



earth-wise guide to

Beneficial Insects

don't kill the good guys!

more than **90%** of insects aren't pests. some pollinate our flowers and vegetables, while many others feed on pests in our gardens. by allowing them to do their job, we can reduce the need for pesticides and maintain austin's water quality.

resources

- A Field Guide to Common Texas Insects Drees & Jackman
- The Texas Bug Book—the Good, the Bad, and the Ugly, Malcolm Beck and Howard Garrett
- Natural Enemies Handbook -The Illustrated Guide to Biological Pest Control, University of California Press
- Common Sense Pest Control, William Olkowski, et al.
- <http://hortipm.tamu.edu/pestprofiles/beneficials.html>



1. Know Who the "Good Guys" Are

- Learn to recognize the egg, larval, pupal and adult stages of beneficial insects
- Learn about their life-cycles and feeding habits
- Learn to recognize signs of beneficial insects at work, such as hollow-looking, tan-colored aphids, which are the remains of aphids that have been parasitized
- Don't be afraid of stinging insects like wasps and bees; they help pollinate garden vegetables and fruits and are only aggressive around their nests or when provoked

2. Have Patience

- It may take awhile for beneficial populations to build up to control a pest outbreak
- Be willing to tolerate a minor amount of damage
- Monitor outbreak areas to determine whether a population of beneficials is rising and may soon control a pest outbreak



Adult lady beetles (top);
Parasitic wasp pupae on a tomato hornworm (left)



















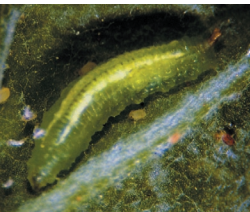
3. Make Wise Product Choices

- When spraying is necessary, select a narrow spectrum product whenever possible. Broad-spectrum insecticides don't discriminate between pests and beneficial insects - they kill both
- Choose an insecticide that won't harm other insect-eating garden creatures like birds, bats, spiders, lizards, and toads (see the Grow Green Products Fact Sheet for ratings)
- Treat only the area of the outbreak
- Choose products that break down quickly like soaps, oils, or pyrethrum sprays

4. Make a Home for Beneficials in Your Yard

- Provide an accessible source of water, such as a birdbath or periodic sprinkling
- Plant flowering plants that provide nectar for adult beneficials to feed upon; better nectar sources include plants with umbrella-shaped bloom heads (Yarrow, Anise, Dill), daisy-like flowers (Chamomile), and flowering herbs (Thyme, Pineapple Sage, Chives)
- Plant a few Tropical Milkweed or Gaura plants to maintain aphids for beneficials to feed on; the species of aphid they attract are not pests of most other landscape plants

Good Guys: Some Common Beneficial Insects

Insect	Food Source	Stage	Description	
	larvae and adults of beetles, caterpillars, and many other pests	nymphs and adults	many species; dark brown to red to black; long slender bodies with narrow heads; 1/2" to 1" long	
	larvae and eggs of fleahoppers, lygus bugs, mites, thrips and whiteflies	nymphs and adult	adults range in size from 1/8" to 1/4" , broad-headed with large, curved eyes	
	snails, slugs, rootfeeding insects	adults and larvae	medium to large fast moving insects, black to reddish or metallic	
	many species, including aphids	larvae	larvae: 1/2", mottled tan adults: 5/8", green or brown with long, delicate wings	
	aphids, scales, soft-bodied insects and mites	larvae and adults	larvae: 3/8", wingless, spiny; orange and black markings adults: orange with dark spots or black with two red spots	
	aphids, mites, thrips, insect eggs, small larvae on plants	nymphs and adults	1/12" to 1/5", long, oval, black with white markings and triangular head	
	most insect groups are affected	larvae	gnat-like, attack all life stages of insects, from 1/100" to 3/4"	
	many species, including caterpillars	adults	various types of paper wasps and muddaubers	
	flying insects, caterpillars	immatures and adults	eight-legged, various sizes, usually specialized as either roaming hunters or web builders	
	aphids	larvae	larvae: creamy -white to green or brown adults: 1/4 to 3/4", black or brown with yellow banded abdomens; resemble small wasps or bees	