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FACT SHEET

Scarce Straw Pearl Moth, *Paracorsia repandalis,* Crambidae Found Feeding on Mullein, *Verbascum thapsus* in Connecticut.

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In early July 2020 a sample of a common mullein flowering stalk encased in webs and frass was brought to the Diagnostic Office of the Valley Laboratory of The Connecticut Agricultural Experiment Station in Windsor, CT (Figure 1). Working with Dr. David Wagner, University of Connecticut, who had encountered this pest at an earlier bioblitz, it was identified as *Paracorsia repandalis* (Crambidae). A pupa was reared and the adult was sent to Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ) of the United States Department of Agriculture (USDA) for further identification and confirmed as the first verified incidence of this insect in Connecticut. This small moth is native to Southern Europe.

Figure 1. Caterpillar feeding damage on mullein flowering stalk.
Used with permission of Lois Deal.

Figure 2. Adult Crambid moth, 14 mm long taken on 8 July. © CAES, Rose Hiskes

Paracorsia repandalis, commonly called the Scarce Straw Pearl, was first found in the United States in August 2010 in Mishawaka, Indiana by lepidopterist, Jim Vargo.

Description:

The tan moths with fringed wings and darker tan bars are ~14 mm long (Figure 2). The snout out in front of the head is formed by long, upturned labial palps. Hence the common name of 'snout moths'.

The caterpillar is creamy white with black spots. Long thin white setae emerge from the black spots (Figure 3). The head capsule varies from tan to brown. As the ~1cm long caterpillars feed on the flowering stalk, plant hairs are webbed together with insect silk and frass to make communal nests.

This webworm is closely related to the melonworm, *Diaphania hyalinata*, the pickleworm, *Diaphania nitidalis* and the beet webworm, *Loxostege sticticalis*. The European corn borer is also in the same subfamily of Crambid moths.

Life Cycle:

Overwintering occurs as a prepupae in a webbed case in mullein plant debris.

In Connecticut, after pupating in early spring, adults emerge from April throughout the summer. Adults have been seen in Massachusetts as late as October 25. After mating, eggs are laid in the flower stalks of mullein through July. Later in the season eggs are laid in the mullein rosettes that have begun to grow (Figure 4).

Larvae feed for most of the summer. In fall, mature larvae in the mullein rosettes form the case in which the prepupae overwinters.

There are two overlapping generations per year that are synchronized with the biennial life cycle of mullein and do great damage to the mullein flowering stalk in summer and basal rosette in fall.

Figure 3. Crambid moth larva on *Verbascum* leaf.

Hosts and Damage:

Common mullein, *Verbascum thapsus*, is also exotic to the United States. Native to Europe and Asia, it was brought to the United States first in the 1700's as a medicinal herb. Mullein drops and dried leaves for tea are available at most health stores today for use in respiratory health. There is no scientific evidence of their efficacy or possible side effects.

Mullein is used by gardeners for cut flowers and for pollinators. Burpees sells a hybrid cultivar, "Southern Charm", with yellow, pink and orange flowers for use in cutting and cottage gardens. Many bees, wasps and flies can be seen feeding on the flowers during the summer.

Common mullein is upright, getting to 1.8 m (6') tall in healthy plants. This biennial will self-sow. In year one, seeds germinate and produce densely hairy basal rosettes. Leaves can get up to 60 cm (23") long narrowing to a short petiole. The following year bright yellow flowers open from bottom to top on the bolting stalk. Brown ridged, very small, .7 mm, brown seeds are produced. Seeds can survive in the soil for many decades.

Two other species of exotic *Verbascum* present in Connecticut are also fed on by this caterpillar: *V. lychnitis*, and *V. phlomoides.*

At one property in Vernon, CT where big healthy mullein plants had been present in previous years, the population disappeared in 2021 when this moth was active. In 2023 a few small plants germinated. In 2024 they did put up flowering spikes which were again eaten by the caterpillars.

Management:

Mechanical: Clear mullein plant debris carefully each fall to hopefully destroy the overwintering pupal cases. Hand picking caterpillars in the flower spikes is a very dirty business so have some gloves handy.

Chemical: Spinosad can be applied to young caterpillars. *Bacillus thurengiensis* products applied to the flowering stalk and basal rosettes early in an infestation can give some management. Once infestation has established the combination of webbing and frass makes the actual insects hard to contact with any insecticides.

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Figure 4. Infected basal rosette of a first year mullein plant. Sept. 23. © Rose Hiskes

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