



THE LEAF

THE LYNN VALLEY GARDEN CLUB

Established 1943

February 2021

President's Message - Norma Austin

Hello, Fellow Gardeners,

Drum roll please . . . A plant sale is coming to a neighbourhood near you . . . namely, Lynn Valley! The date? Saturday, May 22, 2021. Our energetic and resourceful MALs are creating a one-of-a-kind event, suitable for this exceptional year. There will be many opportunities for you to help and be part of this special event. Whether it is producing seedlings, contributing plants from your garden, helping out at the sale venues, or buying a whole bunch of plants, we will need all hands on deck. It will be over a year since we've seen each other, so it might take you a minute or so to figure out who is behind that mask 😊 (Be sure to read Penny's report for more details)

For all the shortcomings of ZOOM, it is the only place to see faces without masks. A short story - I met Donna Wasylik, our new treasurer, for the first time, and a few times since, on ZOOM. I know what her face looks like. But I had no other physical cues. So, when I went to meet her at the Royal Bank to sign papers, I really had no idea what she would look like, if she was masked. As I got out of the car, I saw a woman walking towards the bank and another standing against the wall. The latter pulled down her mask, smiled knowingly, and said, "It's me, Donna." Only then did I feel that I had finally met Donna.

We are changing the format of our general meetings on ZOOM. Starting this month, the guest speaker will be giving the presentation at 7 PM sharp. This format change allows the speaker to have a definite start time without having to listen to our club business. While you are waiting to be admitted into the meeting, please be sure that you are muted, and your video is off. This is especially important if you are late, otherwise you will be interrupting the speaker. This portion of the evening will last about an hour, depending on the number of questions at the end of the presentation. Any club business will follow. This month, you'll get to meet the executive and committee members. Also, we will be doing a trial run of a "Bright Spots" segment. Share a story or photo of your garden. As usual, anyone wishing to speak should put their name into chat. (Call me if you have questions about ZOOM or need a practice session.)

Update on St. Stephen's - The renovation of the Hall, where we held our monthly meetings, started on February 3rd. Here are some of the major upgrades: The kitchen will be completely gutted and re-configured with water stations and new appliances. The bathrooms will be completely redone. The chairs and tables will be stored out of sight. The electrical system will be upgraded to include more electrical outlets. Outside work in the parking lot will include a wheelchair ramp. Optimistically, the earliest we can expect to be back there would be in September. I'll keep you posted.

I hope everyone had a chance to pick up some soil from Jackie and Jim Morris's house. Thank you very much for hosting and managing that mountain range! Kudos also to Sue and Rob Callahan. They were digging up plants at the "Dig" for our plant sale when Francesco Allocca of ConWest Contracting offered them some "leftover" soil from their planting job for the District. Seven yards worth of quality soil! For free! I like to believe that good things happen to good people, so the Callahans definitely qualify as good people.

LVGC MEETINGS
Non-Pandemic: **3rd
Thursday of each month
(except July and August)**
at
St. Stephen's Church
1360 E 24th Street

**Pandemic: ZOOM
MEETINGS WILL START AT
7PM**

**SPEAKER
February 18
LINDA GILKESON
"WHERE HAVE ALL THE
INSECTS GONE?"**

*Even though we have a
Mailing Address:*
**Lynn Valley Garden Club
P.O. Box 16053
1199 Lynn Valley Road
North Vancouver, BC
V7J 3S9**
**To limit unnecessary trips,
we are picking up the mail
ad hoc**

**PLEASE USE ELECTRONIC
ACCESS
Your emails are welcome!
<http://www.lynnvalleygardenclub>**

- President
- Norma Austin** x
- Vice President
- Jacquie Morgan** x
- Secretary
- Lorraine Robson** x
- Treasurer
- Donna Wasylik** x
- Membership
- Barb Downman** x
- Doreen Marbry** x
- Members at Large
- Lori Herman** x
- Penny LeCouteur** x
- Ann McKinnon** x
- Courtney Mitchell** x

Committees

- Newsletter Editor
- Maria Issa** x
- Plant Table
- Norma Buckland** x
- Hospitality
- Sharon Carabetta** x
- Susan Nicholls** x
- Daphne Page** x
- Sunshine / Door Prizes
- Susan Huber** x
- Website
- Aline Burlone** x

Executive Meetings

By Zoom, 1st Wednesday of each month, 7PM

Next Newsletter Deadline

Beginning of march

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

Thanks to all who contributed to this edition: *Rosemarie Adams, Aline Burlone, Sue Callahan, Linda Howe, Penny LeCouteur, Lorraine Robson*



Artwork by Rob Callahan

SPEAKER
LINDA GILKESON

Linda earned a Ph.D. in Entomology from McGill University in 1986, then moved to British Columbia to work for Applied Bio-Nomics Ltd., producing biological controls. Throughout the '90's she worked for the provincial government, promoting programs to reduce and eliminate pesticide use. She was head of the provincial State of Environment Reporting Unit for six years, then the Executive Director of the Salt Spring Island Conservancy until the end of 2011. Linda recently retired from that position to devote more time to her writing, teaching and consulting.

Linda has co-authored pest management training manuals for the government and organic gardening books for Rodale Press. She self-published two books: "Year Around Harvest: Winter Gardening on the Coast" and "West Coast Gardening: Natural Insect, Weed and Disease Control". Her most recent book, "Backyard Bounty: The Complete Guide to year-Round Organic Gardening in the Pacific Northwest", has become a BC best seller. As a private consultant, Linda is a regular instructor in the Master Gardener programs in BC and is busy year-round giving workshops on pest management and organic gardening.

Linda has served as President of the Entomological Society of Canada, the Professional Pest Management Association of BC, the Entomological Society of BC and the Salt Spring Island Garden Club. She was awarded a Queen's Jubilee medal in 2003 and an outstanding achievement award from the Professional Pest Management Association of BC in 2005. She became an Honorary Master Gardener in 2000. Linda's [website](#).



REPORTS

Treasurer's Report - Donna Wasylik

LVGC Assets as of the end of January 2021:

Bank Balance January 15, 2021:	\$10,156.83
Petty Cash:	<u>\$ 119.65</u>
Total:	\$10,276.48



Membership Report - Doreen Marbry and Barb Downman

In case you were not able to watch the zoom AGM, we wanted to let you know that the motion "to carry forward (extend) the fees from 2020 to 2021" was approved, so ***you do not need to send money, or forms to us.*** Please contact Doreen Marbry if you have had a change in your contact information from a year ago, so we can update our records. We have been in contact with Garden Works & North & West Van. Maple Leaf Gardens and they will honour your ***2020 membership cards for 2021 discounts.*** If you have not picked up your 2020 membership card please contact Doreen to arrange a time when you can pick up your membership card. We have 148 members.

Membership can always be reached by phone or email lvgc.membership@gmail.com

List of Speakers 2021 - Jacquie Morgan

March 18, 2021	James Casey, Birds Canada:	Bringing birds into your Garden
April 15, 2021	Earthwise Society:	Their work and projects
May 20, 2021	Christine Allen:	The Chosen Few



THE GREAT 2021 LVGC PLANT SALE RIDES AGAIN!!!

This year's event will fit into the description "low cost, low key". We are assuming that we will be able to run a small, outside event (or actually "events") but no-one knows what is going to happen with the pandemic. If things get bad we may have to cancel the Plant Sale at the last moment - and we will have a Plan B in case this happens.

The MALS have looked at a number of possibilities: the church parking lot (very unlikely to be available due to renovations), other sites (too difficult, too expensive or too much work), a single large site (parking problems) etc. We decided that a smaller sale (or sales) with much lower costs - no tent rentals, no security costs, no signage costs - would ultimately generate a similar net profit as trying to run a large sale with large costs. So here is the basic plan for 2021:

1) We will have a multi-site sale using homes (driveways or backyards) of a few [voluntold] members. The date is **Saturday May 22nd** (the Saturday of the long weekend). Time - **probably 10 am to 12 noon**. There will be **two types of sites:** vegetables and everything else. We have still to determine how many of each site there will be *ie* 2 veg sites and 3 everything-else sites, or 3 veg sites and 4 everything-else sites, or 3 and 3, or ?????? We will try and have all the sites reasonably close to each other in Lynn Valley (*ie* not Deep Cove or West Van). So, if you have a house with a reasonable sized driveway, or backyard *etc* where we could display plants, and there is a carport or garage or "under-deck" where we could have the cashier's space and would **consider being a host site please let us know**.

2) There will be 6 volunteers per site. These are:

- The site supervisor - in charge of making sure all goes well, of ensuring that we keep social distances and controlling the number of people entering the site (if necessary).
- Two cashiers under cover (everyone else will need umbrellas if it rains). 6' apart, one to pull out the coloured prices tags, total the numbers and call out to the other who will add and collect the money.
- Two members for holding tank/Sherpa duties. Wheelbarrow supplied.

- One general [dogsboddy] member to answer questions, move plants around, as necessary.

3) The customers will be LVGC members who can each invite 1 or 2 (or 3) or their friends, neighbours *etc* to attend. There will be no advertising, no signs, no publicity. If the hosts wish, they can put up a sign outside their house. **A map showing all the sites will be published in The Leaf and be available on the website.** You can visit as many sites as you want [or can].

4) We will have two central databases - one for veggies and one for the rest. You will be asked to email or phone the appropriate database person telling them approximately what you will be donating. Probably about a week before, we will contact you to tell you which site(s) to take you plants to (one for veggies, one for other). This way we hope to spread out the plants so there are similar offerings at each site. Details still to be worked out! You can probably deliver plants on the Thursday or Friday before.

5) So, **we will need volunteers**. As well as the hosts at the host properties, we need 6 other people at each property. We will need some people to act as pricers (*ie* to visit a site beforehand and price the plants there using our normal method of coloured plastic sticks. We will run a short pricing workshop (on Zoom) for these people.

6) Soil. **THERE IS SOIL** at Jackie Morris's on the West end of Tempe Crescent. It's good stuff and lives under the obvious tarp. Details about extra pots will also be forthcoming.

7) **Honey sales or a raffle????** If you are interested in doing either of these let us know. Otherwise, we won't have them as the MALS are already too busy to do anything else!

8) We are working on a mechanism to allow those volunteering on the day to also buy plants - maybe ordering ahead, or online sales. No details yet but if you do volunteer we will make sure you have an equal opportunity to buy as well.

9) We will be asking the **Hospitality Committee** to arrange/deliver refreshments (coffee/tea/cookies) for the Friday night and Saturday volunteers.



There are lots of details still to be decided but we wanted to give you a general overview of what we are planning. I know there will be suggestions and comments and we welcome all such. (Please note that we may not be able to manage all your suggestions, additions, etc but they will be noted and considered). Remember that the plant sale motto for 2021 is "low cost, low key"!!!! Your MALS will be working very hard to make this plant sale as successful as possible under these pandemic conditions. Our **Plan B** (if we can't do Plan A because of Covid-19 restrictions) will probably do "end of the driveway" sales over the long weekend with an honour box and reduced numbers of plants. Contact me if you have questions, suggestions, comments etc.

Please consider volunteering your home/garden/driveway if appropriate. Please consider being a volunteer – let the MALS know this as soon as possible so we can ensure we have sufficient help.

The Plant Sale chores have been allocated as follows:

Lori

Checks the cash boxes, coloured pricing tabs, flags for holding pen, signs for different tables, are all up-to-date and delivers them the Friday evening (before the sale)

to each site. After the sale is over collects all the previous and returns it to storage. Also collects the money from each site and delivers it to the treasurer. (Note: Lori already has all this material stored at her place!)

Courtney

Is the Covid-19 advisor – keeps an eye on the provincial health rules to ensure we can safely hold the plant sale (or not!) Liaisons with the hospitality committee and finds out who has **spare pots – and how to get them to members.**

Ann

Keeps the databases (1 for veggies, 1 for rest). Liaises with the 7 people who are not on email, when necessary.

Penny

Checks out any member's garden or driveway that is volunteered as a site. Will be the point person (go to with problems) for site hosts. Will be the point person for all volunteers. Writes a monthly update for The Leaf.

No doubt there will be other chores that arise but for now this should give you an idea of what we are doing and who to go to with a particular question. If you can't figure out who to ask, try Penny. Penny Le Couteur (for the MALS)

x



Dishing the Dirt – YES THERE IS 'POT UP' SOIL FOR THE PLANT SALE!!

So, miraculously (*see details later*) some **super soil** materialized on a large tarp, next to Jackie and Jim Morris's on Tempe Crescent. It's near the West end of Tempe and pretty impossible to miss. **Please go get some:** it won't be frozen forever... As of Friday, there was still quite the pile. Some thought it was superb, others worried that there might be fresh horse-poo-with-seeds in it. Not so.

According to Norma, "I called Francesco about the make-up of the soil because Doreen was worried that it had untreated horse manure, which would contain seeds from their feed. Horse manure is not added to the mix, but any small amount that could've gotten in there would have been aged one year and heat treated. It's a composted mix blended for trees and shrubs that are planted in the district's boulevards. There is no manure or live seeds in the soil. In other words... good stuff!"

According to Jackie "I have told several people that if you are using it for potting, it should have some perlite added. Also, it needs to breathe a little before being used in pots."

"Many thanks to the generous garden gnome or whomever delivered that glorious soil!" wrote Susan Mar, and Bruce Tennant emailed, "Just back from picking some up. It's great soil this year! Thanks to whomever organized it."

THOSE RESPONSIBLE – PLEASE TAKE A BOW: Sue Callahan, who responded quickly and quickly called Norma; Norma, who connected the dots and called Jackie; and Jackie who generously allowed her roadside to be a tarp-covered frozen lump. What a team!

No Pig Poo Parade

...this year, but if you are hunting for rich, organic, aromatic food for your little green friends, Aline Burlone found this www.ThunderbirdsTrack.org :

THUNDERBIRDS TRACK & FIELD
22nd Annual
Manure Sale
Buy early to SAVE

Pricing	Early Bird Feb 1 - 15	Regular Feb 14 - 28	Late Mar 1 - 4
Aged Mushroom Manure 40L bags min. order 6 bags	\$7.70	\$8.25	\$8.75
Organic Potting Soil Mix 40L bags min. order 3 bags	\$12.50	\$12.99	\$13.64

3 Ways to Order

- Online**
thunderbirdstrack.org/manure2021
- Email**
manure@thunderbirdstrack.org
- Phone**
604 878 3867

Phone & email orders must provide:

- Full name
- Phone number and email
- Number of bags you wish to order (min. 6 manure or 3 soil)
- Where you will leave payment (e.g. "side door, under doormat")

Free CONTACTLESS delivery to your home on Saturday March 6

All deliveries will be brought to your front yard. Sanitation and social-distancing measures will be in place. Please leave additional instruction if needed. Due to the large volume of orders, a specific time of day for delivery cannot be guaranteed.

*Must be within designated delivery zone (see website for details)
**Orders of 20+ bags may be delivered on Friday March 5

www.ThunderbirdsTrack.org/Manure2021

Pots Galore – Sharon Carabetta, Courtney Mitchell



Sharon Carabetta has lots and lots of pots. You can contact her directly, if you want some. Contact Courtney Mitchell if you have some to offer.

Plant Labels – Doreen Dew

“Shortly, I will have a large amount of the 1” slats from some window blinds. I was wondering if some of our members would like some for plant labels? Contact Doreen if you need some. [Doreen must have a Covid redecorating project]



Foster Parent Plants

Many, many LVGC members have generously offered to **foster** piles of pre-potted plants from the BIG DIG 2021. We also hope that some of them would be willing to house things like hostas and grasses [*yes, I know... grasses look ratty in May, but we did rescue quite a few*] at “lower levels” because those of us gardening up on the mountain are 5 degrees colder, and 2 weeks later than members at warmer elevations. As a result, our Plant Sale offerings are less verdant and *ergo* less lucrative. Just think – you could call yourself a “Hosta Foster”...

So if you want to come and dig and pot up “sur place” – but cannot take anything home because you are chock-a-block already, here’s a list of **Potential Plant Parents**. Thanks so much for offering, Plant Parents!!! (For phone numbers see the Members’ Master List appended to this Leaf)

Marilyn Bullock: Fairway Drive

Margaret Campbell: at Glenwood Ave, just 1 block off

Capilano Road and Montroyal

Barbara Frisken: Crestlynn Place

Sarah Gray: Kilmer Road,

Rosamond Hughes: Lonsdale

Julie Kehler: Raindance Crescent

Karen Kosch: on Ronayne Road

Denis McMahon: I live in the Delbrook/Capilano Highlands area.

Ann Pentland: a little room for flats –East 19th

Kathy Stubbs: Avonlynn Cres.

Taking plants over to them might provide a physically distanced chance to see friends you’ve been missing. The way it works – and this sort of brings back childhood misdeeds: you place the plants, ring the doorbell – and run away!!! Then after having giggled at a safe distance – you can have a well-earned chat.

Avocado Plants – Rosemarie Adams

I love avocados, I can eat them for breakfast (mashed and spread on toast, topped with a fried egg), lunch, in a sandwich or salad, or dinner, as a veggie.

But what to do with those big seeds? Over many years I have grown them, as individual plants, tried the toothpick in glass of water, *etc*, not very impressive.

A few years ago I decided to try a group planting, just adding pits to the pot each time I had one. I now have a pot of about 12 plants, growing for about 5 years. They make an attractive house plant, and go outside in the summer. They range in size now between 2 and 3 feet, I have “topped” a few of them. I don’t ever expect to get fruit, although Phoenix Perennials Nursery in Richmond is selling them as fruit trees (for a hefty price). Maybe in a warmer greenhouse situation they would produce fruit.

- What do you call an avocado after a priest blesses it?"

- Holy Guacamole!



COMPANION PLANTING FOR TOMATOES:

Carrots: attract beneficial insect
Basil: repels flies and mosquitoes
Borage: repels hornworms and cabbage worms
Chives: repel aphids
Lemon Balm: improves taste [!!!? How was that tested?]
Marigolds: deter nematodes

If you have ever wondered what a nematode looks like- they are sort of "snakes for insects" in terms of size.



Lewisia - Aline Burlone

Lewisia is a genus of plants in the *Montiaceae* (previously of the *Portulacaceae*) family native to western North America. They are named after Meriwether Lewis of the famous Lewis and Clark expedition charged with mapping out a route to the Pacific Coast. He was credited as being the first European (or American) to have discovered it in Lolo Creek in 1806. However, this plant was well known to the local Native Americans as "bitterroot" and used as an emergency food source.

There are about 19 species of *Lewisia* with several varieties. Their natural habitats include rocky outcrops in high alpine meadows and lower chaparral, oak woodlands and coniferous forests.

They are simple to grow if their culture requirements are met:

- They only need water during the spring growing season. Once flowering is done, they dry off and will not require moisture. Keep them on the dry side all seasons except in the spring - but never bone dry.
- They are cold hardy, but prone to crown rot when drainage is not perfect. Excellent drainage is essential.
- A light and porous soil with coarse grit or pumice in the neutral to slightly acidic range (pH 6 to 7) is best.
- Mulch with small stones or grit.
- Keep them away from the hot midday sun. A north or north east exposure is best, but they can tolerate a northwest exposure if the area is lightly shaded in the afternoon.
- Give them plenty of room - they do not like to share space with other plants.
- If grown in a garden bed, a raised bed or steep slope would be ideal.
- They grow well in containers.



I purchased a few *Lewisia cotyledon* three years ago and planted them in containers. In the fall, I place the containers in an unheated greenhouse to protect them from the heavy rains and to avoid crown and root rot. This pink *Lewisia cotyledon* has been flowering in the greenhouse for almost a month. It is a repeat bloomer during the summer months as well.

Last March I was able to buy *Lewisia* seeds at the Van Dusen Seedy Saturday Sale and decided to try my hand at growing them. I planted the seeds in 4 inch pots, watered them, covered them with a plastic bag and put them in the fridge. I checked them weekly, but nothing was happening. After 8 weeks I took them out of the fridge (in May) and placed them in the greenhouse. A few weeks later they started to germinate. I was able to prick out and grow one of the *Lewisia cotyledon* and it is doing well. (The picture of the rosette in a small pot with pumice). I repeated the experiment with the rest of the seeds from August to October and this time it was the *Lewisia nevadensis* seeds that germinated (the picture of the small succulent looking leaves.) I am looking forward to potting them on when



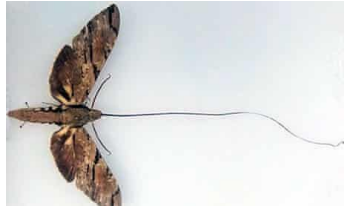
they are bigger and see what will happen.

Darwin's Orchid did you know..? – Rosemarie Adams



Angraecum sesquipedale also known as Darwin's orchid, Christmas orchid, Star of Bethlehem orchid, and king of the angraecums. It is an epiphytic orchid in the genus *Angraecum* endemic to Madagascar. The orchid was first discovered by the French botanist Louis-Marie Aubert du Petit-Thouars in 1798, but was not described formally until 1822. The waxy bloom is not as dazzling as

many
flower,
inches
naturalist
theorist
proposed
pollinizer



other orchid species, but its distinction is not the but the long green tube or nectary that drops some 12 below the blossom. In 1862, while studying the orchid, and evolution-Charles Darwin that there must be a – in this case a allowing it to reach



moth – with an 11 inch tongue, down the flower's foot long nectar to pollinate it. His prediction had gone unverified until 1903, 21 years after Darwin's death, when an entomologists working in Madagascar discovered a sphinx moth (*Xanthopan morgani praedicta*) with an 11 inch tongue that matched Darwin's prophecy.



Connections: Ikea, Pink Noodles, Soil, BIG DIGs – Sue Callahan

My pet peeve is all the new development going on and how they level lots and plough under perfectly good plants/trees/shrubs/bulbs/*etc.* (not to mention starter houses – but we are a garden club ☺). Unfortunately, once we had to re-start from scratch and re-build a house, so I know what I am talking about. We rescued almost all of our plants/shrubs/bulbs/trees and especially my lupins (thanks to LVGC who helped us – a debt we can never repay – but try to pay forward) not to mention all the landscape stone. We constantly rescued all the materials the builders were putting in the waste pile. We even told the builder and the architect that we were not moving one of the rhodos - it was staying there – so they had to work around it.

As you all know – gardens can be anything to everyone – they come in all shapes and sizes. Some are sun; lots are shade; some are containers; low maintenance; roses; most of us dream of having a luscious veggie garden (have tried many times and cannot get carrots to grow! – but we grow a mean tomato, green beans, rhubarb, raspberries, blueberries, apples, *etc.*). Whatever you have is your oasis and I am sure during these trying times, your salvation.



So, when the call goes out that there are plant rescues going on – you can bet your bottom dollar we will be there. Through these "BIG DIGS" you get to meet new people in the club, or catch up with others you haven't seen in a while. I drag my



husband as well, and then there is my "partner in crime", Maria. Let me tell you, we can have lots of laughs, or you can be off on your own digging up sedums (this dig has lots and lots of them – I have so many containers for the plant sale - fingers crossed they survive the cold!). I think back to over a year ago when it was also cold and frosty – and Rob & I were digging for close to 4 hours to extract the famous rhodo that started all the Big Digs. Rob had backed up the truck to the wall, and



the rest of us were sitting in the dirt using our legs to push the rhodo into the truck. Now that rhodo is in our friend's yard – very healthy and happy (and we got a new club member!).

Yes, now we are in a pandemic – but, we can BIG DIG our 6 feet or more away – out in the fresh air and have dirt under our nails.



So how did it start this time? The LVGC was contacted by a couple who are selling their house. LVGC has by now been trained that Maria will dig out almost anything that is green. They contacted Maria, who negotiated the protocols and mobilized us. The couple happens to live right above the BIG DIG 2019/2020 – (the Moodyville site with the famous rhodo, above) and had seen us there. Now they wanted to find a group that cared about plants as much as they do, and thus asked LVGC to have their plants rescued. So, that is how the BIG DIG 2021 started. We had originally gone to the site to check out what could and could not be touched, but with the snow and deep freeze imminent, we decided to dig. We ended up digging a lot and hardly

made a dent. The next day we went back to dig more before the ground froze solid. Rita Marshall also braved the cold and dug and dug. An hour after us, Jane Sherrott arrived with a shovel, lots of big pots, and her husband in tow to do the digging, and of course Sherpa “-ing” all the goodies to the car... I was busy potting up yet more sedums, and all of a sudden I saw a pink pool noodle appear out of Jane's car..... mmm what are they going to do with that??

Never did find out, but that got me thinking..... [*Jane you owe the Leaf the story!! – ed*] I still remember my first bus tour with the club – WOW can LVGC buy plants! - and everyone had an Ikea bag. I couldn't understand why, until they started hauling the plants: a 'flat' will fit just perfectly into the Ikea bag, keeps all the dirt contained and if it's a little wet or muddy, all the mess is kept off your car's rugs! When going to a plant dig – they are perfect for keeping all your containers organized and contained and easy to carry. In a pinch, you can actually put the plants straight in the bag and take them home contained.

While contemplating all this, zen-digging happily, our second-best view to the road, an anxious truck driver hailed us. “Hey, do you want any free soil?” “Free soil? OH YESSSSS!!” came the immediate answer. He was in a rush, as a Telus truck waited impatiently behind him. We quickly nailed down the details and his contact info and I called Norma, “We have the offer of 6 yards of free



soil – but it has to be NOW!! – where can we put it?” While Norma

contacted Jackie, the story came out. Francesco had been contracted to deliver a lot of soil to the district – but he had lots left over. He didn't want to take it to the dump – it was good soil! – and especially he didn't want to have to pay dumping fees. So when he saw the crazy people digging in the depths of winter, he knew he had the perfect targets. While he took 2 yards to his father's house, the plan came to fruition and his 4 yards got dumped Jackie's house. Later he returned with 2 more yards and the rest is history.

Like they say – “It's all about timing!”.



“Don't judge each day by the harvest you reap but by the seeds that you plant.” -Robert Louis Stevenson

ANNOUNCEMENTS AND OTHER GOINGS-ON

Read This – Maria Issa

I know I sound monotonous – and “donations to the needy” sounds so distant and uncaring. The need is immediate and personal. Your gifts are needed by so many - locally the Food Bank and the Harvest Project need anything and everything that you can share. The North Shore is one of the most affluent areas of Canada – need I say more? Use the “CANADA HELPS” website. You even get an instant tax receipt – handy as we are getting close to tax time.

An Assortment of Sites to Visit Virtually

Linda Howe: Nature-based therapy boosts immune function

<https://www.psypost.org/2021/01/nature-based-therapy-can-boost-immune-system-function-among-older-adults-study-finds-58989> This article states the T-cell exhaustion, a phenomenon of the aging immune system, is reduced. [This is double happiness for me as gardening is good for the subject of my PhD Thesis.]

Linda Howe: A flower so rare, there is only one in Maui

<https://www.sacbee.com/news/nation-world/national/article248102370.html>
[so the Darwinian question becomes: what creature pollinates it? – see *Darwin's Orchid*]

Lorraine Robson found us the following – a bit of armchair gardening:

Snowdrop Country on BBC Web Radio
<https://www.bbc.co.uk/sounds/play/m000r4w1>

New York Botanical Garden Free Winter lectures
<https://www.nybg.org/learn/lectures-talks-symposia/lecture-library/adult-education-lectures-conversations/>

Reasonably priced workshops on *veggie growing*.
<https://ubcfarm.ubc.ca/workshops/>

From *Westcoast Seeds*: workshops “The Urban Garden Series”
https://www.westcoastseeds.com/pages/urban-garden-series?utm_campaign=Urban%20Garden%20Series%20Invitation%20%28Vancouver%2FVictoria%29%20%28WSPTm5%29&utm_medium=campaign-email&utm_source=email&_ke=eyJrbF9jb21wYW55X2lkljoglktrNVVjdClslICJrbF9lbWFpbCl6ICJtYXJpYWlzc2FAc2hhdy5jYSJ9

Aline Burlone found this: An interesting new study states that the real reason plants have difficulty growing through compacted soil is not because they physically can't, but rather because of a build-up of a common plant hormone. Listen to the interview on the CBC Quirks and Quarks
<https://www.cbc.ca/radio/quirks/jan-16-snake-lasso-climbing-seeing-gravitational-waves-with-pulsars-soil-compaction-and-more-1.5873142/heavy-machinery-is-compacting-agricultural-soils-can-we-persuade-plants-to-put-up-with-it-1.5873151>

More information can also be found at <https://www.nottingham.ac.uk/news/hard-to-crack-research-reveals-how-crop-roots-penetrate-hard-soils>

Lorraine Robson

wrote “I hope that there will still be space for the Master Gardeners’ notice of their upcoming Zoom event on March 27 & 28. They have some wonderful speakers booked, including



two from England: Noel Kingsbury who gardens in the style of Piet Oudolf, and Fergus Garrett, Head Gardener at Great Dixter. Plus 5 more speakers, all for \$50! It's **open to the public**, so you don't have to be a MG to enjoy it. You don't even have to be free to participate on that weekend but can watch the recording over two weeks. But only if you register! – This is the SPRING BACK 2021 - <https://www.mgabc.org/node/2867>

Found in the Feb 14 New York Times – The *Petal Poem Game – Say it with Flowers* – dating from Victorian England <https://www.nytimes.com/2021/02/13/at-home/petal-poem-game.html>

You also need to look at this – IT IS NOT GARDENING BUT **CORONAVIRUS VARIANTS** – the only connection to gardens is that Dr. Lopez-Correa was interviewed in Maria's garden.
https://linkprotect.cudasvc.com/url?a=https%3a%2f%2fglobalnews.ca%2fnews%2f7638289%2fcoronavirus-hunting-for-variants-travel-restrictions%2f&c=E,1,c7pvxzVcMZ_r6ZIFYwHS3jd4bglv3h80631HrG7fu7Fb0mF0-e7ogKBJRACO0J1w3f4PKu897kK29qISTlyMswwd4f3QvfCorXC8_1GLIAicOafy3q1rG453wy0,&typo=1

BIG DIG – will continue after the snow until we have saved as much as possible. Bushes and back yard accessible after the owners' end of February departure. Two 6 ft maples next door will need to come out.

Beginning to Understand Lichens – Lorraine Robson

The big old house where I grew up in New Westminster sat in the middle of a terraced garden on two lots facing east down the hill towards the Fraser River with a view of snowy white Mt. Baker in the distance. While I loved watching the working boats on the river, I was also fascinated by a more minute landscape growing on the tar and gravel roof of the kitchen in the back. That part of the house was only one story high, so I could stand on the landing at the top of the stairs, lean my elbows on the open windowsill, and stare at the multitude of tiny structures encrusting the roof's surface. When I asked my mother what they were, she told me they were lichens and spelled it for me. If I had known that such a job as "botanist" existed, that might have been the direction my future studies would have taken. As it was, I earned degrees in English Literature and moved on to teach post-secondary students how to write technical reports and business documents for 30+ years – a career I loved, but one which left little leisure time for staring at lichens. All these years later, I am still fascinated by lichens and only beginning to learn about them.



Figure 1. Dust and Crust Lichens on Basalt

their substrate in one piece. Figure 3 shows a variety of lichen life forms, including leaf, shrub, and hair lichens growing on a *Viburnum plicatum* f. *tomentosum* 'Summer Snowflake' in a North Vancouver garden (along with some moss).



Figure 3. Leaf, Hair, and Shrub Lichen Forms (from Left to Right)

structure.

Lichens can be found growing worldwide, with more than a thousand different kinds living in Alaska, British Columbia, Washington, and Oregon, especially in ventilated forests, old-growth forests, rocky headlands, and the alpine of coastal regions. Lichens grow in a diversity of shapes such as dust, crust, scale, leaf, club, shrub, and hair (Pojar, p.484). Figure 1 is an example of dust and crust lichens growing on basalt rock in a North Vancouver garden and Figure 2 shows orange crust lichens on another basalt rock in the same garden. (All photographs taken by LR.)

Dust lichens consist of powdery granules intimately attached to the substrate on which they grow while crust lichens have a hard upper surface and are equally intimately attached to the surface on which they grow (Pojar, p. 484).

Unlike the other lichen growth forms, dust and crust lichens cannot be removed from



Figure 2. Crust Lichens

The leaf lichens may have flattish or curved lobes attached with many holdfasts while the hair and shrub lichens are usually attached at only one point. The shrub lichens are usually multi-branched and stand upright in little tufts; the hair lichens are more finely branched and while they may stand upright, they often hang below their point of attachment as shown in Figure 3. Model railway builders often paint shrub lichens to use as miniature shrubs and trees around their train tracks.

Figure 4, where a club lichen grows vertically on the riser of a basalt stone step, shows quite a different



Figure 4. False Pixie Cup (*Cladonia chlorophaea*)

The club of this *Cladonia* ends in a chalice, but some other types of club lichen may have blunt tips or even balls



Figure 5. Waxpaper Lichen Growing on a Japanese Maple Tree

rather like the head of a match. While the basic shapes of most lichens are easily seen with the naked eye, many of the distinguishing characteristics may be viewed only under magnification. Some lichens that look alike may be distinguished only in the lab by microchemical testing for the different acids they contain (Hale, p. 15).

Unlike most plants gardeners choose, which contain chlorophyll to produce their own food, lichen is a plant with two components living together in symbiosis: a thin layer of microscopic green or blue-green alga and a colourless fungus. Together, these two components form a new plant body called a thallus. The fungus protects the alga and lives off the sugars produced through the alga's photosynthesis. The thallus needs no xylem and phloem for nutrient and water transport; rather it absorbs moisture through its surface which then moves from cell to cell. This absorption method makes lichens particularly susceptible to pollutants in air and water. After the Chernobyl nuclear incident, studies showed that lichens in the Arctic contained higher levels of radioactive particles, as did the meat and bones of the caribou that eat the lichens (Richardson, p. 125ff.)

Lichens differ from many plants in their reproductive strategies, too.

They do not produce flowers and seeds, but reproduce by one of the vegetative reproductive structures that allow the fungus and the photobiont (alga) to disperse together (Brodo, Sharnoff, and Sharnoff, p. 30ff.):

- apothecia – saucer-like fruiting bodies produced by the fungal partner
- soredia – clusters of tiny, powdery balls which appear on the surface of the thallus exposing some of the inner medulla of the lichen
- isidia – tiny, wart-like outgrowths which appear on the upper surface of the lichen.

The two parts may be carried by birds, washed by water, or moved by wind to a new spot where they begin their slow growth again.

Archeologists measure the size of crust lichens to estimate the age of moraines left by retreating glaciers, a technique called lichenometry (Harris, p. 555). Various lichens also have value as food, medicine, and ritual decoration. The early Franklin expedition (1819 – 1822) and even earlier explorers ate rock tripe as a survival food, though Claude-Jean Allouez reported in 1665 that rock tripe ““on being boiled, furnishes an insipid soup, black and viscous, that rather serves to ward off death than to impart life”” (Harris, p. 556). The Saanich People used *Lobaria pulmonaria* (Lung Lichen) and *Parmelia sulcata* (Waxpaper Lichen) medicinally (Turner and Hebda, p. 40). Beard lichen which festoons tree branches feeds animals in winter because it is not covered by snow (Harris, p. 558). It can also be used for starting fires because it is dry and brittle. The Haida used beard lichen to strain hot pitch to remove impurities before it was used as medicine (Harris, p. 558). Other coastal peoples collected black and yellow lichens from rocks and trees to make paint for wooden spoons, bowls, and totem poles (Harris, p. 558). Other lichens were used in decorating dance masks with artificial whiskers and hair (Harris, p. 558). The usnic acid in *Usnea* is antifungal, antibacterial, and antiparasitic (Harris, p. 558).

Identifying specific lichens is challenging, but I feel fairly certain of these three common species in my garden:

- *Parmelia sulcata* (Waxpaper Lichen) shown in Figure 5
- *Evernia prunastri* (Antlered perfume) shown in Figure 6
- *Cladonia chlorophaea* (False Pixie Cup) shown in Figure 4



Figure 6. *Evernia prunastri* (Antlered Perfume)

Figure 5 shows the characteristic loosely appressed leaf lichen which is pale greyish on its upper surface and black below. Looking closely, you can even see the numerous black holdfasts or rhizines on a few of the lower surfaces. With a hand lens, you can see the long narrow cracks in the surface bearing tiny, powdery balls – the soredia – which help to distinguish *Parmelia sulcata* from other similar-looking leaf lichens. Here it is growing on a tree which is typical though it may also grow on rocks in open or somewhat shaded sites. This lichen has been used by northern Europeans and Canadian Inuit as a dye for wool and is often used by rufous hummingbirds to camouflage their tiny nests (Pojar, p. 497).

Figure 6 shows *Evernia prunastri* growing on the branch of a maple tree in full sun in North Vancouver at about 100 meters. *E. prunastri* typically grows on deciduous and coniferous trees and shrubs in open sites at lowland elevations (Pojar, p. 498). The upper surface is pale greenish, dull, and has tiny powdery balls (soredia) along some of the lobe margins (visible with a hand lens). The lower surface is whitish-green and lacks holdfasts (rhizines). It might be mistaken for a look-alike, *Ramalina farinacea*, but for the soft texture of the upper surface of *E. prunastri* (Pojar, p. 498). Extracts of this lichen have been used for hundreds of years as a fixative in making perfumes and fine soaps.

Figure 4 shows the unbranched podetia or clubs of *Cladonia chlorophaea* (False Pixie Cups) arising from a cluster of tiny, grey basal scales or squamules. The podetia are pale greenish and covered in powdery or granular soredia. Each podetia terminates in a flaring cup or chalice. Under a hand lens, the rims of some cups were ringed with tiny brown fruiting bodies (apothecia). These False Pixie Cups are growing vertically on the riser of a basalt stone step, but they may also grow on acid mineral soil, moss and humus, especially in open sites (Pojar, p. 501).

I remember tiny chalices like these on that rooftop from my childhood and still feel a pang of loss remembering how my parents replaced the roof with a sturdier metal one. Lichens, like so many native plants, are at risk from habitat loss, and on a grander scale from pollution. I am delighted to know that so many lichens are thriving in the home garden of my grown-up years and that, in retirement from teaching, I once again have time to stare at them.

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The MALs would like to remind LVGC that it is time to consider, ponder, which plants need splitting, potting up etc. so that they can be ready for the Plant Sale - whatever format that might take.

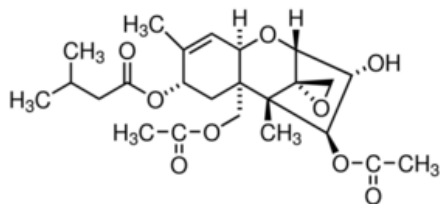
THE COMPOST BIN - Maria Issa

Connections: Witches, Penny, Wheat, Fungus

With Lorraine setting the theme for the fungus among us, I remembered the time when I was living in Saskatchewan among its immensely beautiful seas of waving wheat fields. Probably one of the most beautiful things in autumn is a shining gold sea under an almost navy blue sky, as far as the eye can see. That's when all goes well and as a result, there is a bountiful harvest. [And no, we are not going to talk about monocultures and Monsanto... next time]

However, in the 1980s (when we were all much younger) there were a couple of bad, wet years. The wheat could not be harvested, it was left to over-winter. The Saskatchewan Ag folks started to rumble about "over-wintered wheat" and the economic loss as whatever was harvested would not be good for humans or livestock. In the 1980s they knew that the wheat would develop mould, so when it was finally harvested, there was a worry that the grain would be contaminated. This was actually the case, as the wheat grew what wheat grows - among others, *Claviceps* and *Fusarium*.

These two moulds produce some interesting metabolic by-products. Our lab, from which the Saskatchewan Toxicology Center developed, ended up doing the studies of what grew on over-wintered wheat and what toxins the moulds produced.



You are probably familiar with both these moulds. *Fusarium* you have all seen, just never knew its name: it's the slimy pink stuff that grows on the forgotten celery at the bottom of your fridge. [Note to self: do NOT eat that celery!] *Claviceps*, you may have also come across, if, like me, you had a misspent youth. The latter forms ergot – alias LSD. Unfortunately, that was not the one we got to study... [sigh]. We got the *Fusarium* and its predominant metabolite, T-2 toxin. Apart from being a rather nasty tricothecene mycotoxin, T-2 is also quite famous in international politics, as it is a biological warfare agent known as “yellow

rain” used in Viet Nam. [no, not ‘agent orange’, that was a chemical defoliant].

How nasty, and why it was used as a biological warfare agent became clear when we did the experiments and worked out T-2's mechanism of action. We had hardly started our experiments when the Fort Detrick people had us go through high level security clearance [...and what that's like, is another long story, but has aspects of proctology]. Basically, T-2 toxin and its mycotoxin relatives are “radiomimetics”: they cause symptoms similar to those caused by radiation. While both hit all the cells of the body, the rapidly multiplying cells of an animal or human show the earliest and worst damage. These body cells are the ones that need constant replacement – external and internal linings, digestive system, lungs, skin, blood cells. I won't go into the clinical effects but remind you of Hiroshima.

Some organs, or indeed animals, are harder hit than others – like all things in this world, whether viruses, or drugs, or pollutants or fertilizers – it's a dose-dependence. The mycotoxins are “intercalating agents” that slip between the steps of the DNA spiral staircase and interfere with DNA synthesis and translation – so no cell division. They also interfere with protein synthesis, so cells can't repair themselves; and they mess with the cell membrane, so cell functions are not carried out – eg nerve transmission. [FYI eg anesthetics act on nerve cell membranes].

So, you can imagine why this is a convenient biological warfare agent that some happy spook stumbled upon. Spray it over villages in a contested area and people and livestock sicken, some die, food plants shrivel, slowly, insidiously. People give up, move away. The land is yours, without a shot fired.



So, what has this to do with witches? Everything. Back around 1400-1600, the earth went through “The Little Ice Age”. Cold, wet summers were followed by cold winters, crops failed; what did grow – got mouldy. Yes, you guessed it, our famous moulds. Imagine having little food and having to use every last bit of mouldy grain to stave off hunger. That bread (and other foods) carried mycotoxins. Some created visions (LSD), a sense of flying through the air [not sure how the broomsticks got in there]; some created odd, tingling sensations, lack of balance (nerve transmission); made people ill and miserable (T-2).

As somebody had to be blamed: it was obviously the fault of the witches who made a pact with the devil or demons. They had already been on the suspicious list because although some were men, mostly they were older women, widows, midwives, herbalists who made potions, concoctions, and could cure the sick. If they could cure, they must be able to produce the sickness... Enter the famous Inquisition and the witch trials. Somewhere between 60,000 to 80,000 women were accused of witchcraft and executed. Entire villages were emptied of women. “Historians have shown that surges in European witch trials coincided with some of the Little Ice Age's most bitter phases during the 16th and 17th centuries”.

The way the witch trials worked, once accused, the person had to prove that s/he was NOT a witch. The test was simple: trussed up, the person was tossed into the water. If s/he floated, s/he was a witch, so s/he was fished out to be hung or burned at the stake. If she sank.... well, at least s/he went to heaven.

And that is how we got from wheat and grain diseases to witches. But what of Penny? Simple: if you are interested in this and other similar subjects (peppers, nutmeg and cloves, cellulose, plant oils) and other plant-based decoctions and infusions, read this book: “**Napoleon's Buttons - 17 Molecules that Changed History**”. Penny LeCouteur & Jay Burreson, published by Tarcher/Penguin, New York and available through Amazon.



And the final connection – the illustration of the witch drowning (above) in Penny's book, is from a Dutch Delft tile that was in my mother's collection and part of her research on religious history. The picture is reproduced here without Penny's knowledge or permission.

