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A Good Year for the Ladies Ladybird Beetles in Eastern Washington

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Ladybird beetles, also known colloquially as “ladybugs,” are one of our most valuable insect friends. Year after year, these “ladies” kill untold numbers of aphids, mealybugs, scale insects, and mites on crops and ornamentals.

The Virgin Mary and her Seven Joys and Seven Sorrows

People have revered ladybugs since at least the Middle Ages, recognizing their value as biological control agents. They are known by at least 329 names in no fewer than 55 languages. Many of



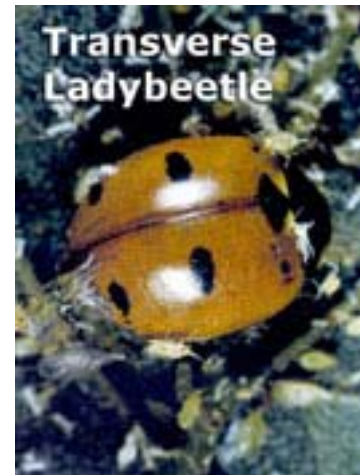
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the names relate to God or the Virgin Mary. “Ladybird” derived from “our Lady’s bird,” a reference to Mary, and was originally applied to the seven-spotted English version of the insect. The red base color represented Mary’s cloak and the seven black spots represented her seven joys and seven sorrows. In Denmark, ladybugs are called “Mary’s hens,” while in France they are known as “cows of the Virgin.” The Cherokee name for them means “great beloved woman.”

A Good Year for the Ladies

Spring 2002 was notable in eastern Washington for a great abundance of ladybugs. Large numbers of these familiar red or orange beetles with black spots were seen in orchards, vineyards, and field crops as well as in residential backyards. They appeared to build up in March and April on a good supply of aphids that thrived under cool, moist conditions, and became very noticeable during May and June. There are thousands of species of ladybugs worldwide, but until recently two species, the transverse ladybug and the convergent ladybug, were the ones most commonly found in central Washington orchards, fields, and gardens. Both are native to the western United States. The convergent ladybug is available from suppliers of beneficial insects for home garden and crop use.



Exotic Ladies

In recent years, a new ladybug, the multi-colored Asian ladybeetle, has become increasingly common in our region, providing good biological control of aphids in some crops like hops. This species was introduced by the USDA into the eastern United States during the 1960s, '70s, and '80s for control of forest and orchard aphids. Fourteen thousand Asian ladybeetles were released by USDA near Yakima in 1980. For many years the beetle failed to establish in any of its intentionally released zones, but during the late eighties and nineties large populations developed in many eastern states. Large populations also began developing about that same time in the coastal areas of Washington and Oregon. The Asian ladybeetle was rarely seen in eastern Washington until the late nineties, but was common in 2001 and again this year.

Ladies Behaving Badly



In their native Asian habitat, these ladybugs gather in large numbers during autumn on elevated, rocky outcrops prior to overwintering en masse in nearby protected situations (e.g., under rocks, cliff ledges, caves). In the urban environment, Asian ladybeetles use light-colored buildings, walls, signs, and similar structures as their gathering places and they often end up overwintering in buildings including homes. As much as we in agriculture appreciate the “ladies,” when

hundreds or thousands of them overwinter in someone’s home, it causes a considerable nuisance. This has proven to be a problem in many eastern U.S. states.

In another instance of bad behavior, Asian ladybeetles have begun infesting ripening grapes in Ohio, New York, Pennsylvania and Indiana. In large numbers, the beetles cause tainting and odor problems in wine, presenting what could become a serious concern to grape growers.

Watching for Exotic Ladies in Eastern Washington

The recent increase in Asian ladybeetle abundance in eastern Washington may be a consequence of a series of milder winters or some other climatic or environmental factor. Numbers may return to the previous low levels when conditions alter. However, it is also possible that the beetle has adapted better to eastern Washington conditions and will maintain or even increase populations further in the future. This will undoubtedly enhance biological control of aphids in orchards, on trees, and in some crops such as hops. But as we have seen in the east, it may also develop into an urban and possibly a vineyard problem.

I believe the arid climate and environment of eastern Washington is sufficiently sub-optimal to prevent the population explosions of Asian ladybeetles seen in the east. Nevertheless, we should remain vigilant and aware of the possible threat that this ladybeetle poses to our rapidly expanding viticultural industry.

Because of this concern, we ask that readers report any large aggregations of ladybeetles on or in buildings or on grapes so we can monitor them. Phone or e-mail any such sightings to me, David James, at (509) 786-9280 or djames@tricity.wsu.edu.

An English Lady in Washington

The Asian ladybeetle is not the only new ladybug in eastern Washington. The English seven-spotted ladybird (of Virgin Mary fame) is also now a common part of our ladybug fauna.

Like the Asian species, the seven-spotted

ladybird was introduced into the United States

by the USDA and has gradually spread throughout the country, turning up in Washington in

1990. However, 2002 appears to be the first year that its numbers have increased so much that during spring it was the dominant species in crops and ornamentals in the lower Yakima Valley.

Fortunately, this species has not exhibited the nuisance behaviors of the Asian species. It does not use houses as overwintering sites and has not been recorded as a contaminant problem on grapes. It is a very effective predator of aphids, scale insects, and other pests and it will strengthen our biological control programs.



Will the Exotic Ladies Displace Native Ladies?

That is the six-billion-dollar question! We have no ready answer yet, although evidence is accumulating from various parts of the country suggesting that this may be the case. It will probably depend on how well the exotics adapt to different environments. In some areas they may totally displace native ladybugs, but in others, the natives may always be better adapted and thus repel the exotics.

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