue; government rations of eggs, sugar, rice, and pork account for less than a third of what the typical Cuban eats, and the average monthly wage still hovers around \$20. But according to Figueroa, Cubans



now eat 400 grams, or 14 ounces, of vegetables a day, a five-fold increase since the “special period.” That speaks, in part, to her and Lama’s efforts.

Give fools their gold, and knaves their power; let fortune's bubbles rise and fall; who sows a field, or trains a flower, or plants a tree, is more than all.

---John Greenleaf Whittier



A Pesticide-free Christmas????

Merry Christmas – time for all that delicious gingerbread, all those tasty spice cookies, and that mulled wine. And while you munch away you probably won’t think of all the different pesticides you

- Penny Le Couteur

are thus ingesting. No – don’t spit out the cookie in horror. But I am not jesting. You are probably ingesting (note the pun) more pesticides at this time of the year but there is nothing to cause concern except



perhaps for an expanding waistline. Consider where those spices come from and what they actually do in nature. Take nutmeg for

example. You will be consuming it in many treats this Christmas; English trifle, spice cookies, sprinkled on eggnog, even vegetable dishes like mashed sweet potatoes. The active ingredient - that is what gives the smell and taste - in nutmeg is a chemical called *isoeugenol*. Originally from the Banda Islands part of the original Spice Islands, and now in the Indonesian province of Moluccas, the nutmeg tree produces *isoeugenol* as a means of protection against insects, fungi, bacteria, viruses, molds *etc.* Plants cannot escape predators or disease by running away so they engage in a highly successful form of chemical warfare. They produce a great variety of toxic chemicals in varying concentrations. The clove tree produces a very similar chemical compound called *eugenol* as its main protector, the ginger plant manufactures *zingiberone*, the active ingredient in cinnamon is *cinnamaldehyde*, and pepper contains *piperine* (black pepper that is, peppers are hot because of a different chemical *capsaicin*).

The list of toxic chemicals in plants - including plants that we eat - is long. And humans have a long history of desiring those plants to use the chemicals for our own purposes. Even in Roman times, spices from 'exotic lands' to the east were highly sought after; pepper from India, cinnamon from India, Bangladesh, Myanmar and Sri Lanka and virtually every other spice we use today. Early explorers visited the Spice Islands for cloves and nutmeg, not to make spice cookies but to use the pesticide molecules they contained to preserve food. In those days - with no refrigeration - large quantities of spices were needed to prevent food from rotting. And as a bonus, the taste of these pesticide molecules helped to conceal the taste of decay. Many were used as medicines: nutmeg, for example was used to treat rheumatism, colic, dysentery as well as being considered an aphrodisiac and a soporific. Other compounds in nutmeg such as *myristicin* and *elemicin* are thought to be responsible

for hallucinations reported after excessive doses of nutmeg.



Carrots, celery, dill, parsley and black pepper also contain small amounts of these hallucinogens.

"But" I hear you saying "these are natural compounds so they are perfectly safe." Sure - tell that to Georgi Markov, a Belgian defector who was shot on a London street in 1987 - supposedly by the Bulgarian secret police - with a *ricin* laced pellet from an umbrella modified for this purpose. He died in agony a couple of days later. *Ricin* is a natural product obtained from the seeds of the castor oil plant. Or what about those intrepid mushroom gatherers who die from eating red (with white spots) Amanita mushrooms (fly fungus) that contain deadly - but natural - *muscarine*? [and medicine still talks about *muscarinic receptors* that control a large number of physiological functions including heart rate and force, contraction of smooth muscles and the release of neurotransmitters. - ed] And Socrates who was sentenced to death by drinking a potion made from the fruits and seeds of the hemlock plant that contain poisonous *coniine* - another natural chemical?



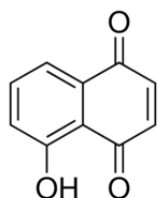
But you are right in one way: these spice molecules are perfectly safe to eat as long as it is in very small amounts which is how they are most often found in nature. As with all poisons, be they from natural sources or man-made - "Toxicity is dose related". So enjoy your gingerbread, your spice cookies, and your pumpkin lattes with their tiny traces of toxic, but natural, chemicals. I will.

Note: The author does not use pesticides, natural or man-made, in her garden. (She has been known to put out slug bait but slugicides - is this a word? - don't count.)

"I think of love and marriage in the same way I do plants: We have perennials and annuals. ..."

My compost is full to bursting in the fall. Autumn is definitely here and while we are generally in the land of firs and cedars - and they don't wait for fall to drop needles - some deciduous trees do appear in some of our gardens. You know - for "fall colour." So I have a pecan tree in the garden: not my credit, it came with the house and makes the local squirrel population fat and happy. It is a BIG tree and drops copious BIG leaves in BIG piles all over the garden. I have been slaving with a BIG rake to get them all. The leaves leave a BIG dead area. Whaaaat? Why? Mulching with leaves is supposed to be the "right thing to do" in gardens: returning nutrients to build up the soil...bla..bla..bla... I know the story. So what is wrong?

When all else fails, I turn to Mr. Google and ask. Google wisdom answers. Apparently nut trees - and even pecans - contain a poison called juglone in their leaves.



LVGC, meet juglone, alias 5-Hydroxy-1,4-naphthoquinone: a funny looking two 6-carbon ring structure that looks vaguely familiar. A distant bell rings, pun intended. Back to Mr. Google.

"Juglone occurs naturally in the leaves, roots, husks, fruit (the epicarp), and bark of plants in the *Juglandaceae* family, particularly the black walnut (*Juglans nigra*), and is toxic or growth-stunting to many types of plants."

AHA!

"The harmful effects of walnut trees on other plants have been observed for at least two millennia. The ancient civilizations of Greece and Rome used the walnut for its cytotoxic properties as did residents of the American South for easily gathering fish when they threw cut husks into the water with the fish."

Nasty thing. And it goes on. From the Old Farmers' Almanac:

"Although the black walnut has many uses and benefits, the tree does come with a caveat: The black walnut's roots, which may extend 50 feet or more from the trunk, exude a natural herbicide known as juglone that inhibits many plants' growth. Tomatoes, potatoes apples pears berries, and some landscape plants such as rhododendrons azaleas, and lilacs may be killed or stunted if grown in close proximity to black walnut roots."

Rats. That explains why I've wasted several mini rhodies in the "dead zone". Granted, my tree is only a pecan, and apparently pecans produce less nasty juglone than black walnuts, still, things are adding up.

"This is a process called allelopathy by which a plant releases chemicals that can either inhibit or benefit other plants. Since most allelopathic plants cause harm to certain other plants - for example, the pecan to the camellia - you may want to move your camellia somewhere else."

"Allel" from the Greek, as in "other" and "pathy" also from Greek as in sickness - pathos.

Oh, double rats!! The camellia I moved from Mom's garden is close to the pecan tree.

That distant bell ringing.... toxic... Things are coming into focus. Cytotoxic!

"Juglone exerts its effect by inhibiting certain enzymes needed for metabolic function. This in turn inhibits the effects of respiration of mitochondria and inhibits photosynthesis. In addition, juglone has been shown to alter the relationship between plants and water because of its effect on stomatal functioning. [Stomata are the little 'breathing holes' on the undersides of leaves, that regulate water retention.]"

At this point, I was none too pleased. The squirrels ate the pecans I was planning to use for Christmas baking, and the tree killed my rhodies, and Mom's camellia is in jeopardy... I was distinctly sorry for myself and needed some less bad news.

"One study showed that juglone inhibits three key enzymes from *Helicobacter pylori*, a bacterium that can cause gastritis, peptic ulceration, and gastric cancer in humans. This bacterium affects approximately 50% of the world's population and antibiotic resistance is a rising problem. Juglone could become a new antibacterial agent to treat infections of this bacterium. Recent data suggest juglone could be a promising chemo-preventive agent for human intestinal neoplasia and anti-tumour properties have been reported."

Well, at least juglone has some redeeming qualities. Onward.

"Walnut leaves can be composted because the juglone toxin breaks down when exposed to air, water and bacteria. The toxic effect can be degraded in two to four weeks. In the soil, breakdown may take up to two months after the living walnut tree has been removed. Mulch or woodchips from black walnut are not recommended for plants sensitive to juglone. However, composting the woodchips for a minimum of six months allows the chemical to break down to a safe level even for plants sensitive to juglone."

Let this be a lesson in chemistry for us all. Just because something is "natural and organic" doesn't necessarily mean that it is good for you or your garden. On the other hand, just because something is nasty and toxic, doesn't mean it can't do some good eg chemotherapy drugs. Besides, nothing hangs around forever. Chemical compounds do break down. Eventually.

Those of you with long memories will say, "...but DDT!... it thinned birds eggshells for years and is still killing them in Michigan". Unfortunately true. There is another lesson to be learned here and that is one called "concentration".

The walnut tree's juglone kills as far as the roots reach, or the leaves fall, where the concentration is highest. Further away from the tree, the relative amount of juglone decreases and so does the killing effect. There has to be a certain amount present before something is toxic. In biology, there is a term called "LD50" - "the lethal dose that kills 50%" of the test organism. This defines the toxicity of any compound.

Depending on the quantity - EVERYTHING - is toxic. The MSDS (Material Safety Data Sheets) defines the toxicity of "sucrose" (table sugar) for rats as "Acute oral toxicity (LD50): 29700 mg/kg [Rat]" Let's put that into realistic numbers. That's ~30g per Kg of RATness. A single (lab) rat weighs about 100g. So 3 grams should kill a single rat. That's the same proportion as 3 lb sugar, if eaten all at once, by a 100 lb person. Yup, that would kill me. It is also ridiculous. I have sugar all the time. It hasn't killed me yet.

So, bottom line: anything can kill you if there is enough of it around and if it hangs around. If it breaks down, then the toxicity decreases. This reminds me of the "pesticide in the straw" question. Even pesticides break down exposed to bacteria and sunlight. The crucial question is "how much was there in the first place?" The more there is, the longer it takes to be rid of it. That's the "half life" again, explained in a previous Leaf.

No worries then: will just let those leaves rot.

Just dumped them in the compost. We should have lovely brown stuff by next summer.



... And what is Ann doing in the Compost Bin? This is for those of you who missed the meeting when we were introduced to these immense squashes. This spectacular specimen should induce you all to try planting something extraordinary!!



Dirt

---Héctor Oliveras Garcia

For all the earth in the world,
For the varied chunks,
shapes and shades of brown, keep an eye out!
There, somewhere in the dirt,
Next to the writhing worm,
Gasping at pockets of sunlight,
Green life ruminates, and pushes, pushes up,
through the soil, intrepid, unlikely.
It abandons its old husk house,
what little safety it knew,
and, daring to dream,
thrusts itself into existence
and feels the day's cooling kiss
a multicellular masterpiece,
when yesterday, there was only
dirt.



*May you never be too
grown up to search the
skies on Christmas Eve*





Lynn Valley Garden Club

2019 Registration Form

(Jan 1, 2019 to Dec 31, 2019)

- Annual membership Fee is \$20 per person or \$35 per couple.
- To secure your member status for January 1 2019 to Dec 31 2019, renewals must be received by December 31, 2018. After this date, both new & past members will be accepted until the committee meets.
- **Payment by cheque is preferred.** Please make cheques payable to 'Lynn Valley Garden Club'. Dated cheques (December 31, 2018) will be accepted.
- Complete the forms and attach the payment. Either bring the form and payment to the next meeting or mail them to:

Lynn Valley Garden Club, P.O. Box 16053
1199, Lynn Valley Rd.,
North Vancouver, BC. V7J 3S9

Current year member _____ or New Member _____

Last Name: _____ First name: _____

Address: _____

City: _____ Postal Code: _____

Phone number: _____

Email: _____ [to receive the newsletter]

Would you consider helping with a committee
or taking an executive position in the future? Yes _____ No _____

Do you want your phone number
included on the membership phone list? Yes _____ No _____

Do you have a suggestion for a speaker or a topic? _____
(more room on the back of this form)

Paid by Cheque: _____ Cash (receipt issued): _____

**** All LVGC email addresses & phone numbers are private information and are only to be used at the discretion of the executive.*