



Blueberry Spanworm: *Speranza argillacearia* (Packard)

Economic importance and damage

Regarding Canada, the blueberry spanworm, previously named *Itame argillacearia* (Packard) and *Macaria argillacearia* (Packard), has been reported from the following Canadian locations: Newfoundland, Nova Scotia, New Brunswick, Quebec, southern Ontario. In New Brunswick, blueberry spanworm larvae are occasional pests of blueberry plants. Many years may occur between infestations. Spanworm infestations have increased with the change of pruning practices from burning to mowing. Closely related species of spanworms also cause infestations. These species are assumed to have life cycles similar to that of the blueberry spanworm.

Blueberry spanworm larvae feed on blueberry leaf and flower buds, blossoms and vegetative shoots. Larvae may bore holes into the side of the bud and hollow it out. The loss of flower buds early in the season causes a reduction in yield. In severe outbreaks, extensively damaged areas appear burned, with only the twigs and stems remaining (Figure 1).



Fig. 1. Typical blueberry spanworm damage

Life cycle and description

The blueberry spanworm has four life stages: egg, larva, pupa, adult moth. The blueberry spanworm spends the winter in the egg stage amongst litter. Larvae (the caterpillar stage) begin feeding in early May on developing leaf and flower buds. Later on they feed on leaves and tender stems. Larvae feed mainly at night and may be difficult to find during the day. Blueberry spanworm larvae have 6 legs, behind the head, and 4 fleshy leg-like structures towards the rear of the body. Blueberry spanworm larvae can be recognized by their characteristic manner of

locomotion and their colour pattern. These caterpillars, and similar species, move forward by moving the back end of the body towards the front, forming a loop in the middle. The front end is then extended forward. Because of this movement, they are commonly referred to as spanworms, inchworms or loopers. When the blueberry spanworm larvae are about 3 mm long (Figure 2) they are light tan to grey, with black markings which become more distinct as the larvae grow. Full-grown larvae are about 20 mm long and are yellowish orange with longitudinal rows of black spots which look like continuous black stripes.



Fig. 2. Very young blueberry spanworm caterpillar

Many larvae drop down on silk threads from the plants and hide in the leaf litter during the day. They are more abundant on plants at night. Feeding occurs until late-June to mid-July. This varies according to locality. Mature larvae change into pupae on the ground. The pupae are 10 mm long, oval, and dark brown. Adult moths emerge approximately two weeks later. Adults readily fly up in masses from plants when disturbed. Adult populations decline after two weeks. The moths (Figure 3) have delicate wings which are light tan or grey. The wingspan is from 18 to 27 millimetres.



Fig. 3. Adult of one species of spanworm

The wings of male moths are uniform in colour while those of the female have some darker spots along the anterior edge of the forewing. Some closely related species also have spots on the wings. Eggs of the blueberry spanworm are laid and hatch the following spring. There is one generation a year.

Pest management

It is difficult to predict when outbreaks will occur as populations are sporadic. Outbreaks have been known to be followed by numerous years of low population levels.

Larval populations can be monitored by sweeping the foliage with a sweep net. Larvae are more easily detected at night. Control measures, however, apply to the number of larvae caught in the day. Larvae are monitored by making 25 sweeps of the net during the day. At least three samples of 25 sweeps should be taken for each five hectares of the field. In field areas where a problem is suspected, or where a recent infestation has occurred, sampling should be increased to at least 25 sweeps per 1000 metres. Monitoring should be done once a week starting from early May, when the larvae are small, and continuing until June.

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A chemical treatment is recommended if there are at least 12 spanworm larvae per 25 sweeps of the net in crop fields, or seven spanworms per 25 sweeps of the net in sprout fields. This count should include similar species of spanworms, which also feed on blueberry.

The foliage in crop fields can also be visually inspected for larvae and associated damage, but this method is not reliable when population levels are low.

Sampling in pruned fields is more difficult since the stems are short. An alternative method, to overcome this drawback, is to leave an unpruned strip in problem field areas for monitoring purposes. Spanworm larvae have also been known to feed on emerging stems at the soil surface. Consequently, pruned fields should be visually inspected for signs of delayed stem emergence. The presence of larvae in suspected areas has to be verified, since delayed stem emergence may result from other causes.

Pruning fields by burning the leaf litter will reduce overwintering egg populations. Blueberry spanworm larvae are attacked by several species of parasitic wasps.

Insecticide recommendations and rates are listed in the [Wild Blueberry Insect Control Selection Guide](#) (fact sheet C1.6.0) which is updated annually. Further information can be obtained from the NB Department of Agriculture, Aquaculture and Fisheries.

References:

- Cornell Univ. Agr. Exp. Sta. Memoir 274, 1948;
- Can. Ent. 83: 241-4, 1951;
- Agr. Can. Pub. 1691, 1980;
- Maine Life Sciences & Agr. Exp. Sta. Misc. Rep. 262, 1982;
- Univ. of Maine Fact Sheet No. 197, 1995;
- Agr. Can. Pub. 1477/E, 1989;
- NS Dept. Agr. & Marketing, Blueberry Spanworm Fact Sheet, 1995.