
Organic Land Care *with*

August, 2004

"Never doubt that a small group of thoughtful, committed people can change the world. Indeed, it is the only thing that ever has."

Margaret Mead
(1901 – 1978)



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Subscription Order

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What does "Certified Organic" mean?

Technically the term "organic" can mean lots of things. The most common definitions are:

- **Containing carbon** (*the strict chemical definition which includes totally synthetic materials – and some highly toxic poisons*)
- **Relating to, or derived from, living organisms** (*which also includes some highly toxic poisons*)
- **Holistic land management practices which emphasize the importance of relationships between living organisms and their environment** (*which may mean different things to different people*)

The "certified organic" label on our food means that a certifying agency vouches that the product has been produced according to a published standard. This standard prescribes the practices and products that may (or may not!) be used in the production of this food. In essence it defines the term "organic" for all to see and protects consumers from misleading claims.

In agriculture the certification process involves costly yearly inspections of the farm. Obviously this is not feasible for home gardens, but there is still the need for clear guidelines for homeowners and landscape professionals. More and more consumers are requesting "organic" landscape services – but are they getting what they expect?

To clear the confusion SOUL developed the Organic Land Care Standard and a certification program for land care professionals. To become certified, land care professionals must document comprehensive experience and formal education in organic practices, and pass a 3 hour examination.

When you hire a SOUL Certified Organic Land Care Professional you can rest assured that he or she is qualified to deliver services that meet the Organic Land Care Standard.

The Organic Land Care Standard and information about the certification program are available at the SOUL web site:
<http://www.organiclandcare.org/>

To find an organic land care professional in your area please visit the SOUL web site at www.organiclandcare.org





Composting

A slightly “different” perspective

By Heide Hermary

Heide Hermary is president of Gaia College Inc. She can be reached at heide.hermary@organic-land-care.com

Decay of organic matter happens naturally. That's what the whole soil food web does: it breaks down organic matter into humus AND even incorporates it into the soil. What could be more convenient!

However, aesthetic reasons sometimes require that undesired organic matter be removed and composted in another location, to be returned later. And then there is kitchen waste and other organic matter such as paper etc. which is best returned to the soil rather than to the landfill.

So when we talk about **compost-ING**, we are referring to an artificial environment created specifically for the efficient, large scale breakdown of organic matter.

A judge in Victoria, B.C. Canada recently ruled that composting is the **manufacturing** of soil, and consequently **prohibited** on agriculturally zoned land!!

A much more accurate way to look at composting is as **livestock management**. Only in this case the livestock consists of soil dwelling organisms. Our objective is to increase their numbers, because the more there are, the faster they can break down the organic matter. **We're breeding soil dwelling organisms!** Compost, in essence, is *the waste product created*.

This point of view allows us to focus directly on what's important in composting: **the creation of conditions conducive to the rapid multiplication of soil life**: bacteria,

fungi, protozoa, worms, bugs, slugs, insects – the greater the diversity the better and healthier the end product!

So what do these creatures need?

- **Food**
- **Air**
- **Water**

FOOD

All composting instructions stress the importance of the carbon-nitrogen ratio (30:1). This means that the food we feed to our “livestock” must contain certain percentages of carbon and nitrogen.

There is a good reason for this. These creatures cannot absorb carbon and nitrogen from the air. In nature both of these exist as gases.

So if we want the little critters to work for us we must feed them these basic elements, and the minerals they require, through the material we put into our compost.

The SOUL web site (Public / Education) has some very excellent information on composting: <http://www.organiclandcare.org>. Here you will also find information on carbon / nitrogen rich materials, and how to build a great compost pile.

AIR

For the most part the organisms that work in our compost require air to breathe. The simplest way to inject air into the pile is to turn it. The additional air results in an explosion of microbial populations and the increased metabolic activity creates

heat.

The heat, combined with the various excretions of the microbes, kills (weed) seeds and plant pathogens.

If the compost pile does not have sufficient air, anaerobic organisms (those that don't require air to breathe) will multiply. Unfortunately many of these organisms are associated with serious plant (and human) diseases. Additionally their waste products – and the compost created in this way – are toxic to plants. So air is really important!

WATER

Approximately 90 % or even more of living bodies is composed of water, and that includes all microbes.

The rule of thumb is that your compost pile should feel as moist as a wrung-out sponge.

If the compost pile is too dry (even if it contains enough air), microbial populations go into hibernation and your compost will become a playground for woodbugs.

If the compost pile is too wet the excess moisture will displace the air, and your pile will become anaerobic with all the associated problems.

The moral of the story? Composting works if you do it right. If you can't or don't want to, then do as Mother Nature does: let the leaves and grass clippings disintegrate in place.



To find an organic land care professional in your area please visit the SOUL web site at www.organiclandcare.org

Gardening with Native Plants



The Tiger Lily

By Laurie Hardy

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Starting in July they are still around in August, waiving their rich orange blooms on long green stems. The native Tiger Lily (*Lilium columbianum*) makes a wonderful addition to the back of the perennial flower bed, tucked in away from the wind.



In the wild I have seen them up to three and four feet high near streams. In our home gardens they perform equally well given a humus-rich, moist, well-draining soil and positioned in light shade to full sun.

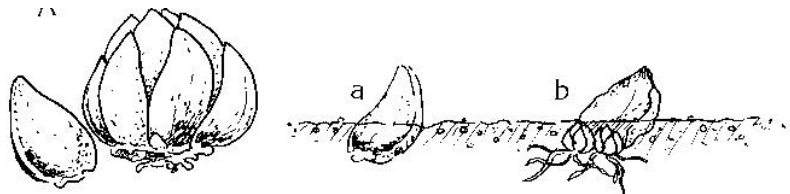
Photo courtesy of Gerry Danen, www.danen.org



Come late September this lily goes dormant and can be dug and moved to other parts of the garden along with your divisions of the native wild ginger, wild asters and False Lily-of-the Valley. You can use both bulbils and bulb scales of this perennial to increase your displays next year.

Apparently the bulbs can be steamed or boiled and used as a bitter flavoring or condiment, but I prefer seeing their small golden orange heads nodding through the remaining summer days of September.

Native to our BC coast, they are the exception in the Liliaceae family in that water needs to be withheld in the summer as they actually enjoy the dry summer conditions. Excellent for the drought tolerant garden.



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The Beauty of Bugs

By Jessica Dawe

*Jessica is the "Bug Lady". She lives in Errington, B.C.
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It is long overdue that professionals in horticulture and the public start recognizing and appreciating the beauty that insects offer. Quite often we neglect to see the amazing infrastructure within which the community of insects works.

We should be grateful that their single minded efforts of feeding and procreating leads to blossoming flowers, waste management and pest control. Their methods of communication and housing design alone are enough to rival any of our attempts at efficient infrastructure.

Bugs are not to be feared but to be marveled at.!

The birth of a ladybug, the pollination of fruits or a network of ants can be admired by most individuals if they know what to look for.

It is about time that we become aware of the phenomena occurring right under our noses.

Step into the garden and look deep into the canopy, introduce yourself to your neighbors in the garden.

Discover the roles of each bug and the effect on the plants. Forget choosing plant varieties for colour or scent, elect varieties for their ability to support and benefit the entire system!



Green lacewings deposit their delicately stalked eggs on the undersides of leaves. Lacewing larvae are voracious predators of aphids and other insects.



Adult paper wasps feed on nectar and pollen, but they spend most of their lives searching for caterpillars and other insects, which they feed to their young.



Leafcutter bees are solitary bees which build their nests from neatly cut leaf tissue. They are important pollinators



Dung beetles eat dung and decaying animals, plants and fungi. Some species build and bury brood balls, into which they lay their eggs.

Educate yourself so you can make an informed decision that will produce long-term benefits not short-term rewards.

Taking ownership of the life in your garden will create a responsibility on the individual's part to value the ecosystem as more than a plot of land.

It will make the transition to organics a conscious and deliberate act.

The SOUL web site has comprehensive information on beneficial insects, and how to attract them to the garden.
http://www.organiclandcare.org/public/beneficial_insects.htm

Pesticide Basics

*“When we kill off the natural enemies
of the pests we inherit their work”*

*Carl Huffaker, 1914 – 1995
Professor, University of California*



Using pesticides is never a good idea. Here are some compelling reasons:

Population resurgence

Pesticides often kill off natural enemies along with the insect. With their natural enemies eliminated, there is little to prevent recovered insect populations from exploding to higher, more damaging numbers than existed before

pesticides were applied. Additional chemical pesticide treatments only repeat this cycle.

Creation of secondary pests

Some potential pests which are normally kept under good control by natural enemies become actual pests after their natural enemies are destroyed by pesticides. Mite outbreaks after pesticide applications are a classic example of this.

Resistance to pesticides

Naturally resistant individuals in a pest population are able to survive pesticide treatments. The survivors pass on the resistance trait to their offspring. In the last decade, the number of weed species known to be resistant to herbicides rose from 48 - 270, and the number of plant pathogens resistant to fungicides grew from 100 to 150. Over 500 insect species are now resistant to insecticides.

“Organic” Demystified

Question:

What is the difference between inorganic, organic and botanical pesticides?

Answer:

In reference to pesticides, the term "organic" **always** refers to the chemical structure, i.e. **containing carbon**. The **most poisonous synthetic chemicals** belong to this group. Most organic pesticides are extremely toxic and are **prohibited** from use in organic culture!

Inorganic Pesticides

- Do not contain carbon
- Are derived from mineral ores, for instance:
 - Copper sulfate
 - Ferrous sulfate
 - Copper
 - Sulfur

Organic Pesticides

- Contain carbon
- Are usually synthesized from petroleum

Botanical Pesticides

Pesticides extracted from plant materials are called "**botanicals**". Most botanical pesticides are extremely toxic.

Please check the SOUL Organic Land Care Standard for pesticides permitted for use in organic culture.
<http://www.organiclandcare.org/public/standards.htm>

Please note:

- **In Canada**, pesticides that do not have a PCP (Pesticide Control Product) number may not be sold or used except by special permission or for **personal** use only. **This means that organic landscapers are not allowed to apply non-registered pesticides for their clients**, but homeowners may apply them in their own gardens.
- It is illegal to use a pesticide for purposes **other than those described on the label**, without a Special Use Permit (i.e. in Canada we can use garlic oil as an insect repellent, not as a fungicide).
- **In British Columbia**, the provincial government requires a variety of licenses and permits for the sale and application of pesticides. **This also applies to organic landscapers**, as many common pesticides used in organic culture are **non-exempt** (i.e. copper compounds, sulfur, horticultural oils)! Once again, homeowners may apply them in their own gardens.

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A Visit to the Henry Doubleday Research Association (U.K.)

By Carolyn Herriot

Carolyn Herriot is owner of *The Garden Path Organic Plant Nursery* in Victoria.
She can be reached at thegardenpath@shaw.ca

Last July I had the good fortune to visit Ryton Gardens, the headquarters of the Henry Doubleday Research Association (HDRA), leaders in the field of organic gardening in Great Britain. Ten weeks prior to my visit, Prince Charles, who is a patron, had opened a new visitor centre. In addition to an exciting interactive indoor exhibition, 'The Vegetable Kingdom', which tells the story of Britain's vegetable heritage, they have designed an inspiring new vegetable garden, a showcase for organic methods of gardening.

"Did you know there are over 600 different types of vegetables, 80 which are readily grown in Britain?" I was informed in The Vegetable Kingdom display, and "as there are hundreds of different varieties of each type, there are more than 6,000 vegetables to choose from". Since many of the older strains of these food plants are threatened with extinction, the HDRA is committed to preserving many of them by saving seeds of over 800 older varieties in the Heritage Seed Library, now housed in the new Vegetable Kingdom. The Heritage Seed Library is recognized as one of Europe's most effective seed conservation and distribution schemes.

There were 360 varieties of tomatoes listed in amateur seed catalogues in the UK in 2002. Tomatoes with names which conjure up a wide range of images – *Britain's Breakfast*, *Cherry Ghost*, *Green Sausage*, *Tommy Toe*, *Queen of Sante Marthe*. The Victorians grew over 120 different varieties of tall garden pea, providing a continuous supply of

fresh shelled peas throughout the summer months. Two of these 19th century varieties, *Champion of England* and *Ne Plus Ultra*, are being saved and distributed by the seed library to protect them from extinction today. It's interesting to note that peas are undoubtedly still the most popular of all vegetables eaten in Britain today. Pass the peas please!

I took my time wandering through the eight acre gardens, viewing the twenty different theme display gardens. I spent a lot of time perusing the plants in The Herb Garden, containing over 250 plants, and was most intrigued by some of the unusual plants I had never seen before, such as *licorice*, *variegated horseradish*, *English mace*, *buckshorn plantain* and *madder*. I made special note of the *Eryngium*, (*sea holly*), collection - a genus used for fibers, medicines and vegetables. In Shakespeare's day the roots of *Eryngium maritimum* were steeped in sugar and orange flower water and made into candies called 'kissing comfits', or 'eryngoos'. These candied roots were reputed to be aphrodisiac, so I bet they were popular!

The spectacular 'Diversity In Landscape' display showcased plants which thrive with the minimum of attention in the challenging local conditions - a free draining soil, with late frosts and regular gales. I noted *Echinacea*, *Phlomis*, *Alchemilla*, *hardy Geranium sanguineum*, *Buddleias*, *Potentillas*, *grasses*, *yarrows*, *Polygonum*, *lavender*, *Coreopsis*, *Santolina*, *Solidago*, *sages*, *Cistus*, *spireas*, *Echiums*,

Lychnis, *Nepeta*, *Malva*, *Euonymous* and *Hypericum* all interacting beautifully together in this colourful display area.

Close by, the Bee Garden, a six-sided hexagram the shape of a honeycomb, was filled with examples of plants that provide nectar to attract bees, mostly those with single open flowers. Some of the favourite bee plants in this garden were noted as *Alyssum*, *blackberry*, *heather*, *Phacelia*, and *Epilobium*, *Rosebay willow herb*. Most important are those which open in spring and fall, when the bees' food supply is limited. A pond with sides sloping down to the water, so that the bees could walk down to drink, was an important feature.

One of the most aesthetically pleasing gardens was The Paradise Garden, dedicated to Geoff Hamilton, an exponent of organic gardening techniques, who has since passed away. It was touching to discover three varieties of plants, a sweet pea, a penstemon and a rose named after Geoff - enduring reminders of a much loved gardener who touched many people's lives each week, while appearing on *BBC Gardeners World*.

I happily truded around, enjoying the myriad displays, knowing that at the end of it I would find relief at the restaurant at Ryton Gardens. I put my feet up in the shade, where I savoured a delicious organic lunch. It's at times like this that you know that you are not as young as you used to be!!



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Urban Permaculture

The Edible Lawn: Part One

By Bob Ewing

Bob Ewing is a Permaculture Designer and Educator in Thunderbay, Ont.
He can be reached at sixdegrees@baynet.net



Lawns are everywhere. The lawn is a highly useful area where we can walk, play, entertain and relax. Not many plants tolerate traffic the way grass does!

But a lawn is also a very unnatural ecosystem which consists almost entirely of grass, and offers very little habitat diversity. This makes it vulnerable to pests and diseases, resulting in heavy pesticide use.

So what are our options?

We could decide to be very practical and transform this grass-based ecosystem into a vegetable garden. Or we could indulge our senses and create beautiful shrub and flower beds. But many property owners are reluctant to relinquish their lawn because it is so uniquely functional.

There is, however a compromise: an edible ornamental lawn!

Here are 5 ornamental, edible plants that can tolerate some foot traffic and regular mowing. They can all be easily seeded and / or planted into the lawn.

Yarrow (*Achillea millefolium*)

The young small leaves can be added to salads in low quantity. They supply the bitter that our salt-sugar diets often lack.

The leaves are soft and feathery, and their colour ranges from deep green to almost grey, depending on variety. Yarrow is available in many flower colours, from plain white to pinks, reds and even bright yellow.



Illustration: E. Sibly, 1810

Bugleweed (*Ajuga reptans*)

Young shoots can be added to salads, they are also somewhat bitter. Bugleweed is commonly grown for its leaf colour, which ranges from deep green to variegated white and deep red, depending on variety. Bugleweed flowers are deep blue spikes.

Field Garlic (*Allium oleraceum*) and Crow Garlic (*Allium vineale*)
The leaves look like typical green

onions, and have an onion-garlic taste. The flowers are small pinkish purple ball-like flower heads on long stalks. Both leaves and flowers are edible.

Chamomile (*Anthemis nobilis*)

The leaves are bright green, soft and feathery. The small white flowers are commonly used in tea or for medicinal purposes.

Saffron flower (*Crocus sativus*)

The spice saffron consists of the red female stigmata which, when soaked in liquid, stain it a bright yellow. The Saffron leaves look like ordinary crocus leaves, but it blooms in the fall. Beware: its flowers can be confused with those of the autumn crocus, which also blooms in the fall, but is poisonous!

It is very easy to grow an edible ornamental lawn. Basically all we need to do is raise the cutting height to its maximum 2.5 or 3". In the spring and early summer the regular cutting of the lawn will ensure a constant supply of succulent young leaves. Later in the summer the lawn could be left uncut for a few weeks to allow the taller plants to flower.

Next issue I will look closer at some of the common lawn weeds that will spice up your salad!





Education in Organic Land Care

For Gardeners and Land Care Professionals

Organic Land Care – Working WITH Nature

This series of eight intensive one-day seminars introduces participants to the science and practice of organic horticulture. Be prepared for a lively and fascinating experience that will leave you with a new awareness of how nature works. This fall / winter 2004 / 05 in Burnaby, Delta, Duncan and Victoria.

Instructor: Heide Hermary, President, Gaia College Inc.

For a detailed brochure please call:

Burnaby Continuing Education (604) 664-8888

DR Society, Delta (604) 946-9828

Malaspina University College, Duncan (250) 381-9995

City Green, Victoria (250) 746-3519

The information can also be downloaded from the Gaia College web site:

http://www.organic-land-care.com/Gaia_College/programs/lecture_series/index.php

Certificate in Organic Landscape Management

Certificate in Organic Turf Management

These very comprehensive on-line programs are geared at landscape professionals and those wishing to enter the landscape professions. They introduce students to a fundamentally different way of thinking about nature. Those who have been practicing conventional horticulture will find many of their practices challenged, and nagging doubts exposed. Beyond that they will discover how the knowledge of sound horticultural practices transfers to the organic management of landscapes.

Please visit the Gaia College web site for more information:

http://www.organic-land-care.com/Gaia_College/programs/index.php



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