

## ANAEROBES BEFRIEND COMPOSTERS

By Geoff Johnson, Site Educator

*This just in! Anaerobic Bacteria, which operate only in the absence of oxygen, are actually our friends! Being a natural trouble maker, I thought I'd stir things up (or refuse to) in the sometimes too conservative world of composting, by defending that stinky underdog, the anaerobic microbe.*

A common assumption out there is that composting must at all times, in all situations, be an aerobic, or oxygen fueled process. It's true that when organic matter decomposes, anaerobically terrifying odors occur, and that you would never want to let this happen in your regular back yard bin. But it's also true that in the absence of oxygen, the oxidation of nitrogen does not occur during decomposition. This means that much more of this essential plant nutrient is retained instead of evaporating into the atmosphere as it does in conventional aerobic composting. But there is more than one advantage to composting anaerobically, and more than one method available to us.

Trenching, simply put, is burying your organic waste. The advantage of this method over back yard bin composting is that it enables you to compost meat, grains, dairy, and oily foods in addition to other kitchen scraps. It also requires nothing more than a shovel. Just remember to dig deep (at least 16 inches) and cover your waste with at least 10 inches of top soil to prevent pest problems. It's an excellent way to fertilize and promote deep water conserving root systems in heavy feeding annual veggies, but you can also spot trench just outside the drip line (the ring underneath a tree's outermost branches, where feeder roots are concentrated) of shrubs and trees. Make sure to plant over the trenched materials only when they are composted. In relatively healthy garden soil,

break down should take 2-3 growing season months. If you're a carnivore, and concerned about meat-borne pathogens in your trench, give it 3-6 months before planting. Or alternatively, become a vegetarian!



Courtesy Seattle Public Utilities

Back yard food digesters are a lower maintenance alternative to trenching (and aerobic methods). They are partially buried containers, with holes or mesh in the bottom and tight fitting lids, and can be purchased (i.e. green cone) or easily improvised with metal garbage cans.

If you choose to try this method, place two digesters in a well-drained, sunny location (and maybe even encircle them with plantings). Technically, you can add all your kitchen waste, as in trenching, but I've heard of problems with rodents when meat or bones are added. Scatter a little leaf mold (partially composted leaves) over each addition, and dolomite lime if overpowering aromas occur. In 6-12 months, when the first digester is almost full, switch over to the second one. When number two fills up, empty the first and dig into the garden (see carnivore warning above). If the decomposition process is complete (and it should be), the material shouldn't stink.

In addition to creating soil fertility, anaerobes can even turn our wastes (including sewage) into eco-fuel. Biogas digesters consist of an underground chamber or mechanized drum in which various anaerobic bacteria convert organic waste into nutrient-rich slurry, carbon dioxide, and methane gas.

*Continued on Page 4*



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## A FOND FAREWELL TO STEVE YOUNG

At the end of January, 2002, we said good-bye and good luck to the Centre's coordinator, Steve Young. Steve shared with us his supreme organizational skills and created a greater public awareness of the Centre and its important work. We were fortunate to have the benefit of Steve's experience and knowledge. We wish him well as he moves full steam ahead to produce a series of environmental programs for Global Television.

Although staff responsibilities have been reorganized to fill the gap left by Steve, it is unknown right now who will be replacing him and his many jokes and puns. A tough act to follow! Thank you, Steve, for your hard work and being such a "fun-guy" to work with.

Lynn Marie



## AND A FEW WORDS FROM STEVE

It has been a year-and-a-half since I first joined this wonderful and worthwhile organization. Where has the time gone? It seems like just yesterday that I walked through the gates and into the life of the Compost Education Centre, and now that I'm moving on to a different, but equally challenging, opportunity I think "What will I miss about the Centre?" Definitely the passion and commitment of the dedicated staff and our Board of Directors who work long, hard hours to carry out the mandate to which we are committed. I'll also think fondly of the many people who visit our site to learn more about composting, and their commitment to improving the world around them by engaging in conservationist practices. I'll certainly look back with pride at the changes that have come about over the last year, including our new identity, our extremely successful outreach program and our new secondary schools education program. Since joining the Centre my life has been filled with challenges and successes, brought about by the splendid cooperation and support of everyone involved with the G.V.C.E.C.

Thanks to all of you! I'll look forward to seeing you again soon.

Steve Young

## WHO TO TALK TO

With Steve Young's departure, program areas have been shifted. If you have any questions about our programs, please contact the appropriate person as listed below (386-WORM). As always, do not hesitate to phone us with your composting queries or comments.

Lynn Marie – Coordinator    Geoff Johnson – Site Educator

Pauline Brest van Kempen – Office Supervisor and Secondary  
Schools Coordinator

Louise Ditmars – Volunteer and Elementary Schools Coordinator

We gratefully acknowledge the core funding support that we receive from the CRD and the City of Victoria. Additional support is provided by the Fernwood Community Association and through the generosity of our Compost Club Members and the residents of Greater Victoria.

## UPCOMING EVENTS

### Compost Club Workshops

Topic	Facilitator	Date
Naturescaping Your Garden	Angela Deering	March 23
Soil Basics	Mike Cowan	April 27
Rain Catchment	Geoff Johnson	May 25
Winter Gardening	Geoff Johnson	June 22

Saturdays from 2 – 4 pm. Free for members and \$3 for non-members.

### Other Workshops

Topic	Facilitator	Date
Basic Composting	Staff	1 <sup>st</sup> Wednesday of every month 7 – 9 pm
Permaculture	Geoff Johnson	March 17, May 26
Biorope	Michael Corbin	March 31, April 14, 28, May 5, June 2, 16

Call 386-9676 to register and/or for confirmation of dates and times.

★ 10<sup>th</sup> Anniversary Open House!

Saturday May 4, 10am – 4pm

Come and celebrate 10 years of composting education! Join Dr. Wiggles, staff and volunteers for refreshments and fun events for children and adults. Admission is free!

## BRIONY PENN TO BE GUEST SPEAKER AT A.G.M.

You are invited!

The Victoria Compost and Conservation Education Society will hold its **Annual General Meeting** on Wednesday, March 20, 2002 at the Fernwood Community Association (1923 Fernwood). Doors open at 7:00, the meeting starts at 7:30.



Our guest speaker is Briony Penn. As well as being the “Enviro Mental” Host/Environmental Specialist for the New VI television station in Victoria, Briony is well known as an environmental educator, writer, naturalist and founding director of the Land Conservancy of British Columbia. She will speak on how individuals can make a difference in their community, illustrating this with highlights from her own career.

If you have been a Compost Club member for two or more months, you will be eligible to vote. If you would like to nominate someone for the Board of Directors please contact Lynn at 386-9676. Nominations will also be accepted from the floor. Non-members are also welcome.

## VOLUNTEER PROFILE

Three cheers for **Leona Smith**! Leona is celebrating her one year anniversary as a Compost Educator. She earned her Master Composter Certificate in 2001 and is still educating the public about composting at fairs, markets and community events. In keeping with the green theme, she bikes to most of these events. Leona has also volunteered for RootsFest, Bastion Square Bike Races and Luminara. We were lucky to snag her at a Volunteer Fair where she saw a fit between her “earth friendly” values and our work at the Compost Education Centre.

Leona also practices what she preaches in her own back yard. Her pesticide free garden includes a rhubarb patch, flowers, veggies, herbs, plum trees and a cherry tree. A dedicated composter, she uses organic mulch and compost to amend the soil and this year has plans to finish her 3 bin composter that she is constructing from wooden pallets and scrap lumber. Her other interests include kayaking, cycling and writing.

Good luck with your new writing course, Leona, and thank you for your continued support!

## E-MAIL SAVES TREES!

New option! If you would like to receive our quarterly Newsletter by email instead of through the regular mail, phone 386-WORM and let us know.

## **ANAEROBES** *continued from Page 1*

Methane is virtually pollution free when burned, and is an excellent fuel source for cooking, heating, and lighting. The slurry is excellent for agricultural application, as the digestion process actually enriches the waste's available nutrient content. This isn't exactly back yard composting, but it works very well at the small farm, village, or neighborhood level, as decades of successful experience in India and China can attest to.

There are many ways to compost anaerobically, and I've only had room to discuss three of them here. If you're interested in other possibilities, phone the hotline (386-WORM). Together we can end prejudice against anaerobes.

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## **ELEMENTARY SCHOOLS PROGRAM EXPANDS**

A whole new batch of red wigglers is working (and breeding) in classrooms this spring. Elsewhere, students with hand magnifiers are identifying tiny creatures that slither or spring through compost. All of this is part of a strategy to introduce children to the wonder of composting thereby fulfilling the Ministry of Education's learning outcomes. Louise Ditmars is on the move – visiting schools and hosting classes in our straw bale building. Here's what's available:

★ In **Wrigglers at Work** (pre-school to grade 7) students build a worm bin together. They learn how composting reduces waste by 30% and improves soil, water and air. Choices for appropriate worm food are discussed.

★ Songs and games enhance the **Wonderful Wastes** program (pre-school to grade 7), in which students harvest castings from their mature bin, and then plant a seed.

★ The ever-popular **Interactive Garden Tour** (pre-school to grade 7) invites children to taste, touch, smell and eat some of the organic goodies growing at the Centre. The program is rounded out with "compost tag" and exploration of an active worm bin.

★ In **Compost Critter Ecology** (grades 5 – 7), games and songs keep interest high while students observe, record and analyze the fascinating creatures of compost: red wigglers, springtails and more! The food web and invertebrate interaction is the focus here.

Call Louise at 386-WORM for information or to book a program.

## **NEW HOME FOR DR. WIGGLES AND FAMILY**

Two new worm benches now grace the inside of the Straw Bale building. These attractive works of art also fill the building with the pleasant scent of cedar. A big thank you to Peter Creesey for donation of his time and labour. Peter is a skilled woodworker. If you are interested in a worm bench or fine furniture made with salvaged wood, contact Peter at 920-3770.

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## **SPEAKING OF DOCTOR WIGGLES**

Here are some of his favourite songs ...

*Twinkle twinkle, little worm,  
how I love to watch you squirm...*

*Happy Wormday to you*

*Baa Baa, black worm, have you any dirt?*



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## **B.C. HYDRO FUNDS WORM BINS**

The Centre is extremely grateful to B.C. Hydro for their recent donation of \$1000.00. This amount will help to finance worm composters in the Elementary Schools Program in 2002.

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## **WE NEED YOU FOR OUR 10<sup>TH</sup> ANNIVERSARY CELEBRATIONS!**

Would you like to help us make our 10th anniversary celebrations a spectacular success? Here is an opportunity for you to bring both your skills and enthusiasm to the Greater Victoria Compost Education Centre. To celebrate our successes over the past 10 years, and to pave the way for the next 10 years, we are planning a series of special events.

We will be raffling an irresistible collection of items for gardeners, with proceeds dedicated to educational programs at the Centre.

You can contribute by:

- \* planning, publicizing and implementing the 10th anniversary events
- \* soliciting prizes for the raffle by connecting with supportive businesses in the CRD
- \* organizing raffle ticket sales
- \* selling raffle tickets

If interested, please call Lynn at 386-9676.

# PREVENTION AND CONTROL OF PESTS IN INDOOR WORM COMPOSTING

## THE FRUIT FLY *Drosophila melanogaster*

By Pauline, Office Supervisor

One common hotline question we get at the centre is *How can I get rid of fruit flies?* A customer told us her story about the little pests literally taking over her household, discovering them in a glass of red wine while she was having a romantic dinner!

Fruit flies are extremely prolific and can be a real nuisance. Females lay up to 2000 eggs each in over-ripe or fermenting fruit. The larvae feed on micro-organisms in decaying fruit for several days, then pupate for several days. The life cycle of a fruit fly takes only 10 days. Fruit flies usually appear on fruit peels and rinds, or are attracted by them in late summer or early fall. A well-managed worm bin is unlikely to have problems, although even the most avid worm composters can neglect their bins on occasion. If this has happened to you, have no fear, there are solutions! Here are some:

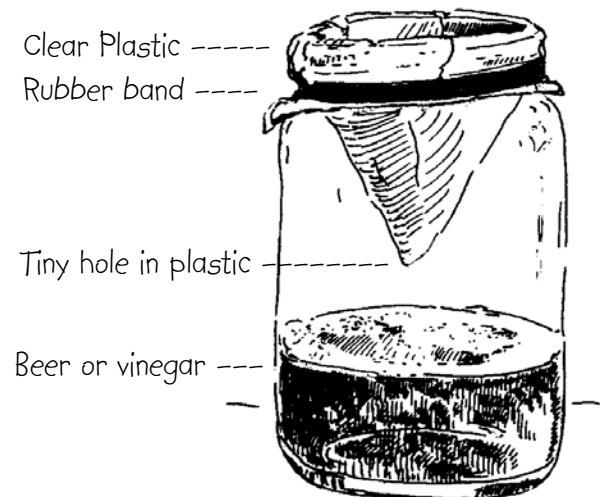
1. Deeply bury your food scraps, do not place food materials at the top of the bedding at any time – this is a sure way to attract flies! And remember *not* to add meats, dairy, oily foods or grains.
2. Place a thick layer of unshredded newspaper (or plastic) on top of the bedding before placing the lid on. Fruit flies do not like to lay their eggs on these materials.
3. Make sure your side vents are completely covered with screening, cheesecloth or even pantyhose. Secure the lid and always keep on when the bin is not in use.
4. Cut the food scraps into smaller pieces. This will aid the worms in feeding and may discourage flies. You can also try freezing all of your fruit and veggie scraps before adding to the bin. This will kill the eggs and larvae. First cut everything into small pieces, freeze it for a few days and then let it thaw in the fridge before adding to the bin.
5. You can also try sucking them up with a vacuum cleaner. Make sure you throw out the vacuum cleaner bag immediately as they will reproduce in there.
6. Keep your kitchen scraps in a tightly sealed container or, preferably, in a container with a charcoal filter to stop any odours from attracting fruit flies. Compost Club members can purchase a Kitchen Compost Container at the centre for \$ 17.95.

7. You may want to move the bin outside in the summer, but do not expose the worms to direct sunlight. Find a cool, shady spot and monitor the moisture level regularly since it may dry out more quickly. The worm bin should have a moisture level of a wrung out sponge and be placed in temperatures between 10 and 25° C.

8. You can also make a simple trap to catch these critters and keep their population under control. Try to trap flies immediately so they do not have time to reproduce. Remember their lifecycle only takes 10 days!

You will need a glass jar, a clear plastic bag, beer, port, or apple cider vinegar, rubber band.

### Fruit Fly Trap



Pour a small amount of beer or apple cider vinegar into the jar.

Cut a small hole, about 6 mm, in the clear plastic. Place over and push down into the opening of the jar, making an inverted cone shape. Secure the plastic with a rubber band.

The fruit flies will sniff around, be attracted by the fermenting alcohol, and become trapped.

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#### References:

- Appelhof, Mary. *Worms Eat My Garbage*, Kalamazoo, MI: Flower Press, 1982.
- Cullen, Mark and L. Johnson. *The Real Dirt*, Toronto, ON: Penguin Books, 1992.
- Martin, D.L. and G. Gershuny. *The Rodale Book of Composting*, Emmaus, PA: Rodale Press Inc., 1992

## PLEASE TELL US YOUR WORM STORIES!

If you have an interesting story or have discovered a good technique for worm composting please let us know. We would love to get your feedback! We have also developed a new worm bin survey. It only takes a few minutes to fill out, so please give us a call and let us know how your worm bin is going. We would love to hear from you. Call us at 386-WORM.

**THE LATEST DIRT** is published quarterly. The deadline for submissions for the summer issue is May 10, 2002. Submissions to the newsletter can be sent to the Compost Education Centre.

Unless otherwise noted, articles appearing in this newsletter may be reprinted only in other not-for-profit publications, with credit given to the author (when named) and **THE LATEST DIRT**.



## Ready to Renew or Join the Compost Club?

### BENEFITS OF MEMBERSHIP

- 10% discount on purchases at participating nurseries and garden centres
- 10% discount on purchases at the Compost Education Centre
- Access to resource library at the Compost Education Centre
- Free admission to Compost Club lectures
- Free subscription to our newsletter The Latest Dirt

Date	<b>MEMBERSHIP FORM</b>		
Name			
Address	City	Province	Code
Phone (home)	Phone (work)		

- New member                       Renewal  
 Senior/Student/Unwaged \$8     Individual \$10     Family \$12     Group/Corporate \$30  
 Please send me THE LATEST DIRT via E-mail  
 I would prefer to read THE LATEST DIRT "on-line" at [www.compost.bc.ca](http://www.compost.bc.ca).  
 I would like to increase my support for the Greater Victoria Compost Education Centre's work.  
 Enclosed is my **tax deductible donation** for:  \$20     \$35     \$50     \$100     \$\_\_\_\_\_

Total amount enclosed \$ \_\_\_\_\_

All memberships run one year from date of purchase. Receipts for donations under \$20 will only be issued upon request. Drop off or mail completed forms to the Compost Education Centre, 1216 North Park Street, Victoria, BC V8T 1C9

## THANKS FOR YOUR DONATIONS

We wish to extend our sincere thanks to the following people for their generosity in donating to the Centre.

**Lesley Wicks   Colleen Loader   Eithne Hogan  
Marilyn Berry            Maurice Tozer**

## CALLING ALL STUDENTS AND POTENTIAL VOLUNTEERS!

How would you like to have a free Compost Club membership? As an *active* volunteer we will provide you with a free yearly membership. We are also giving out memberships to students who donate a copy of a recent student paper and/or a project on composting.

The benefits of membership include a 10 % discount on purchases at the GVCEC and many local garden centres and nurseries, as well as free admission to the Compost Club lecture series. Visit us or call 386-WORM

