



Major Cranberry Insect Pests of Wisconsin

Tim G. Dittl and Leroy D. Kummer



Figure 1
Blackheaded Fireworm, adult



Figure 2
Blackheaded Fireworm, larva



Figure 3
Sparganothis Fruitworm, adult



Figure 4
Sparganothis Fruitworm, larva



Figure 5
Cranberry Fruitworm, adult



Figure 6
Cranberry Fruitworm, larva



Figure 7
Cranberry Girdler, adult



Figure 8
Cranberry Girdler, larva



Figure 9
Cranberry White Grub

INSECT IDENTIFICATION KEY

- 1 A. Caterpillar, worm-like
 1. Four pair of hind legs Go to 2
 - 2 Two pair of hind legs Go to 3
 3. No hind legs Go to 4
 4. Legless, maggot-like Go to 5
 - B. Beetle-like
 1. Black or brownish body, lacking a snout Go to 6
 2. Reddish-brown body, has a prominent snout Go to 7
 - C. Moth-like
 1. Grayish-white to blackish wings Go to 8
 2. Yellow or brownish wings Go to 9
 - D. Fly-like (gnat size)
 1. Orange body Go to 10
- 2 A. Black head with a whitish-yellow body,
webs uprights or feeds on berries **Blackheaded Fireworm** *Figure 2*
 - B. Yellow head with a yellowish-green to gray body
and paired white spots along top of the back,
webs uprights or feeds in berries **Sparganothis Fruitworm** *Figure 4*
 - C. Tan head with a green body and reddish coloration
along the top of the back, feeds inside the berry **Cranberry Fruitworm** *Figure 6*
 - D. Yellowish-green head with a wide, bulky green body and
whitish stripe along the sides, may move in a looping fashion
(when young), feeds on foliage, hooks, blossoms and fruit **False Armyworm** *Figure 14*
 - E. Tan head, white to cream colored body, feeds in soil
on underground roots, runners and stems **Cranberry Girdler** *Figure 8*
- 3 A. Greenish-yellow head, narrow green body
with a whitish stripe along the sides, moves in a looping fashion,
feeds on new growth and hooks **Green Spanworm** *Figure 16*
 - B. Brownish-tan head, narrow reddish-brown body
with a whitish-yellow stripe along the sides,
moves in a looping fashion, feeds on new foliage **Rannoch Looper** *Figure 22*
 - C. Brown head, brown body with a whitish stripe along the sides,
moves in a looping fashion, feeds on hooks,
blossoms and berries **Brown Spanworm** *Figure 18*
 - D. Dark brown to blackish head, chocolate-brown body,
moves in looping fashion, feeds on hooks,
blossoms and berries **Big Cranberry Spanworm** *Figure 20*
 - E. Gray head, grayish body with small black spines
and yellow patches along the sides, moves in looping fashion,
feeds on new growth, hooks and blossoms **Spiny Looper** *Figure 23*

INSECT IDENTIFICATION KEY

- 4 A. Orangish-brown head, wide, bulky white or dark cream colored body, curls into a "U" shape ball, feeds in soil on underground roots, runners and stems **Cranberry White Grub** *Figure 9*
- 5 A. Clear, white, orange colored maggot with a small black mouth part, feeds in the terminal ends of the uprights. **Cranberry Tipworm** *Figure 11*
- 6 A. Small reddish-black head with a shiny black body, very mobile, feeds on foliage and buds **Cranberry Flea Beetle** *Figure 12*
B. Brown head, with a large brown body, fuzzy under torso, slow crawling insect but strong flyer, does not feed on cranberry, lays eggs in cranberry beds **June Beetle** (*White Grub Adult*) (*Not Pictured*)
- 7 A. Small rusty-brown head with a large distinct snout, has a reddish-brown body, about 1/16" in length, feeds on pods, blossoms and berries **Cranberry Weevil** *Figure 24*
- 8 A. Small gray moth with blackish markings, about 1/4" in length **Blackheaded Fireworm** *Figure 1*
B. Whitish-gray moth with brown to black markings, about 3/8" in length **Cranberry Fruitworm** *Figure 5*
C. Silvery-white to gray moth with prominent snout and straw-colored bands with black dots located on forewing tips, about 1/2" in length. **Cranberry Girdler** *Figure 7*
D. Male moth powdery-gray with black wavy markings on forewings, about 1/2" - 3/4" in length; female moth grayish and wingless about 1/2" in length **Spiny Looper** (*Not Pictured*)
- 9 A. Yellowish wings with a distinct orangish-brown "X" pattern on back, about 3/8" in length. **Sparganothis Fruitworm** *Figure 3*
B. Orangish-brown moth with some wavy, dark brown tiger markings on the wings (female) or solid orangish-brown wings (male), both about 1/2" - 3/4" in length **Rannoch Looper** *Figure 21*
C. Tannish-yellow moth with brownish tiger markings on the wings, about 1/2" - 3/4" in length **Brown Spanworm** *Figure 17*
D. Male moth grayish and female moth yellowish, wings speckled with brownish spots, both about 1/2" - 3/4" in length **Green Spanworm** *Figure 15*
E. Tannish-brown moth with two tiny black dots on middle of forewings and pointed wing tips, about 3/4" - 1" in length. **Big Cranberry Spanworm** *Figure 19*
- 10 A. Female with reddish-orange body, male with dark body and long legs, both almost gnat-like in appearance and size, both about 1/16" in length **Cranberry Tipworm Adult** *Figure 10*



Figure 16
Green Spanworm, larva



Figure 17
Brown Spanworm, adults



Figure 18
Brown Spanworm, larva

MAJOR WISCONSIN INSECT PESTS

(Descriptions)

Blackheaded Fireworm

Rhopobota naevana (Hubner). Newly hatched first generation larvae appear mid to late May mining old leaves and terminal buds. As new growth begins, larvae web leaf and vine tips together, feeding on both upper and lower leaf surfaces in a skeletonizing manner. Heavy infestations result in serious feeding and webbing of uprights causing a browning appearance of vines. Second generation larvae hatch during bloom and early fruit set, oftentimes feeding on berries and webbing uprights together. Overwintering eggs are deposited singly on the underside of leaves (Figures 1 & 2).

“Sparganothis Fruitworm” *

Sparganothis sulfureana (Clemens). First generation larvae are found mid to late May. Larvae feed on new plant growth and web leaf and vine tips together. Second generation larvae hatch during fruitset and feed by surface gouging berries and entering fruit. Larvae consume the inner portion of the fruit leaving berries hollowed out with no evidence of waste material inside. Pupae are sometimes found inside the berries. Sparganothis fruitworm reportedly overwinter as young larvae (Figures 3 & 4).

Cranberry Fruitworm

Acrobasis vaccinii Riley. Larvae are found during early to late fruitset feeding inside berries. Young larvae enter the fruit near the

stem end and consume the inner portion of the berries before moving on to others. Entrance holes are oftentimes covered with a silken window. Larvae can devour from 5 to 8 berries before they mature. Infested berries are filled with waste material and turn red prematurely before drying on the vine. Larvae overwinter on the bed floor inside their cocoons, pupate in spring, and emerge as adult moths the following year. Adults fly during bloom and lay eggs singly on the bottom side or calyx end of berry (Figures 5 & 6).

Cranberry Girdler

Chrysoteuchia topiaria (Zeller). Larvae are typically found in the duff layer feeding on roots, runners and stems. Girdled bark and light brown waste material is found in association with larval feeding. Larval activity begins during the month of July and can continue through mid-September. Damage to the aboveground portion of the plant appears in late summer and fall as foliage begins to turn brown. The full extent of injury becomes most apparent the following spring. Larvae overwinter on the bed floor, pupate in spring, and emerge as adult moths in June and July (Figures 7 & 8).

“Cranberry White Grub”

Phyllophaga anxia LeConte. Larvae (grubs) feed in the soil on underground roots, runners and stems. Plant damage is similar to cranberry girdler however, waste

material is not found in association with larval feeding. Plant damage aboveground generally occurs in patches as uprights become discolored eventually turning brown and dying. Larval injury occurs throughout the growing season. Larvae live and develop in the soil for three years before pupating and emerging as adult beetles (June beetles). Adults fly in late spring during the months of May and June. White grubs overwinter as larvae, pupae or adults (Figure 9).

“Cranberry Tipworm”

Dasineura oxycoccana (Johnson). Adult midges lay their eggs in between the leaves near the growing tip of the upright. Larvae are maggot-like and feed on developing leaves by rasping inner leaf surfaces causing a “cupping” of leaves around themselves. Plant response to feeding can vary depending on variety, time of attack and plant vigor. Three color phases (clear, white, orange) of larvae occur during each life cycle. There may be as many as three to five generations per year. Tipworm overwinter as pupae in cocoons on the bed floor (Figures 10 & 11).

“Cranberry Flea Beetle”

Systema frontalis (Fabricius). Flea beetle overwinters in the egg stage. Egg hatch occurs during June and July with larvae feeding and developing on the roots of cranberry and other assorted host plants. Adult beetles emerge during



Figure 19
Big Cranberry Spanworm, adult



Figure 20
Big Cranberry Spanworm, larva



Figure 21
Rannoch Looper, adults

summer and feed on plant foliage in a “skeletonizing” manner. Often times, adults are found feeding on other preferred weed hosts around the marsh (Figure 12).

“False Armyworm”

Xylena curvimacula (Morr.). Larvae are found from mid-May through fruitset. Young larvae have small black spines on their body and tend to move in a looping fashion. Larvae often feed on new plant growth and as they mature, feeding becomes nocturnal and larvae are found consuming hooks, blossoms and excavating berries. Overwintering adult moths lay eggs in the spring (Figures 13 & 14).

“Green Spanworm”

Itame sulphurea (Packard). Larvae begin to feed in May, eating new terminal growth and leaves then move to hooks, pods and blossoms. Adult flight occurs from mid-June through mid-July. Eggs overwinter and hatch in spring. Only one generation occurs each year (Figures 15 & 16).

“Brown Spanworm”

Ematurga amitaria (Guenee). Adult moths emerge in May from overwintering pupae. Larvae appear just prior to and during bloom feeding on leaves, pods, blossoms and young berries. Only one generation occurs each year (Figures 17 & 18).

“Big Cranberry Spanworm”

Abbotana clemataria (S. & A.). Adult moths emerge in late May from overwintering pupae. Larvae

are found during June and July feeding on leaves and severing hooks, pods and blossoms. One generation occurs each year (Figures 19 & 20).

“Rannoch Looper”

Itame brunneata (Thunberg). Larvae are found from early May through mid-June. Larvae generally feed on new plant growth. Adult moths begin flight in June and may continue into July. Eggs overwinter and hatch the following spring. One generation occurs each year (Figures 21 & 22).

“Spiny Looper”

Phigalia titea (Cramer). Larvae are found feeding on foliage from mid-May through mid-June. Feeding often occurs in patches and may seriously defoliate plants in these areas. They overwinter as pupae and there is only one generation each year (Figure 23).

Cranberry Weevil

Anthonomus musculus Say. Overwintered adult beetles emerge in spring and as uprights begin to elongate and hooks develop, females bore holes and deposit eggs singly into flower pods. Ensuing grub-like larvae feed and develop within the pods leaving only the excavated ovary behind. Newly emerged adults appear during late bloom feeding on small berries and leaves. As fall approaches, adult beetles seek nearby overwintering sites (Figure 24).

**Names in quotation marks are common names not recognized by the Entomological Society of America.*

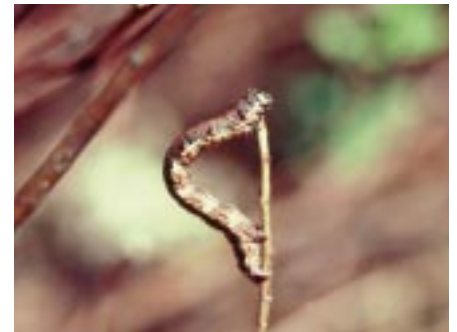


Figure 22
Rannoch Looper, larva



Figure 23
Spiny Looper, larva



Figure 24
Cranberry Weevil, adult

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