

# THE SEEDLING

*The Newsletter of Burnaby and Region Allotment Garden Association  
BARAGA, Volume 28, Number 4, December 2009*

## **Welcoming Annelida** (Part 1)

Walk along the sidewalk early in the morning after a rainy night and you are certain to find stranded earthworms flailing away on the concrete. They have not ventured out of their burrows to avoid drowning, but given a false sense of security by all the moisture have ventured far from their homes and cannot get



back. Generally the colloquial term for these creatures is just “worms”,

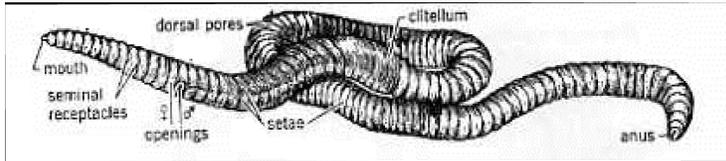
but it is more precise to call them “earthworms”; there are many other creatures designated “worms” who are totally unrelated. What we are talking about here are worms with distinct segments that live and feed in soil. They come in all sizes, some a mere millimetre long, others are two metres long and more than two centimetres thick (living in Ecuador and Australia).

Earthworms are noticeably divided into segments called “somites”, typically between one to two hundred of them. At the first segment is the mouth and at the last, an anus. In common earthworms each segment or “somite” has four pairs of bristles, called “setae”, which serve as grips when the worm is moving around. A thickened area looking like a pack saddle is called a “clitellum”. Earthworms can be looked on as flexible, muscular tubes. The outside skin, which must be kept moist, does the respiration. The inside of the tube is a fairly simple digestive tract; this includes a crop and gizzard where ingested material is ground up. Within the wall of tube five hearts maintain a circulatory system. Earthworms have no eyes or ears; they are sensitive to vibrations, to light, and to dryness and cold. Generally they avoid all of these conditions which spell trouble. They are sensitive to chemical components in the soil and vulnerable to many of the toxic sprays

**First Insert: AGM &  
Proposed Handbook Updates  
Second Insert: BARAGA  
financial statements**

gardeners sometimes use, herbicides, pesticides, etc.

Earthworms are hermaphrodites, they all have the organs of both sexes. New worms begin life as eggs in cocoons stored on the pack saddle. Inside the cocoon the young worms develop in a few weeks. They will live about seven years if destined to reach old age, but they have many predators from man to moles and from birds to bacteria.



While there are many species of earthworms two groups are of special interest to gardeners. The first is nightcrawlers ; these inhabit burrows which reach as far as eight feet below the surface. These burrows serve as pathways for air to circulate in the soil and for water to drain. During the day the burrows are concealed by the worms with detritus; at night the worms emerge to forage for grass clippings, fallen leaves, etc. which they take back into the earth. Often they keep their tails in the burrow and stretch out their long bodies. Nightcrawlers pick up a vast amount of detritus and with it lots of soil particles. All of this gets considerably modified in the worm's gut and is deposited back on the surface in the form of worm castings. Thus mulch on the surface is gradually buried and replaced by casting enriched soil.

The second group are red wigglers, a name given to worms that like to live in compost piles, fallen leaves, dung heaps, etc. These worms live on or near the surface and are capable of cleaning up all kinds of muck

from rotting food to industrial waste. They breed faster and live shorter lives than nightcrawlers. These are the ones to breakdown your compost piles into soil amendments. These worms, called "epigeic worms" have calciferous glands that helps them process calcium in their diet; the excess calcium is passed out of their bodies in the castings which a gardener can use to enrich the soil.

Very little was known about the life and importance of earthworms until Charles Darwin researched and wrote a book in his old age. Darwin calculated that there were 50,000 earthworms per acre and they could turn over eighteen tons of soil in a year. He underestimated their numbers - more like a million - but no one has challenged the phenomenal amount of cultivation they do. Some monuments in England (Roman villas and part of Stonehenge) owe their preservation to being buried by worm castings.

Viruses, bacteria, protozoa, nematodes and fungal spores are all known to pass through the gut of the earthworm. Some are ingested, others pass through unharmed. At this point in time scientists need much more knowledge of what is taking place before they can say what is beneficial and what is harmful. Some beneficial organisms profit from the mucus in the worm's gut and get moved around or spread by earthworms; some harmful ones get ingested. However, the reverse might sometimes be true.

(This is part one of two - the second - in the April Seedling - will discuss how worms cultivate the soil, how gardeners can increase their worms and look at worm composting.)

## **2010 BARAGA AGM**

The BARAGA Annual General Meeting will be held on January 16<sup>th</sup>, 2010. Time: 1:00 P.M. Again it will be held in the Lions Hall (which has installed a new furnace) at 5024 Rumble Street in Burnaby.

The business of the meeting will include the President's report on the state of the garden, approval of the 2010 budget and election of officers for 2010. President, Vice-president, Treasurer, Secretary and Directors (the number is determined by motion at the meeting) will be elected. All members of BARAGA are eligible for election; you may nominate any member in good standing for any position - providing you have their assent - either by prior nomination or at the meeting. Members may also nominate themselves. BARAGA, like many others, needs and encourages new faces in their organization.

As at other AGM's there will be door prizes and light refreshments will be served following the meeting. This is an opportunity for members, especially new members, to meet each other. There will be some time available for questions and an opportunity to input ideas.

Membership renewals will be processed between 12:00 and 12:55 P.M. before the meeting begins. Members may bring their renewal forms with them; this form includes important details of their previous rental information and assigned volunteer task (if any). Please also bring a cheque, dated before February 1 and include everything in the envelope mailed with the renewal form.

### **Nominations**

Member should submit their nominations for BARAGA offices in 2010 to Camilla Dietrich either by mail (214 - 67 Miner Street, New Westminster BC V3L 5N5 or by email to dietrich@sfu.ca

### **Water Shut off and Turn on times**

The board approved the following schedule for turning on water at the garden in spring and off in autumn. Turn on: March 31<sup>st</sup>. Turn off: November 15<sup>th</sup>. These dates (which are close to daylight saving times) are likely to vary slightly for reasons of weather and convenience.

### **Important!**

**Bring this newsletter with you to AGM - BARAGA financial statements and proposed changes to the Handbook are printed here but will not be duplicated for distribution at the meeting.**

### **Compost Policy**

At the November meeting the board made some changes to the "Compost Policy" as it appeared in the Handbook. The policy encourages gardeners to compost everything (or as much as possible) on their own allotments. The aim is to put garden waste back into the soil, thus enriching rather depleting it. Diseased plants, obnoxious weeds, and refuse can still be disposed elsewhere.

## Proposed Changes to the BARAGA Hand book

These will be voted on at the AGM on January 16<sup>th</sup>, 2010.

Be sure to bring this copy with you.

### Chapter 3 Membership

Insert the following after the paragraph entitled "Plot Rental Fee"

Returned Cheques

{In the case of a returned cheque} the issuer must replace a returned cheque within ten days of notification with a certified cheque or money order in the amount of the returned cheque and BARAGA imposed penalty in the amount of \$20.

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### Chapter 5 Plot Allocation

Delete the paragraph entitled "Plot Succession" and replace with Plot Vacancy and Succession Policy

In the event of a vacancy occurring, the following will apply:

1. If a member dies, the spouse is entitled to garden that plot until the end of the year. The spouse regardless of city of residence may succeed to the plot if s/he wishes provided s/he does not rent another plot.
  2. A gardener sharing a plot who has gardened for at least three preceding years (as evidenced by paying \$10 associate membership fee annually and being named on the rental agreement during the period) and is a resident of Burnaby may succeed provided the plot was not lost due to neglect.
  3. All other vacancies will be filled from the established wait list.
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### Chapter 11 Plot Maintenance

Insert the following:

Trees at BARAGA

Trees, other than fruit trees and fruit bearing shrubs, will no longer be allowed on a member's plot. All fruit trees and fruit bearing shrubs will be allowed only if kept to a maximum height of seven feet or less and placed in such a position as not to overhang any common pathway at any time or shade another plot from May to October.

All non-fruit bearing trees or shrubs over seven feet in height must be removed by January 1, 2011.

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Insert the following after "Pathways":

In order to provide a reasonably safe environment for our members all pathways that are common to all plots must be kept free of any dangerous materials including wooden boards used for walking on and anything protruding beyond the plot line including hoses. Any structures on any plot must adhere to the regulations stated in the handbook including no overhanging roof materials that could cause injury to any person walking past on a common pathway.

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Insert the following in “Greenhouses and other Structures” after “ safe and in good repair”:

All greenhouses are to be constructed using materials other than glass and no part of the structure is to be of a permanent nature, in other words, no pored concrete material and other materials that cannot be removed if necessary.

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Change “Cultivation of Plots”:

Delete the statement: “remove rubbish from plots, placing it in the bins at the front of the gardens or in the designated dumping area for vegetation.”

Delete the statement: “Compost all plant material possible on their plot.”

Insert the following:

In the interest of maintaining healthy garden soil and minimizing off-site waste, waste plant material from each garden plot should be put back into the soil of the plot. Dumping anything outside your garden plot or off-site is discouraged, except for diseased plant material and noxious/aggressive weeds such as horsetail and morning glory. A small amount of garbage {put} into the BARAGA dumpster or your home garbage is acceptable. Pile waste vegetation, including weeds, on one or more compost heaps on the plot. Spread finished compost on garden beds to feed growing plants. Mulch bare soil with plant waste to help suppress weeds and maintain moisture for plants. The new Burnaby residential garden waste recycling containers will allow the discarding of slow to compost materials such as raspberry canes and corn stalk roots. BARAGA does not maintain a common compost site because of past indiscriminate discarding of refuse on {the} site.”

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## Chapter 13

### Site Management

Insert after paragraph entitled “Animals”

No individual plot holder may bring to or tend honey bees on the BARAGA site; orchard mason bees are permitted..

Delete the following from paragraph entitled “Waste Bins”

Diseased plants, noxious weeds or material which are in excess of what can be composted on the garden site should be placed in the area set aside for plant materials, not in the waste bin.

## Growing in Raised Beds

On a traditional farm where the muscle was provided by a horse or a tractor straight rows were essential and this tradition is reflected in our vegetable gardens. However there is another traditional way of planting in both old European and oriental cultures - that of growing in hand-tilled raised beds.

By the term "raised beds" is meant gardening in semi-permanent beds of soil that are built up about six inches above the level of the intervening pathways. Usually raised beds are four feet wide; that way they can be comfortably reached by people with average length arms from either side without encroaching on the growing area. Some raised beds are just heaped soil with a temporary soil pathway between; others are semi-permanent structures with low walls (usually of lumber) enclosing the soil and retaining it in place.

Raised beds of either kind have distinct advantages for the gardener, especially in small garden situations like allotments where almost all work is manual anyway.

◆ Easy access: a raised bed can be reached with less effort; it is six inches or more closer to reach down to or bend to. That makes it easier to plant, weed and harvest the crop. (Much higher beds can be made to facilitate gardeners with physical impairments.) Paths between beds need to be at least 16 inches wide to give the gardener ample space to turn and work. Bed length is optional, but 20 feet, the width of the allotment, is about maximum; longer than that and the gardener has to go a long way to reach the opposite

side of the bed.

◆ Maximum utilization of space: more plants can be fitted into a bed than can be planted in rows, so more can be grown and produced. An easy way to prove this is to take a sheet of graph paper and a roll of pennies; see how many will fit in a row with access paths between and how many will fit when a bed arrangement is made. Unless the plants require four feet of growing space (in which case it is equal) the beds will always hold more.

◆ Warmth and drainage: the soil in a raised bed tends to warm up more quickly; this gives a slight advantage when planting hot weather crops like peppers, eggplant, cucumber, etc. that do not grow until the soil warms up. A raised bed also drains faster so roots are not long immersed in cold, soggy soil.

◆ Less cultivation: since a bed is never walked on the soil does not get compacted. While soil in rows needs to be turned over and hoed to keep it loose so air and moisture can penetrate, a bed hardly needs to be turned at all. Experimental farms are now trying out techniques that plant without ploughing. Natural pathways for air and water are apparently better maintained when the soil is not disturbed. It may sometimes be necessary to turn weeds under or desirable to work compost in, but otherwise all cultivation accomplishes is bringing weed seeds to the surface and breaking up the soils natural texture.

◆ Raised beds often simplify management. If the gardener is using a plan of crop rotation, keeping track of the beds is much easier than dividing the ground into sections. Raised beds are easy to mulch whether it is a layer of black plastic to heat the bed or a layer of

compost to reduce weeds and nourish the soil.

There are advantages in providing a raised bed with a permanent edge, usually lumber. The wood frame can be used as a means of constructing a simple tunnel or cloche by attaching plastic pipes to it. The wood frame can also serve as a base for a vertical structure on which to train tomatoes, cucumbers, peas, beans and others. A sturdy plank four feet long can be used for access when called for. The sides of parallel beds can be used as the base for a comfortable seat.

The lumber for raised beds is, of course, an investment. Over the years it pays for itself, and it is a permanent benefit to succeeding gardeners; after all we want BARAGA to improve. However the frugal can have raised beds just for the labour of a little digging. Such beds are very flexible even if they are impermanent. Perhaps the ideal allotment garden might be a combination of both.

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## Getting An Early Start

For those really eager gardeners who want to be off and running, here are a few ideas:

◆ **Keep the Weeds Down:** on mild, dry days, take advantage to remove or turn under the inevitable weeds that germinate. Lamium, a BARAGA scourge, persists in winter and flowers and seeds in early spring; remove them now. Chickweed is rampant this fall but likely cannot tolerate the weather.

◆ **Adding Lime:** BARAGA soil has a low pH value, meaning that it is much too acid for many vegetables to grow robustly, if at all. Potatoes are an exception.

In order to raise the pH level it is necessary to add lime periodically, on average every three years. Now is a good time to do it - the winter rains will wash it into the soil. Brian Minter suggests 20 kg will cover 1000 square feet - an allotment size.

Several different types of lime are available:

Dolopril is a new generation of lime that is "prilled" for ease of application and quick release. Although slightly more expensive it "goes further";

Dolomite is the traditional type used to lime gardens, taking six to eight weeks to completely act;

Hydrated lime acts faster but comes as a messy white powder that covers your clothes and your neighbour's garden on a windy day.

◆ **Early Planting:** Peas and broad beans are cool weather crops that can go in the ground near the end of February. Or they can be started in a

sheltered spot, a greenhouse, cold frame, or balcony; then hardened off and transplanted; be sure the roots are not disturbed.

Build these early starters a cloche or cold frame to protect them and enjoy some really early crops.

◆ **Hunker Down:** relax a spell, rest up, have a restful holiday, a Merry Christmas, a Happy Hanukkah, a joyous solstice and be ready for year of great gardening in 2010.



Malva by Bella Scholz

## Bees at Baraga: Fall, 2009 Report

by Ann Talbot

◆ **The Bees:** It's slow time for bees these days. They are all now hunkered down for a break for the next few months. What do bees do in the winter? Well, fortunately in our part of the world, they can survive the weather. While most species of bees have only a queen to hibernate for the winter, honey bees can maintain colonies of workers and queens throughout the winter season. When it gets cold, they cluster together to generate heat and when necessary feed on stored honey supplies in their brood chamber.



Our bees have come through a fairly successful season. We are going into the winter with some healthy colonies, although we are keeping an eye on mites with on-going prevention measures. We are

hoping to come into the spring with some vibrant colonies. "In spring, an overwintered colony of bees may consist of from 10,000 to 20,000 individuals or more." (Beekeeping in Western Canada, 1998)

◆ **The People:** We have some sad news and some good news. Sadly, our intrepid beekeeper, Dick Goold is stepping down. He's worked incredibly hard over the past few years and has managed our bees with the utmost care, dedication and diligence. This is not an easy job; it requires weekly

maintenance throughout the summer: checking the bees, feeding the bees, making bee food and syrup, lugging 30-kg. boxes of honey, maintaining equipment, keeping up-to-date with the latest diseases and disease-management. These are just a few examples of what type of commitment is required in properly managing a bee colony. THANK YOU Dick – from all the bees and gardeners at BARAGA.

The good news is that we have found a replacement for Dick. We are extremely fortunate to have a new gardener at BARAGA, who also happens to be an apiculturist with the Ministry of Agriculture and Lands! Jaquie Bunse is a passionate beekeeper and gardener as well as a great educator. We're hoping that she will hold a few workshops for us to learn more about the lives and benefits of these little creatures.

◆ **Volunteers:** We would like to put out a call for volunteers for the 2010 bee season. We would like volunteers who are 1) strong and can handle lifting heavy hives and cranking honey extractors 2) who are willing and able to work on weekends. We only need about 4 people in order to justify the total of six hours of volunteer work required – this would account for a total of two or three 'work parties' that would either be devoted to honey extraction or equipment maintenance. We are also looking for a new 'coordinator' – someone who would manage the work parties, assist the beekeeper, manage the finances and honey sales.

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◆◆ Contact phone number for plot rental or getting on the wait list is 604-842-8571.

◆◆ To contact the president Don Hatch call 604-433-8055 and leave a message or e-mail support@baraga.ca  
This newsletter was edited by David Tamblin. Views expressed in this newsletter are not necessarily those of BARAGA.