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Predatory Beetles: Mite-eating lady and Scymnus beetles

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

Biology

The mite-eating lady beetles (*Stethorus picipes*, *Stethorus punctillum*) are pin head-sized (1/25 to 1/16 inch), black, oval, convex, and shiny, covered with sparse, fine, yellowish-to-white hairs.

Stethorus picipes (a native species) is most commonly found but *S. punctillum* (exotic) also occurs. Both species are voracious spider mite feeders, consuming 50 to 75 mites per day. Overwintering occurs as non-reproductive adults in protected habitats (e.g., in ground debris, under bark). Adults emerge from hibernation sites in March-April, and seek out spider mite colonies, which they are able to do extraordinarily well. Once found, females feed and lay eggs (approximately 15 eggs per day), rapidly exterminating small colonies of mites. Larvae develop through four instars, pupating after 12 days.

Development from egg to adult takes approximately three weeks and three to four generations are produced during spring-summer. Adults live for four to eight weeks during summer and thrive at temperatures between 68 and 95°F.

A number of *Scymnus* beetles (*Scymnus* spp.) occur in Washington and all are predators of rust and spider mites as well as leafhoppers and mealybugs. Slightly larger and similarly colored to *Stethorus* spp., they are easy to mistake for mite-eating lady beetles. However, their larvae are very different being white or pale colored with long thick cottony filaments adorning the body. They look a little like mealybugs and can be mistaken for this pest.

There are about 90 species of lady beetles in the Pacific Northwest. The five species most likely to be seen in Washington gardens include the transverse, convergent, seven-spot, multi-colored and mite-eating lady beetles.

Prey or Pest Targeted

~ Lady beetles are industrious predators of not only aphids but also many other soft bodied arthropods like mites, thrips, insect eggs, scale insects and mealybugs.

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.

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Images



~ Caption: *Adult mite-eating lady beetle (Stethorus picipes) (Coccinellidae)*
~ Photo by: D.G. James



~ Caption: *Mite-eating lady beetle egg (Stethorus picipes) (Coccinellidae)*
~ Photo by: D.G. James



~ Caption: *Larva of mite-eating lady beetle (Stethorus picipes) (Coccinellidae)*
~ Photo by: D.G. James



~ Caption: Pupa of mite-eating lady beetle
(*Stethorus picipes*) (Coccinellidae)
~ Photo by: D.G. James



~ Caption: Adult scymnus beetle (Coccinellidae)
~ Photo by: D.G. James



~ Caption: Larva of scymnus beetle
(Coccinellidae)
~ Photo by: D.G. James