Pest Alert - July 2020
New Leaf Beetle
"THE GOLDEN CASEBEARER"

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In Massachusetts cranberry, a tiny brown case-bearer beetle, in the family Chrysomelidae, injured the new growth during bloom at eight sites this summer. Identification is pending. Outbreak sites built up slowly. There was one damaging population in 2015, one in 2018 (both in Carver), and now we have many sites ranging from Plympton, Taunton to RI, but still mostly around Carver.

The tiny beetle is only 1-2 mm long.

DESCRIPTION

The adult beetle is much smaller than a cranberry weevil – only about 1 mm (1/16th of an inch) in size. It is quite similar to another case bearer in cranberry, the fire beetle (*Cryptocepalus incertus*), which is commonly found on wild and abandoned bogs, and which was an occasional outbreak pest on MA commercial cranberry in the old days. The new beetle pest is smaller than the fire beetle and does not have cream-colored stripes on its wing covers.

Sweeping through infestations may pick up 100s! A collection bag of the tiny case bearer beetles (bag on left with no magnification and on right, a close-up).

DAMAGE

Each site had multiple large dark areas that were readily apparent on the bog. Here, the tips of the uprights had been fed upon and other tips had been girdled. The damaged areas ranged from 3 feet around to 10 feet. Spots generally were about the size of a truck, with damage to the tips, flowers and foliage. Sweeping through spots results in 100s of the beetles.

It is possible that, like fire beetle, only the adult causes injury to the vines. Little is known about the feeding habits of the immatures (larvae).

Dark spots on the bed show where feeding by the adult beetles caused significant injury to the vines.

Here is a link to a description and life cycle of the fire beetle in: Averill, A.L. and M.M. Sylvia. 1998. Cranberry insects of the Northeast. See page 61.

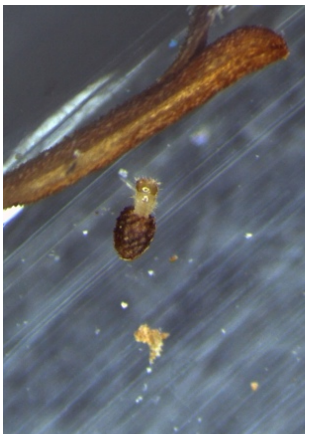
https://ag.umass.edu/sites/ag.umass.edu/files/pdf-doc-ppt/cranberry_insects_of_the_northeast.averill.sylvia.franklin.2000.pdf

Damage (left and above) includes feeding on tip of vine, girdling tip, and feeding on flower buds.

MANAGEMENT

The adult beetle is targeted for management. The timing is difficult as the beetles and their damage appear in the 1st week of July, just as most cranberry is in full bloom.

Diazinon and Actara both work well to manage the beetle but CANNOT be applied when bees are working the bogs and there is bloom present.



The developing larva carries around a case of feces that it adds to as it grows (left). Mating pair of the "golden casebearer" in cranberry. The females tend to be larger than the males (right).

BIOLOGY

The female beetle encases each egg with her excrement (called a pot), and some may stick to the stem where they are hard to see. Some fall to the ground.

We never detected these beetles until early July, at which point they may have already laid eggs of the next generation that overwinter. Perhaps the eggs are laid later in the summer, and the full-grown larva closes up its case to protect the overwintering stage, either as a larva, pupa, or an adult. Nonetheless, for the previous infestations (2015, 2018) that we monitored and that were treated, outbreaks did <u>not</u> reoccur, so maybe the one post-bloom spray manages them! There is still much we do not know and more work is required on the life cycle.

Female of another species of case bearer beetle in the act of producing the pot by layering feces over the egg.