MASTER GARDENER UF UNIVERSITY of FLORIDA IFAS Extension

The COMPOST Pile

...for discerning weeders

A Newsletter of the Okaloosa County Master Gardeners Association — **July 2010**

July MG Meeting in Niceville - City Council Chambers, Niceville - 9:00 a.m.

Where Would We Be Without Bugs

Lynn Fabian

Bugs, insects, arthropods, call them what you will, we pay a lot of attention to them and pay a lot to have them or to rid ourselves of them.

They may be miniscule or large, fly, crawl or burrow, but they are all around us.

Think of the expressions we have involving insects.

Creepy crawlies
Be a fly on the wall
Put a bug in his ear
Don't bug me
Cute as a bug
Busy as a bee
Snug as a bug

Insects live in our homes, in our yards, on our bodies and in our psyches. In his book *The Diversity of Life,* renowned entomologist Edward O. Wilson discusses the importance of insects and land-dwelling arthropods in the ecosystem, saying that "if [they] all were to disappear, humanity probably could not last more than a few months." Most other life forms, like amphibians, reptiles, birds, and mammals would also become extinct because of the domino effect that would occur in the food chain. http://www.riverdeep.net/current/2002/03/030402t_insects.jhtml

Ironically, if humans disappeared the only other life forms to disappear would be those that live on or in our bodies especially if we were the only source of habitat. Some insects eat plants, some insects eat other insects and and other creatures (toads, frogs, bats and others) dine on insects and occasionally each other.

Ten years ago there were approximately 750,000 named insect species. Today, that number is over 1,000,000. And according to a recent article in Scientific American, entomologists estimate that there are likely over eight million different species of insects on Earth. When you compare that to 4,650 named and 4,809 estimated mammal species or the 72,000 named and 1,500,000 estimated fungi, it is easy to see that insects "out-populate" any other living taxonomic group on Earth. http://www.riverdeep.net/current/2002/03/030402t_insects.jhtml

"Bugs are not going to inherit the earth. They own it now. So we might as well make peace with the landlord." -- Thomas Eisner

Beneficial Insects...How to Keep 'Em Down on the Farm

If your yard has a diversity of plant life, you probably already have a lot of insects. With any luck they are not all dining on your precious plants. Predators in the insect world feed on other insects that may be feeding in your yard. Encouraging the predators and parasitizers should be a major consideration for any gardener.

You can buy beneficial insects to release. Makes you feel self-righteous to know you are making such a statement to the bugs that are eating your roses. Truth of the matter is the insects you release may or may not stay around to help you out. Most are mobile (lady bugs can fly away, fly away, fly away home) and will head for any ready food source...maybe several blocks away from your particular address. Just 'cause you paid for them doesn't guarantee any loyalty.

A better plan is to breed them. No messy test tubes or little satin rooms are needed but you do have to set the stage to support the beneficial insects all year long.

The main way to create a habitat is to plant flowers that will provide food in the form of pollen and nectar for the adults. Tiny flowers, like those found on herbs, provide the best pollen and nectar for beneficial insects. Because many of the beneficial insects are small, tiny flowers are easiest for them to feed from.

This list of some of the herbs that have such flowers and are known to attract beneficial insects comes from Sally Scalera of Brevard County:

Dill (Anethum graveolens) annual; Cilantro/ Coriander (Coriandrum sativum) annual; Queen Ann's lace (Daucus carota var. carota) annual; Basil (Ocimum basilicum) annual; Alyssum (Lobularia maritime) winter annual; Fennel (Foeniculum vulgare) perennial; Yarrow (Achillea millefolium) perennial; Garlic chives (Allium tuberosum), Anise hyssop (Agastache foeniculum) annual; Lovage (Levisticum officinale) perennial; Angelica (Angelica archangelica) biennial; Parsley (Petroselinum crispum) biennial; Tansy (Tanacetum vulgare) biennial; Cosmos (Cosmos bipinnatus) annual; Mints (Mentha spp.) perennial. Fact Sheet # FS 6050 HORT

Once you have the beneficial insects working in your garden, don't revert to products that are broad spectrum pesticides. You will kill the beneficials with the "bad" bugs. and all your hard work will be for naught

Cockroaches really put my "all creatures great and small" creed to the test. ~Astrid Alauda

Beneficial Insects
General Links

Coleoptera:
Tiger beetles

Damselflies and dragonflies

Flies:
Predatory gall midge
Robber flies

Brown lacewing for insect control

larva pictured

Ladybugs
Ladybugs for insect control on citrus

Mantids

Wasps

Ensign wasps
Parasite on caribbean fruit fly
Parasitoid on brown citrus aphid
Parasitoid on citrus whitefly
Parasitoid on diamondback moths

Predatory Hemipterans:
Predatory stink bug
Florida predatory stink bug
Bigeyed bugs
Spined soldier bug
Predatory stink bug
Wheel bug

Spiders

All pictures are UF photos unless otherwise shown.

Reference: http://www.flaentsoc.org/fespestweblinks2.html#BI

We hope that, when the insects take over the world, they will remember with gratitude how we took them along on all our picnics. --Richard Vaughan

Yard Gone Wild

Recently homeowners called the Extension office requesting identification of plants growing wildly and taking over their yards. Earlier this spring one homeowner asked about a vigorous vine that had a pretty orange flower shaped like a trumpet. He wanted to know how to get rid of it as it was growing through his trailer floor! Then someone brought in a fragrant, delicate yellow tubular flower also on a vine. He just wanted it identified and when it was, the Master Gardener discouraged him from growing it, as it was known to be aggressive. Both these questions made me think about the clingy green screen that has grown up between my neighbor's oak trees and has covered my untamed natural area like a blanket. Here's what I learned from these questions and research.

I was in on the identification of the first orange flowered plant. It was difficult to pin down with no sample and just the homeowner's description. But, with Sheila's help, Faye and I were able to pin it down to Trumpet Creeper,

Campsis radicans Center for Aquatic & Invasive Plants

The homeowner had tried Round*up* and diesel fuel to get rid of it with no success! We recommended he dig up the pernicious plant. More research verified his story. Controlling that pretty, but aggressive plant is difficult. Trumpet Creeper is a native classified by the USDA as an invasive weed. It will start to displace desirable vegetation if not properly managed. Florida doesn't classify it as an invasive [species], only as a native, and based on our customer's experience, it can be quite aggressive in our zone. On top of its invasive potential, it is slightly toxic if ingested and it may cause skin redness and swelling to mammals. Even though it has its issues, it isn't all bad. It attracts hummingbirds and butterflies and provides habitat for ants!

So how do we control this native, but aggressive plant? The best information we found came from the Texas Invasives Database (see web link below for specifics), which provided detailed guidance on several different steps. The first step is prevention. Texas recommends planting only on a limited basis and careful removal of existing plants, before they produce seed to prevent seed spread. The next step is cultural control. Texas advocates educating the public about its ability to escape into natural areas and encourages people to refrain from purchasing, propagating, or planting Trumpet Creeper. After cultural control comes mechanical control. The Texas Invasives Database recommends regular cutting or mowing over a period of several months or years to deplete the plant's reserves. During this mechanical process take care to prevent seed development. Next is biological control but, unfortunately, Trumpet Creeper has no known biological controls. The last option is chemical control. Currently, chemical controls include painting cut vine ends with 100% glyphosate herbicide solution or applying 100% Triclopyr solution to the basal bark or a 1-2% solution with surfactant to the foliage. As always, when using pesticides read all instructions and follow the directions carefully. Contact your state department of agriculture for additional requirements or restrictions.

A little more internet research brought up these comments about Trumpet Creeper from the Ladybird Johnson Wildflower Center at the University of Texas, Austin. "Native to eastern North America as far north as New York and Ontario, this vine is often cultivated for its attractive, reddish orange flowers and can

escape cultivation, sometimes colonizing so densely it seems a nuisance, particularly in the southeast, where its invasive qualities have earned it the names Hellvine and Devil's Shoestring. Its rapid colonization by suckers and layering makes it useful for erosion control, however, and its magnificent flowers never fail to attract Ruby-throated Hummingbirds within its range. Adapted to eastern forests, Trumpet Creeper grows tall with support. It climbs by means of aerial rootlets, which, like English Ivy, can damage wood, stone, and brick. To keep it in check, plant it near concrete or an area that you can mow; mowing down the suckers will discourage them."

These reports of the aggressiveness of Trumpet Creeper make me wonder why it is suggested routinely as a suitable alternative to the next "Yard Gone Wild" plant- Japanese Honeysuckle.

The second unknown weed brought in for identification was a woody stemmed vine with opposite leaves. The typical fragrant yellow blossoms were not present on the sample provided, but Sheila was again the expert who was able to put a name to this lovely but aggressive visitor - Japanese Honeysuckle,

Lonicera japonica (Japanese Honeysuckle)

The Florida Exotic Pest Plant Council identifies it as an invasive exotic. It was introduced to the United States from Japan as an ornamental, but has quickly become trouble because it is a fast grower and can overtake and displace native plants. Its prolific growth will quickly overwhelm small trees and shrubs causing them to crumple under the weight of its foliage. Because of the impact of this opportunistic intruder, Florida has an Invasive Species Management Plan for Japanese Honeysuckle. The Florida management plan reads very similarly to that of the plan developed for the Trumpet Creeper by Texas. I won't go into the details here because they are available on the IFAS website, but the overview is: Prevention – monitoring and education; Cultural – plant native alternatives; Mechanical – use hand pulling, mowing, tillage, prescribed burning; Biological – no biological control; and Chemical – glyphosate or triclopyr application. The only real difference is that the Florida plan suggests using native alternatives like Trumpet Creeper to replace the honeysuckle. And like Trumpet Creeper, Japanese Honeysuckle isn't a total villain, either. Bees, hummingbirds and deer love it.

References:

USDA, Natural Resources Conservation Service, Plant Guide for Trumpet Creeper
http://plants.usda.gov/plantguide/pdf/pg_cara2.pdf

Texas Invasives Database – Trumpet Creeper
http://www.texasinvasives.org/invasives_database/detail.php?symbol=MAUN3

Ladybird Johnson Wildflower Center, University of Texas Austin, Native Plant Database – Trumpet Creeper
http://www.wildflower.org/plants/result.php?id_plant=cara2

Plant Management in Florida Waters, IFAS, UFL
http://plants.ifas.ufl.edu/guide/invplant.html#native

Invasive Species Management Plans for Florida, IFAS, UFL
http://plants.ifas.ufl.edu/node/239

The United States National Arboretum
http://www.usna.usda.gov/Gardens/invasives.html

Southeast Exotic Pest Plant Council Invasive Plant Manual
http://www.invasive.org/eastern/eppc/HEHE.html

US Forest Service, Weed of the Week
http://www.invasive.org/weedcd/pdfs/wow/english-ivy.pdf

IFAS Assessment of Non-native Plants in Florida's Natural Areas
http://plants.ifas.ufl.edu/assessment/conclusions.html

Invasive Plants of the Southeast
http://www.se-eppc.org/pubs/gpca.pdf

This Was Supposed to Be About Earthworms

Stacey Taylor

Kent Beck mentioned, in passing, that a man he knows "does" vermiculture, selling the worms as bait and making a nice little profit. He and I both agreed that that sounded like a good project for one junior MG. Drew was less than thrilled at first, but has warmed to the idea (amazing what the prospect of money will do) and the first bin went into production this month. Perhaps there will be more about that at a later date. There is an AMAZING amount of material on the internet about vermiculture, including a PowerPoint presentation by our good neighbor Teresa Friday. But, as with most internet searches, one thing leads to another and next thing you know, hours have passed and you are then reading about something else.

It started with keeping undesirables out of the worm bin. Added to it, by sheer coincidence, was, "Mom, you have to do something about those black wasps! They are everywhere and they scare me!" Turns out that they are connected. One thing that may turn up in a worm bin is a maggot-looking creature with a voracious appetite. Guess what ...they turn into the wasp-looking thing that is everywhere.

The creature is the Black Soldier Fly (BSF), *Hermetia illucens*. Last year, I noticed that I had a huge number of "maggots" in my compost bin. I really didn't like the looks of it, but since it was covered most of the time, and I didn't have maggots crawling outside or around the bin, nor a fly problem, I didn't pursue it farther. This year we have a large number of BSFs. They are annoying in that they act much like the male carpenter bee - buzzing around your face. Enough to drive a kid in the house thinking he is going to get stung (seemingly much more threatening than the 100,000 honeybees in the front yard which WILL sting!). However, BSFs have no stinger, and their mouth parts are not able to bite, so they are harmless. Annoying, but harmless, and they are keepers.

BSF is indigenous to the Americas and was spread to the rest of the world during WWII. The female deposits about 500 eggs in decaying matter and they hatch in 4 days. The larvae live for approximately 2 weeks in ideal

conditions. Development can be delayed for up to 6 months if temperatures fall too low or not enough food is available. Adults live for only 5 to 8 days and subsist on the stored reserves from their larval stages.

So what makes me so stoked about these creatures? Well, it turns out they are much more efficient than worms at turning kitchen wastes into compost. BSF larvae can eat the "food" immediately whereas worms have to let the food decay before they work their magic. AND, here is the neat thing.....the residue left from the BSF larvae is excellent feed for the red wigglers. Also, BSF larvae can eat meat and dairy products, not just vegetable matter. Sounds like a mess doesn't it? Fortunately, these critters also release a *synomone* (defined by MSN Encarta as a chemical released by

members of one species that affects the behavior of another species and benefits both parties) that keeps fruit flies and other "filth" flies away. One commercial dealer of containers specifically developed for the BSF states on their website that 100lbs of waste can be converted to 5lbs compost, a few quarts of compost tea, and 20lbs of BSF larvae which can be used as fish bait, or chicken, song bird or lizard feed. Want to come harvest them with me? Get this: once the larvae are ready to pupate, they kindly crawl out of the mess and "self -harvest" themselves, falling into a bucket provided just for them. It doesn't get any better than that does it?

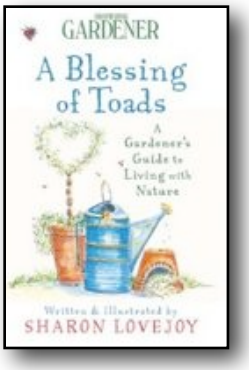
Now, I had these beasts all last year and didn't know what potential I was looking at. This year, however, I am going to actively try to "farm" BSF. I plan on feeding Drew's worms my leftovers. I'll let you know how it works out. Who knows, maybe I'll show up at a meeting with containers of larvae for all you fishermen.

Teaching a child not to step on a caterpillar is as valuable to the child as it is to the caterpillar. ~Bradley Millar

Book Review — Klare Fox

A Blessing of Toads: A Gardener's Guide to Living with Nature

Written and Illustrated by Sharon Lovejoy



This month, let's take a break from the purely educational gardening tomes and try this delightful collection of essays by former *Country Living Gardener* writer, Sharon Lovejoy.

With the charm of a friendly neighbor, she shares experiences gleaned from years of gardening with an eye to protecting and preserving the ecosystem found in one's own backyard. And most of all, enjoying every minute of it!

There are forty-five essays in all, with topics as interesting and varied as how to enchant a wasp to rescuing worms. In the midst of the playfully written stories is a bucketful of tried-and-true gardening wisdom as well as the author's own whimsical watercolors.

Keep this book next to your favorite reading spot and savor it when the heat keeps you indoors. It is available at your favorite on-line book sources and sometimes at garden gift shops.

ISBN 9781-58816-654-8

Coming Events

–MG General Meeting Wednesday, Jul 7th, 9:00a
City Council Chambers, Niceville

–Crestview Landscape Workday, Tuesday, July 13th 7:30a 'til... Weeds are open 24 hours a day so come by and pick a few!!
–July Board Meeting TBA, Jul 21st, 9:30 a
–Plant Clinic, Wednesday, Jul 28th, 10a-1p
–Nursery Workday, Every Friday, 10a-2p
–Nursery Workday & Education Program, TBA
–Rain Barrel Workshop, Aug 3rd
–New Class, MG Training, begins Aug 13th

(E-mail events to Editor/Compost Pile)

Phone support in the offices is needed even though it is too hot to think about going out in the garden. People have questions that need answering. Please sign up to help.

Last Word — Lynn Fabian

So who is Thomas Eisner? (page 2) He is the Jacob Gould Schurman Professor of Chemical Ecology at Cornell University, and Director of the Cornell Institute for Research in Chemical Ecology (CIRCE). He is a world authority on animal behavior, ecology, and evolution, and, together with his Cornell colleague, Jerrold Meinwald, is one of the pioneers of chemical ecology, the discipline dealing with the chemical interactions of organisms. He is author or co-author of some 400 scientific articles and 7 books.

I was excited when I found one of his books in the Okaloosa Library System...but it is a reference book at FWB Library and I will have to plan a trip down to take a look at it. The title is *Love of Insects* in case you are down there and want to check it out...figuratively, not literally.

My thanks to all who contributed to *The Compost Pile* this month. An embarrassment of riches. You were so generous with your time and words that I am going to hold some articles over until August. Hurray!! A head start on next issue.

Stay cool and keep the flowers deadheaded.

See you at the meeting in Niceville.

When the bee comes to your house, let her have beer; you may want to visit the bee's house some day. ~Congo Proverb

About Us

The Compost Pile is a publication of the Okaloosa County Master Gardeners Association.

Okaloosa County Master Gardeners Association is a volunteer organization sponsored by Okaloosa County Extension and the University of Florida IFAS.

The Foundation for the Gator Nation...an equal opportunity institution.