



South Burnaby Garden Club

N E W S L E T T E R

March 2018

Our next meeting will be:
Tuesday March 6, 2018
Bonsor Community Centre
6550 Bonsor Avenue- 2nd floor



It's been really cold these last few days, but oh so sunny and I see many spring flowers either opening up or with leaves and stems ready to start blooming (even if they have a touch of snow on them right now).

One of the speaker suggestions you voted on at our AGM meeting in February was new plant introductions for the year. It's definitely time to start thinking about what we will put into our gardens and yards this year and if we want to introduce something new. So our March meeting will focus on the latest and greatest plants for 2018.

It's never too early to start thinking about having a garden tour of your yard. We've talked many times about having spring tours because some of the showiest flowers are the spring ones. So consider having us come to your yard this year, particularly if you've never had a spring tour. We love to visit new yards, and they certainly don't need to be magazine perfect. We really just want to have a chance to meet and visit while seeing a new season in bloom. Let me know if you want to put your yard on a tour.

See you all at our March meeting.

- Lucette

CLUB AGENDA

7:30 - 8:00 PM -Club Business
8:00 - 9:00 PM -Guest Speaker
9:00 - 9:20 PM -Show Bench

Mark's Ten Seedling Tips

by Mark Macdonald

You've selected your seeds, you've invested in unfamiliar seed starting equipment, you've planted the seeds — and now the damn things are coming up! What to do?!

Lesson One: Take it easy. Remember that seeds are just like any other embryo, and that their parents have bestowed upon them a supply of food to get them started. As seeds germinate, they use this food to unfurl their first leaf/leaves, and to pop out a tiny, rudimentary root with which to take in water and nutrients. As those first leaves unfurl, the plants will begin taking energy from the sun through photosynthesis. My approach is to lay off all fertilizers until it's time to transplant them into their permanent growing spots. Seedlings just don't need a lot of food. They need bright light and a steady, but moderate supply of water.

Lesson Two: Watering is part of the process. If you've used sterilized seedling mix to start your seeds indoors (a sensible choice, in my opinion), you can rely on it to provide two key essentials to your seedlings. The first is even moisture, and the second is drainage of excess moisture. You want the soil to feel just moist. After some practice, you will be able to look at the soil surface and judge by its colour whether more water is needed. If not enough water is present, the soil will be a lighter colour, it will feel dry to the touch, and your seedlings will shortly begin to show signs of stress by wilting. If too much water is present, the roots of the seedlings will not have access to the oxygen that normally fills spaces between soil particles, and the plants will drown. Too much moisture can also encourage the growth of mould and even the fungus that causes "damping off," which is something to avoid.

Lesson Three: You can't over-apply light. The grow lights & reflectors that are on the market now are much better than they used to be. Some credit is owed to the ingenuity of marijuana growers in developing these products, it must be said.

Keep your grow lights close to your plants (10cm /4" above the top leaves), and expose your plants to 12-18 hours of this bright light every day. This will make all the difference by keeping the plants compact and strong.

Lesson Four: Those heat mats really do work. Seedling heat mats will shorten the germination period by several days in many cases. With tomatoes and peppers (which can be agonizingly slow sprouters), the difference is substantial. But once your seedlings sprout, take them off the mat so the soil cools down again. As with a lack of light, soil that is too warm can cause legginess — tall, spindly plants with weak stems. Use the heat for germination, and then move your seedlings to a cooler environment to slow down their growth. Stout, strong seedlings are what you're looking for.

Lesson five: Air circulation is your friend. Once your seedlings sprout, remove the plastic dome from over your tray. The seedlings do not benefit from intense humidity. And if you leave a domed seed tray in direct sun, you can end up (as I did once) with a tray of steamed seedlings. Air moving around your seedlings will reduce the moisture that can lead to mould and fungus, and it will actually help to strengthen the stem tissues of the plants, to boot.

Lesson Six: Cats can't help it. At least mine can't. She does not like the taste of onions, but she sure loves to pull them out of the seedling trays and spit them out. Keep your seedlings well protected from cats, toddlers, and all other curious onlookers! Filling up all the spare space on your planting table with watering cans, stacks of pots, and other odd objects will usually keep cats from investigating in the first place.

Lesson Seven: Stay rational. It's easy to become emotionally attached to seedlings, and that can interfere with both judgment and actual success with seeds. One gardener asked me in early March at what point should she be potting on her

sunflowers, because they seemed to be getting big. Well the brutal truth is that she planted them too early: By the time it's warm enough outside to transplant them, they will be huge plants already, with such confined roots that they will not be able to develop the sturdy anchor then need to remain upright. My advice was to toss the plants away and plant new seeds at an appropriate time. You wouldn't sow them indoors before the middle of March, and that's the very earliest date. But simply discarding plants that you have grown from seed can be too much to bear for many people.

This emotional attachment can lead to other kinds of mistakes, too. Plants rarely benefit from being fawned over. It may actually help to think of seed starting as a mechanical process, like the assembly line approach commercial growers need to take with seeds. It's a useful exercise to plant 500 of something (or 1,000 or 10,000), because you just can't afford to fuss over them. I've done mass tomato plantings like this... It still feels rewarding to see the seeds sprout and the plants do well, but in the home setting it can be tempting to obsess over individual seedlings. Try not to.

Lesson Eight would be about "potting on." Potting on is the process of moving one seedling into a larger container with more soil to allow for root growth. Remember that the plants are growing below the soil as well as above. Healthy roots will allow the mature plant to take in moisture and nutrients easily. There is no hard and fast rule about when it's appropriate to pot on. In the case of tomatoes, you may be able to gently tip the root ball out of the existing pot and judge by the number of visible roots if potting on is called for. Whenever you handle seedlings, handle them only by the root ball. Their stems are easily bruised by even light pinching. The need to pot on is largely dictated by the size of the container the seed sprouted in. The cells in our 12-cell seedling flats are much larger than those in our 128-cell flats. More room means the seedlings can stay in the 12-cell flat for two to three weeks longer than one planted in a 128 flat. If you see roots emerging from your jiffy pellet or coir pot (or Cowpot!), it's obviously time to pot

on the seedling. Those roots want to grow into more soil.

Lesson Nine: Label everything. The greater the variety of seeds you are planting, the easier it is to lose track of which is which. I did this last year by carelessly mixing up some peppers at my home garden. I had three seedlings each of four types of pepper, and thought would just keep the three pots of each together, with only one label identifying them. This was pure laziness on my part. Of course, once they started getting potted on into larger containers, and getting moved around to make room for new seed trays of other plants, they got mixed up. Pepper seedlings look, for the most part, interchangeable, so I had to wait until they actually set fruit to tell them apart. So err on the side of caution, and label as you go.

The tenth and final lesson: I now start all of my leafy greens indoors in trays. I like the 72 and 128-cell trays particularly for this purpose. I find it's worth the effort of tediously planting a single seed per cell, and then getting them on a heat mat until germination. After the majority in the tray have sprouted, I remove the heat mat and put them in a bright, but cool room. I happen to have a south facing sun room for this purpose, but if I didn't, I'd get some artificial light on them with the Sunblaster LED Growlight. When they have reached the right size to transplant, I pop them out of the cells with a length of 1/4" dowel, and transplant them into a prepared row. I find this is the most economical way of planting leafy greens. There's no over-planting or thinning involved, and you always get a plant where you want it to be in the row. If some of the seeds in your flat don't germinate (and this will always be the case), just let the soil mix dry out, and it can be reused.



How do Hummingbirds survive Cold Nights?

Hummingbirds and Torpor

A flash of scarlet and emerald zooms past me as I poke my sleepy head out of the kitchen door, a vibrant splash of summer color against the sullen winter sky. Suddenly, an indignant Anna's Hummingbird, *Calypte anna*, confronts me, beak-to-nose, demanding his breakfast. Shivering, I retreat quickly into the kitchen to prepare warm sugar water for my feathery guest.



Hummingbirds are classified into the avian family, Trochilidae, which is from the Greek word, trochilos, or "small bird." In fact, the smallest avian species alive today is the thumb-sized Bee Hummingbird, *Mellisuga helenae*, found exclusively on the island of Cuba. With a total length of 2.25 inches (5 centimeters) and a weight of 0.07 ounces (2 grams), this tiny bird can comfortably perch on the eraser at the end of a pencil.

There are more than 330 described species of hummingbirds, and occasionally a new species is discovered by ornithologists and added to the list. Even though most people think of them exclusively as tropical birds, hummingbirds are found in diverse habitats, ranging from the wettest to the driest, from sea level to over 14,000 feet (4400 meters).

The greatest diversity of hummingbird species is the neotropics (New World tropics) but many species live in or migrate to temperate zones in the United States and Canada to breed. Sometimes, for reasons that are not entirely clear, individual birds remain behind for the winter, and sometimes, they survive. Thus, as average seasonal temperatures increase, hummingbirds are increasingly becoming established as year-round residents outside of their traditional ranges. Anna's Hummingbird is one species whose range has expanded steadily northward as seasonal temperatures have become milder. Thus, this bird is now a common year-round resident along the northwestern coast of the United States and even into some parts of Canada.

As most people know, hummingbirds feed on flower nectar, which is a tempting "gift" of high-energy sugars provided by flowers in exchange for pollination. In addition to nectar, hummingbirds also consume large quantities of small insects, which are full of higher-energy fats as well as essential proteins. Because of their tremendous metabolic requirements, hummingbirds have voracious appetites. Equivalent to the average human consuming an entire refrigerator full of food, hummingbirds eat roughly twice to thrice their own body weight in flower nectar and tiny insects each day.

Besides being among the smallest of all warm-blooded animals, hummingbirds also lack the insulating downy feathers that are typical for many other bird species. Due to their combined characteristics of small body size and lack of insulation, hummingbirds rapidly lose body heat to their surroundings. Even sleeping hummingbirds have huge metabolic demands that must be met simply to survive the night when they cannot forage. To meet this energetic challenge, hummingbirds save enough energy to survive cold nights by lowering their internal thermostat at night, becoming hypothermic. This reduced physiological state is an evolutionary adaptation that is referred to as torpor.

Torpor is a type of deep sleep where an animal lowers its metabolic rate by as much as 95%. By doing so, a torpid hummingbird consumes up to 50 times less energy when torpid than when awake. This

lowered metabolic rate also causes a cooled body temperature. A hummingbird's night time body temperature is maintained at a hypothermic threshold that is barely sufficient to maintain life. This threshold is known as their set point and it is far below the normal daytime body temperature of 104°F or 40°C recorded for other similarly-sized birds.

Research shows that this set point is actively maintained by the bird's internal thermostat. "If you try to cool an animal down below this new set point, it will generate enough body heat to maintain that set point," says Sara Hiebert, hummingbird expert and associate professor of biology at Swarthmore College in Swarthmore, Pennsylvania.

There are several types of torpor, classified mostly by duration and season. For example, when torpor takes place for long periods of time during the winter, it is known as hibernation. However, unlike hibernation, hummingbird torpor can occur on any night of the year so it is referred to as daily torpor or noctivation. Because tropical hummingbird species also have rigid metabolic budgets, even they rely on daily torpor to conserve energy.

Torpid hummingbirds exhibit a slumber that is as deep as death. In 1832, Alexander Wilson first described hummingbird torpor in his book, *American Ornithology*; "No motion of the lungs could be perceived ... the eyes were shut, and, when touched by the finger, [the bird] gave no signs of life or motion."

Awakening from torpor takes a hummingbird approximately 20 minutes. During arousal, heart and breathing rates increase and hummingbirds vibrate their wing muscles. Heat generated by vibrating muscles, or shivering, warms the blood supply. Shivering is sufficient to warm the hummingbird's body by several degrees each minute and the bird awakens with enough energy reserves to see him through to his first feeding bouts of the morning. Interestingly, hummingbirds reliably awaken from torpor one or two hours before dawn without any discernible cues from the environment. Thus, it appears that the bird's internal circadian clock triggers arousal.

What are hummingbirds doing during those pre-dawn hours when they are warm but not yet active? "One suggestion is that they might be using this time to sleep," explains Hiebert. "Although there is some evidence that torpor is an extension of slow-wave sleep, there is also evidence that the body is too cold during torpor for the normal functions of sleep to occur."

Torpor is not limited to hummingbirds; it has also been observed in swallows, swifts and poorwills. Additionally, scientists think that most small birds living in cold regions, such as chickadees, rely on torpor to survive long cold nights. Interestingly, even though rodents, bats and other small mammals typically show some form of regulated hypothermia during cold weather, these animals can only rely upon daily torpor during the winter months when they are not breeding. In contrast, noctivation is possible on any night of the year for hummingbirds. Because daily energy balance is progressively more difficult to maintain as body size decreases, hummingbird torpor is a finely tuned evolutionary strategy that preserves these birds' daily metabolic budgets.

"Hummingbirds are the 'champions' of this kind of energy regulation because they have to be," concludes Hiebert.

Many thanks to Sara Hiebert for allowing me to interview her for this story.

-posted by GrrlScientist

Show Bench Schedule

Judge: Jeanne Noel

Decorative: THEME ----Design in the Asian Manner

We all learned so much from Joan last month that we thought we should practice at the March parlour show! Ikebana in its truest form however is never judged so these will be designs in the Asian manner.

1. A traditional design in a shallow dish
2. A traditional design in a tall vase
3. A freestyle design
4. A design with strong lines (generally using straight plant material).

Joan taught us that designs should be put together on the bench rather than transported, so just gather whatever flowers and or branches you would like to use, pop them in some water and bring them to the meeting. If you don't have the right bases, Betty Girard will bring a variety of vases and kenzans (pin frogs) that you may borrow for your displays. If there is something specific you need, please contact her at 604 4318611 or sbgcinfo@telus.net

Show Bench:

Fruit, flowers and vegetable section must be from the members gardens not borrowed or purchased.

5. 3 blooms Crocus
6. 3 cuts Primrose
7. 3 blooms Narcissus (Daffodils)
8. 3 blooms Pansies or Violas
9. 1 branch flower shrub
10. 1 branch flowering vine
11. 1 branch flowering tree
12. 1 vase Heather CVA
13. 1 potted plant - foliage only
14. 1 potted plant - in bloom
15. 1 African Violet - single crown
16. 1 African Violet - trailing multi crown
17. 1 Streptocarpus
18. Anything not listed above





For many years people have just planted their dahlia tubers in early May straight into the ground and hoped for the best.

With our recent cold, wet springs with their unpredictable temperatures along with a proliferation of snails and slugs, many dahlia growers have rethought planting, myself included.

Rather than throwing caution to the wind and planting straight into the ground, I have been starting my dahlias inside with success. Of course, my first hurdle was to convince my husband to have a temporary greenhouse set up in the dining room as it had the best window.



Starting in mid March, I choose a few of my favourite dahlias and plant them in sterile, barely moistened potting soil. I plant them vertically, with the top of the dahlia just peeking above soil level. Growing vigorously and has at least 2 sets of true leaves I will start to harden outside if the weather has warmed up.

Once the dahlia is growing vigorously and has at least 2 sets of true leaves (second picture sent),

I will start to harden outside if the weather has warmed up. The advantage here is that if we have a cold snap, it is a quick trip back into the house with all the plants.

Now I am not so stressed about getting them planted, they are perfectly happy, even though they are a little root bound in their pots until as late as early June. As you can see from the last picture, some plants that went into my plot were already vigorous plants about a foot tall. These large plants are far more able to fight off a slug or snail nibble.

I would like to report that this hastens blooming,

but I haven't really found it to be so. The tubers planted outside directly do catch up. The advantage of this approach is that you reliably know you have planted a viable dahlia, which is preferable to repeatedly checking the spot you planted, hoping to see a sprout come up sooner or later.



Happy Growing,

-Betty Girard

SUNSHINE



A get well card was sent to Sofia Porcellato she had eye surgery and a sympathy card to Virginia Rutherford her sister passed away.

2018 Calendar

March 6

SBGC meeting

Chair: Syl

April 3

SBGC meeting

Chair: Betty

May 1

SBGC meeting

Chair: Lucette

June 5

SBGC meeting

Chair: Lucette

PLANT SALE REMINDER

Plant sale will be here before we know it! When weather permits, please have a look in your garden to see which plants might be suitable for dividing & make a note for future reference.

Our plant sale is confirmed for May 5 at
All Saints Anglican Church
7405 Royal Oak Ave.

Next Steering Committee Meeting

Monday March 12 @ 7:00 at Dan's house.

Members are welcome to attend the
Members are welcome to attend the Executive Meetings as observers.

Please contact us through the email address in our website ahead of time if you wish to attend.

2018 Steering Committee

Treasurer:

Elizabeth Beer

Secretary:

Betty Girard

Newsletter Editor:

Branko Matkovic

Speaker Convener:

Lucette Wesley

Bonsor Liaison & Membership:

Syl Davis

Sunshine:

Judy Vander

Fall Fair Co-Chairs:

Dan Oldroyd & Daphne Sinclair

IT'S MEMBERSHIP RENEWAL TIME

While our organization is not in any immediate financial trouble, the executive have noted, that despite all efforts to minimize expenses and create revenue from our activities, our treasury decreased by \$1123 in 2017. The budget for 2018 has been carefully drafted to remedy the situation, but the bottom line is we felt it was necessary to increase membership fees to help us reverse our deficit. Currently, our annual membership fees are \$17 for individuals and \$20 for families. At the Annual general meeting a vote to increase the fees to \$20 and \$25 was passed. Membership expires on March 31/18.

We understand this level is very competitive with other clubs and when you consider how much we all gain from club membership, we hope you will agree with the vote in favour of the motion. The books of the club are open to all members and if anyone would like more detailed information, please do not hesitate to speak to the treasurer.