



# Newsletter Extension

## Fruit ICM News

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## When Good Beetle Go Bad

Sources: *Ohio HSE Factsheet # 2158-95* and  
<http://www.ars.usda.gov/is/pr/2000/001030.beetlefacts.htm>

Immigrants are among America's greatest strengths, and this holds true not just for people. Many of our major food plants -- wheat, soybeans, rice, potatoes, and others -- originated outside North America. And so do many of our beneficial insects.

Colonists from England brought in our most valuable and well-known bee for making honey and pollinating crops, *Apis mellifera*. Other six-legged immigrants include some species of lady beetles that give farmers biological options to insecticides. For the most part, lady beetles are beneficial, consuming aphids, scale insects, and many other pests that injure plants in our gardens, landscapes, and agricultural settings.

The multicolored Asian lady beetle is native to Asia, where it is an important predator that feeds on aphids and other soft-bodied insects that dwell in trees. In their native habitat, large aggregations of these lady beetles often hibernate in cracks and crevices within cliff faces. Unfortunately, in the United States where cliffs are not prevalent, they seek overwintering sites in and around buildings.

During the past decade, the multicolored Asian lady beetle has emerged as a seasonal nuisance pest in many regions of our country. It was recognized in Ohio during October 1993, when some residents reported that thousands of lady beetles were congregating on homes and buildings, with many of these insects finding their way indoors.

### How did these exotic lady beetles get here?

The multicolored Asian lady beetle made its way into the United States through a number of accidental and planned releases. There are several reports that this species was accidentally brought on ships to

various ports, notable New Orleans and Seattle. This lady beetle was also intentionally imported from Russia, Japan, Korea, and elsewhere in the Orient and released in the United States as part of a Federal effort to naturally control insect pests in trees. The rationale was that native species of lady beetles are not particularly effective in controlling tree-feeding aphids and scale insects. The Federal releases were made in California as early as 1916 and again in the mid-1960s, but the multicolored Asian lady beetle apparently failed to establish.

During the late 1970s through the early 1980s, tens of thousands of multicolored Asian lady beetles were intentionally released by the U.S. Department of Agriculture's Agricultural Research Service (USDA-ARS) in an effort to control insect pests that injure trees. The USDA-ARS coordinated the lady beetle releases in many southern and eastern states, including Ohio, Maine, Connecticut, Delaware, Pennsylvania, Maryland, Georgia, Mississippi, and Louisiana. In Ohio, a total of approximately 1,800 lady beetles was released in Cuyahoga and Lake Counties during June 1979 and July 1980.

During this period, the largest USDA-ARS releases (more than 11,000 lady beetles) were made in Georgia. The USDA-ARS release program was eventually discontinued because failed recapture efforts suggested that the multicolored Asian lady beetle was not surviving in the United States.

Hence, there is some controversy regarding the origins of this nonnative species. Nonetheless, the multicolored Asian lady beetle is now well established in the United States, where it currently thrives in many parts of the Midwest, East, South, and Northwest. This nonnative species appears to be displacing some of our native lady beetles in Ohio.

**Identification:** The name "multicolored" refers to the many different color forms of the adult lady beetles. Color variants found in the United States are different shades of yellow, orange, or red, either with or without black spots on the wing covers. Some have 19 black spots while others have faded spots that vary in number and size. On the white pronotum (top covering of middle body part), many have several spots that fuse into a regular- to irregularly-shaped "M." A guide to identification of various lady beetle species is available at the following interactive web site: <http://www.schoolnet.ca/vp-pv/ladybug/e/ladybug/ladybugs/bugmap.htm>.

Immatures (larvae) are covered with tiny, flexible spines (non-stinging). Their body is elongate, somewhat flattened, and "alligator-shaped." The immatures can rapidly move about leaves and branches, where they eat aphids and other soft-bodied insects. The multi-colored Asian lady beetle has significantly benefitted the pecan industry by nearly eliminating injurious pecan aphids and has impacted pests that injure other commodities, such as fruit orchard and agricultural crops.

**Some bad habits:** In spite of their important role in nature, multicolored Asian lady beetles can be seasonal pests in and around homes, particularly from late autumn until early spring.

Homeowners often express concern and aggravation with these nuisance pests. During late autumn, homeowners complain that multicolored Asian lady beetles cluster on the sides of houses; "crunch" under foot; get into food and drinks; alight on hands, arms, and other parts of the body; and sometimes enter the ears and mouth. The lady beetles can be so numerous that they appear to be "raining" outdoors or swarming like bees.

When lady beetles are disturbed, they defend themselves by exuding a yellow-orange body fluid, which is their blood. This defense mechanism is termed reflex bleeding. The blood has a foul odor and can permanently stain walls, drapes, carpeting, etc.

Multicolored Asian lady beetles have been reported to nibble, nip, or "bite" humans. These lady beetles are not aggressive toward humans, and they simply may be examining an unfamiliar substrate or they may be seeking moisture. Their nibbling smarts, but is not reported to break the skin or draw human blood. Some individuals report an allergenic response to lady beetles. Some experience inhalant allergy, others are sensitive or allergic to the fluid that lady beetles secrete, which can cause contact dermatitis and a stinging sensation. However, lady beetles cannot sting, because they do not possess a stinger.

In addition to the published bad habits, we have received numerous reports about feeding on peach and raspberry fruit. It is not presently known whether the beetles were able to puncture the peach skin, or whether there had been an entrance site from another cause. It is thought that they are seeking moisture and/or nutrients.

It is probable that their introduction into new habitats in the United States freed these lady beetles from some natural population checks and balances that occur within their native Asian range. It is likely that these natural controls will catch up to the lady beetles in time and curtail their booming population. Additionally, a period of time may be required for checks and balances of our native lady beetles to adapt to this newcomer.

## Fruit Observations & Trap Reports

| Insect Key |                             |
|------------|-----------------------------|
| AM:        | apple maggot                |
| CM:        | codling moth                |
| ESBM:      | eye-spotted budmoth         |
| LAW:       | lesser apple worm           |
| LPTB:      | lesser peachtree borer      |
| OBLR:      | obliquebanded leafroller    |
| OFM:       | oriental fruit moth         |
| PTB:       | peachtree borer             |
| RBLR:      | redbanded leafroller        |
| SJS:       | San Jose scale              |
| STLM:      | spotted tentiform leafminer |
| TABM:      | tufted apple budmoth        |
| VLR:       | variegated leafroller       |

**Waterman Lab, Columbus, Dr. Celeste Welty, OSU Extension Entomologist**

*Traps used: STLM = Wing trap, SJS = Pherocon V, Codling Moth = mean of 3 MultiPher® traps, Others = MultiPher*

**Apple:** 9/5 to 9/12

STLM: 106 (down from 111)  
RBLR: 29 (down from 70)  
CM (mean of 3 traps): 15.0 (up from 13.7)  
SJS: 1 (down from 2)  
OFM: 1 (down from 2)  
AM(sum of 3 traps): 1 (up from 0)

**Peach:** 9/5 to 9/12  
 OFM: 11 (up from 3)  
 LPTB: 2 (down from 3)  
 PTB: 0 (unchanged)

## Terminal Market Wholesale Fruit Prices September 5, 2001

Sources:

Chicago [http://www.ams.usda.gov/mnreports/HX\\_FV010.txt](http://www.ams.usda.gov/mnreports/HX_FV010.txt)

Detroit [http://www.ams.usda.gov/mnreports/DU\\_FV010.txt](http://www.ams.usda.gov/mnreports/DU_FV010.txt)

Pittsburgh [http://www.ams.usda.gov/mnreports/PS\\_FV010.txt](http://www.ams.usda.gov/mnreports/PS_FV010.txt)

|  | Chicago                       | Detroit  | Pittsburgh                    |
|--|-------------------------------|--|-------------------------------|
| <b>Apples, cartons, 12 3-lb filmbags</b> |                               |  |                               |
| U.S. Fancy Earligold                     |                               | <b>MI</b> 2½" min 12 - 12.50                         |                               |
| U.S. Fancy Gala                          |                               | <b>MI</b> 2½" min 11.50-12.00                        |                               |
| U.S. Fancy Gold Supreme                  |                               | <b>MI</b> 2½" min 10.00                              |                               |
| U.S. Fancy Paula Red                     | <b>WI</b> 2½" min 10.50       | <b>MI</b> 2½" min 11.00-12.50                        |                               |
| U.S. Fancy Jersey Mac                    | <b>WI</b> 2½" min 10.50-11.00 |  |                               |
| U.S. Fancy McIntosh                      |                               |  | <b>NY</b> 2½" min 11.00-12.00 |
| U.S. ExFancy Royal Gala                  |                               |  | <b>PA</b> 2¼" min 11.50       |
| U.S. ExFancy Paula Red                   |                               |  | <b>PA</b> 2¼" min 10.50       |
| <b>Apples, bushel cartons, loose</b>     |                               |  |                               |
| U.S. Fancy Cortland                      |                               | <b>MI</b> 2½" min 11.50-12.00                        |                               |
| U.S. Fancy Gala                          |                               | <b>MI</b> 3" min 14.50 - 15.00<br>2½" up 11.50-12.00 | <b>PA</b> 2¼" min 11.00       |
|  |                               |  |                               |

|  |  |   |   |
|--|--|---|---|
| U.S. Fancy Ginger Gold   |  | <b>MI</b> 3" min<br>14.50 - 15.00   |   |
| U.S. Fancy Gold Supreme  |  | <b>MI</b> 3" min<br>13.50 - 14.00   |   |
| U.S. Fancy Paula Red   |  | <b>MI</b> 2 ¾" up<br>12.00<br>2 ½" up 11.50 -<br>12.00  |   |
| <b>Apples, cartons cellpack</b>  |  |   |   |
| U.S. Fancy Paula Red 112s  | <b>WI</b> 15.00  |   |   |
| U.S. Fancy McIntosh 80s<br>100s<br>120s  |  |   | <b>NY</b> 10.00 - 12.00<br>10.00 - 12.00<br>10.00 - 12.00 |
| <b>Blueberries</b> , 12 1-pt cups  | <b>MI</b> 23.00 - 25.00  | <b>MI</b> med 21.00 -<br>23.00  | <b>MI</b> med-lg 19.00 -<br>23.50                         |
| <b>Peaches</b> , 25 lb cartons, loose, no grade<br>marks, various yellow flesh varieties | <b>IL</b> 2½" up 12.00<br><b>SC</b> 2½" up 12.00<br><br>2¼" up 10.00 |   |   |
| <b>Peaches</b> , 25 lb cartons, U.S. ExOne various<br>yellow flesh varieties             | <b>MI</b> 2½" up<br>12.00-12.50<br>2¼" up 8.50-9.00                  |   |   |
| <b>Peaches</b> , ½ bu cartons, U.S. One various<br>yellow flesh varieties                |  | <b>MI</b> 2¾" up<br>13.00-13.50<br>2½" up 9.50-<br>10.00<br><b>NJ</b> 2¾" up<br>11.00-12.00<br>2½" up 10.00-<br>12.50<br>2¼" up 6.00-<br>7.00 | <b>NJ</b> 2½" up 11.50-<br>13.00                          |
| <b>Peaches</b> , ½ bu cartons, U.S. ExOne Blakes   |  |   | <b>WV</b> 2½" up<br>11.00-12.00                           |
| <b>Peaches</b> , ½ bu cartons, U.S. Fancy Blakes   |  |   | <b>PA</b> 2½" up 11.50-<br>12.50                          |
| <b>Peaches</b> , 38 lb ctns, no size marked, various<br>yellow flesh varieties           |  |   | <b>NJ</b> 8.00 - 9.00                                     |
| <b>Prune Plums</b> , 30-lb cartons<br>U.S. One Stanley                                   |  | <b>MI</b> 1¼" min<br>10.00-12.00  | <b>MI</b> 1¼" min 9.50-<br>12.25                          |
| U.S. One Bluefire  |  | <b>MI</b> 1¼" min<br>12.00  |   |

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Information presented above and where trade names are used, they are supplied with the understanding that no discrimination is intended and no endorsement by Ohio State University Extension is implied. Although every attempt is made to produce information that is complete, timely, and accurate, the pesticide user bears responsibility of consulting the pesticide label and adhering to those directions.

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