Cherry Blossom Moth (*Argyresthia pruniella*)

The cherry blossom moth (CBM) is an economically damaging pest of cherry and plum crops. The moth's distribution is widespread throughout Europe, and it is considered a serious pest of cherries in Germany, Sweden, Switzerland, and the United Kingdom. The CBM's impact is particularly serious in orchards that do not practice integrated pest management (IPM), a pest control strategy that typically combines chemical treatments with changes to growing practices.

As they feed, the moth larvae damage buds, flowers, young leaves, and developing fruit. They do not feed on mature fruit. In particular, the larvae eat the stamens and unexpanded petals of host plants. They can also hollow out the ovaries in the flowers and developing fruitlets. Each larva may consume five to seven buds or flowers, which may result in considerable yield loss. Losses can be especially significant in untreated or organic orchards.

The CBM can be found throughout Europe and Asia Minor and in a small area of southwest Canada. Recently, this moth was detected in the State of Washington near the Canadian border. The pest has the potential to spread naturally to other parts of the United States from its established range in Canada.

Figure 1. Cherry blossom moth adult *(© Patrick Clement)*

Figure 2. Cherry blossom moth adult female *(Arlo Pelegrin, Washington State Department of Agriculture, [WSDA])*

Description

The CBM has four life stages: egg, larva, pupa, and adult. Eggs are flat, pear-shaped, and very small (less than 1 millimeter [mm], which is about a dime's width). They range in color from brown to grey to olive green. Larvae can be up to 10 mm (two-fifths inch) long with a brown head and a yellow body tinted light-green or green. Pupae are 5 mm (one-fifth inch) long and brown, with a hint of green. Adults have a 10 to 12 mm (two-fifths to one-half inch) wingspan. The front wings are light brown and white with a broad crossband of pale brownish-yellow. The hind wings are grey.

Life Cycle

Females lay eggs in sheltered locations, including leaf scars, shoots, and spurs, usually 2 to 3 meters (roughly 2 to 3 yards) above ground level. Larvae usually hatch in the following spring. They start feeding on fruit buds in the early spring and may be present before the buds burst. Larvae feed on

developing bud tissue and, later, inside the flowers. Larvae are usually hidden in hollowed-out ovaries or in young, developing fruit (not mature fruit). The CBM does not affect fruit quality, and its establishment should not affect the marketability of ripe, mature fruit.

When fully grown, the larvae descend to the ground and pupate in the soil. Pupation occurs within a double-silken cocoon, and adults emerge several weeks later. Females attract males by emitting a sex pheromone. The CBM produces one generation each year.

Symptoms and Signs

The U.S. Department of Agriculture (USDA) encourages growers and producers of cherry and other host plants to look for CBM adults and larvae and report any suspected findings. Host plant buds, flowers, young leaves, and developing fruit should be examined for larvae and damage. After hatching, the larvae first enter fruit buds, where they feed on developing bud tissue, including the stamens and unexpanded petals. They later move to the flowers and usually feed in the young fruitlet or tunneled-out ovary. Adults fly at dusk around host material and are easily disturbed during the daytime.

Because larval feeding occurs when pest management activities often take place (at pre-bloom and petal fall), it is possible that current production practices and established IPM programs with the appropriate pesticide applications will provide sufficient control of this pest.

Figure 3. Cherry blossom moth mature larva *(Don Kitchen, WSDA)*

Figure 4. Cherry blossom moth webbing in cherry blossom *(Arlo Pelegrin, WSDA)*

Figure 5. Cherry blossom moth larva in cherry blossom (base) *(Don Kitchen, WSDA)*

Figure 6. Cherry blossom moth larva (tail end) in cherry ovary *(Arlo Pelegrin, WSDA)*

Report Your Findings

USDA is working closely with stakeholders to determine the distribution of the CBM as part of an early detection survey program. Properly identifying this pest is important because this species is very similar to many other moth species.

If you observe the signs of a CBM infestation described above, please contact your local Extension office or State Plant Regulatory Official as soon as possible. To locate an Extension specialist near you, visit USDA's National Institute of Food and Agriculture Web site at www.nifa.usda.gov/Extension.

A directory of State Plant Regulatory Officials is available on the National Plant Board Web site at www.nationalplantboard.org/member/index.html.

The Cooperative Agricultural Pest Survey (CAPS) conducts science-based national and State surveys that target specific exotic plant pests, diseases, and weeds identified as economic and environmental threats to U.S. agriculture and/or the environment. USDA is the primary funding source for CAPS activities, providing funds to State departments of agriculture, universities, and other entities through cooperative agreements.

PEST DETECTION
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