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## ***Predatory Bugs: Minute pirate bugs***

*Use Integrated Pest Management (IPM) for successful plant problem management.*

### ***Biology***

Minute pirate bugs are 1/12 to 1/5 inch long, oval, black or purplish with white markings on the forewings. The wings extend beyond the tip of the body. The tiny (1/100 inch) eggs are embedded in plant tissue with the “lid” exposed, through which the nymph emerges.

Newly hatched nymphs are transparent with a slight yellow tinge, turning yellow-orange to brown with maturity. They are fast-moving, wingless, and teardrop-shaped. Minute pirate bugs overwinter as adults in leaf litter or under bark and usually emerge from hibernation in March-April. Development from egg to adult through five nymphal stages takes a minimum of 20 days. Females lay an average of approximately 130 eggs and several generations are produced during spring and summer.

When prey is not available, minute pirate bugs are able to survive feeding on nectar, pollen and plant juices. Adults and immature stages can consume 30 to 40 spider mites or aphids per day. Minute pirate bugs are efficient at locating prey and are voracious feeders. They aggregate in areas of high prey density and increase their numbers more rapidly when there is an abundance of prey. Minute pirate bugs are common predators in gardens and contribute significantly to the control of spider mites, rust mites, aphids, leafhoppers, mealybugs and thrips.

### **Prey or Pest Targeted**

~ Mites, aphids, leafhoppers, thrips,  
caterpillars, mealybugs, beetles, scale insects, insect eggs

### **Attracting and Keeping Beneficial Insects in Your Yard**

- ~ Avoid regular use of synthetic, broad-spectrum pesticides. Infrequent use of certain narrow-spectrum pesticides is more compatible with some beneficials but generally the less chemical inputs there are, the greater and more diverse the beneficial insect community will be. Extensive lawns are also not conducive to attracting and retaining a diversity of beneficial insects, mites and spiders. Minimize lawn areas and maximize shrub and bush plantings. Many beneficials reside naturally in riparian and other ‘natural’ areas near to many back yards. Natural dispersion from these refuges ensures that some beneficials will visit back yards but they will not stay unless food, host and shelter resources are available. Native plants have closer affinities with native insects and therefore provide most of these resources. A garden with a good diversity of local native flora in and around back yards, will improve the abundance and diversity of local, beneficial arthropods. Native flora also provides natural overwintering sites for many beneficial insects and it is useful to leave at least a small area of native vegetation undisturbed during fall and winter.
- ~ Some kinds of beneficial insects (e.g. lady beetles, lacewings, predatory mites) are available for purchase from commercial suppliers. However, benefits from introducing these beneficials are usually limited and short-lived. Upon release, commercially obtained lady beetles and lacewings often disperse and may rapidly leave your backyard despite the presence of prey and suitable nectar resources. Generally, it is more effective and sustainable to create a garden habitat that will be colonized by beneficials naturally.

*Predatory Bugs: Minute pirate bugs*

*Images*



~ Caption: Adult minute pirate bug (*Orius tristicolor*) (Anthocoridae)  
~ Photo by: D.G. James



~ Caption: Eggs and early instar nymph of minute pirate bug  
~ Photo by: D.G. James



~ Caption: Mature nymph of minute pirate bug (*Orius tristicolor*) (Anthocoridae) checking out its next meal  
~ Photo by: D.G. James