## **GOOD BUGS---BAD BUGS**

"A happy garden is when what you think, what you know and what you do in the garden are in harmony." Gandhi

As global temperatures rise, many insects are shifting their ranges northward. We will see, along with our good bugs, more severe infestations from both local and exotic pests; such as gypsy moths, bagworms and vine weevils. We will be dealing with pests we have never had in the garden. We will see them early in the spring and later in the fall. Some pests like whiteflies, aphids and spider mites, flourish during heat waves. As climate change induces extreme weather patterns, our roses will become more stressed and less able to fend off pests and diseases.

In May this year, I did a workshop at Meadow View Garden Center on "Diseases and Bugs in Our Gardens". During my research and preparation for this talk, I learned there are more good bugs than there are bad bugs. Nature's way is the good bugs are supposed to take care of the bad bugs. However, we both know that does not always happen.

Below are lists of the most prominent good and bad bugs you will find in your garden. Their description will help you to properly identify them. Meanwhile be on the lookout for "new" bugs and investigate how to safely and effective ly manage them. Share your findings with fellow gardeners and good luck in your gardens.

Kathy Brennan, ARS Consulting Rosarian President, Tennessee Rose Society

## **GOOD BUGS**

<u>Aphidius wasp</u>: 1/8" L and dark in color w/ transparent wings. Rid your garden of all Aphids.

<u>Assassin bug</u>: <sup>1</sup>/<sub>2</sub>" L, broad bodies, sharp curved beak, bristly front legs, brown or black in color. Rid your garden of aphids, most worms, beetles, earwigs and lace bugs.

**<u>Big eyed bug</u>**: 1/6" L, oblong, wide set eyes, gray, black or brown with clear wings. Rid your garden of aphids, beetles, spider mites, thrips and whiteflies.

<u>**Ground beetle**</u>: 1/8"-1½" L w/shiny, hard-shelled bodies. Dark in color w/lg. mandibles. Rid you garden of caterpillars, potato beetle, cutworms slugs, snails, and tobacco bud worm.

**Hover fly**: Looks like small wasps, black and yellow or white striped bodies. Hover like hummingbirds. <sup>1</sup>/<sub>4</sub> -1/2" L. They are pollinators. Rid your garden of aphids, cabbage worms, mealy bugs and caterpillars.

**Lacewing**: 1" L, slender, light green w/ lg. transparent wings. The larvae can consume up to 100 aphids per day. Rid your garden of aphids, caterpillar eggs, cabbage worms, beetle larvae, corn earworms, whiteflies, spider mites and some scales and lace bugs.

**Ladybug**: <sup>1</sup>/<sub>4</sub>" L, w/rounded bodies with black spots. Wings are orange to red with white on the thorax. Rid your garden of aphids,

beetle larvae, lace bugs scale, spider mites, whiteflies and eggs of other insects.

**<u>Parasitic wasp</u>**: 1/32-1/2" L, non-stinging wasps. Some have ovipositors that look like stingers but are not. They have slender, elongated antennae.

Rid your garden of aphids, beetle larvae, bagworms, cabb. Worms, cutworms, leafminers, mealy bugs, sawfly, scale, tent caterpillars, tomato hornworm and whiteflies.

<u>**Praying mantis</u>**: Can reach up to 5" L, shades of brown to green in color. Slender in body with large front legs. Heads can swivel 180 degrees w/lg. compound eyes. Rid your garden of aphids, asparagus beetle, earwigs, leafhoppers and squash bugs.</u>

**Spider**: They come in all sizes and colors from drab brown to bright colors with various patterns. They have good hearing with an exceptional sense of smell and touch. Wolf spiders a very good for your garden. Rid your garden of beetles, aphids, cutw orms, fire ants, lace bugs, sawfly, spider mites, and squash bugs; but all spiders are predators.

## **BAD BUGS**

<u>Aphid</u>: Tiny, 1/8" L with soft bodies, green, yellow, brown, red, gray or black.

**<u>Bagworm</u>**: Caterpillars living inside a slender, silk bag  $(1 \frac{1}{2})$  to 2" long). Bags can be found on evergreen trees.

<u>Cabbageworm</u>: Caterpillars are light green with faint yellow stripe down their side.

<u>Cucumber beetle</u>: Striped beetle are yellow with 3 black stripes. Spotted beetles are greenish yellow with 11-12 black spots on the wing covers.

<u>**Cutworm**</u>:  $1 \frac{1}{2}$ " L caterpillars curl into C shape, brown or gray in color; over winter just below the soil surface.

**Earwig:** <sup>1</sup>/<sub>2</sub>-3/4"L, dark brown in color w/ large, curved rear pinchers.

Japanese beetle: <sup>1</sup>/<sub>2</sub>"L, with metallic green and copper wings. Larvae are a C- shaped, grayish-white grub that spends winter several inches below the soil.

**Lace bug**: 1/8"L, with iridescent, lace-like veination wings. They leave tiny black specks called tar spots on leaves.

**Leafminer**: 1.8-1.4"L, they are flies with black and yellow markings. Tunneling larvae leaves tracks looking like a road map on the leaves.

**Mealybug**: 1/8"L are soft, oval shaped insects, covered with white or gray fuzz. Their feeding leaves clusters or clumps of wax or fuzz.

<u>Mexican bean beetle</u>: Looks like our Ladybug. Wing covers are copper with 16 black spots. They are like

Ladybugs on steroids. Causing skeletonization of the leaves, leaving only the veins.

<u>Sawfly</u>: Adults look like wasps. Larvae caterpillar does all the damage, hairless and yellow, green, black or brown. They are tiny up to 1"L. Chews holes in leaves.

**Spider Mite :** 1/20"L, red in color. Shake a leaf over a white piece of paper to determine an infestation.

**Squash bug**: 5/8"L, brown or gray in color w/flat backs. All emits an unpleasant odor when crushed.

**Tobacco budworm**: 1"L, yellow to green in color. Devour flower buds and plant foliage.

**Tomato hornworm:** 3-5"L, thick as your thumb, green in color w/"horn" in the rear. Defoliate a plant in few days.

<u>Whitefly</u>: 1/20"-1/10"L, white in color and exude a sweet excrement called "honeydew" (a sticky film on leaves).