

20. Cranberry Girdler

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Revised from chapter by David L. Overhulser and Paul D. Morgan, 1989.

Hosts

The cranberry girdler (*Crysoteuchia topiaria*) in the family Crambidae belongs to a large group of turfgrass pests called sod webworms. As well as damaging turf, this insect commonly damages 2-0 nursery stock of Douglas-fir, noble fir, larch, and spruce. Other stock occasionally damaged includes 1-0, 3-0, and 2-1 Douglas-fir and 1-0 larch.

Distribution

The cranberry girdler has been observed in bareroot conifer nurseries in the Western United States.

Damage

Cranberry girdler larvae feed on the roots and lower stems of seedlings and in some cases may completely girdle and kill the plant. Damage is most likely to occur in nurseries adjacent to grass fields, which are prime habitats for this insect.

Diagnosis

On the lower seedling stem and taproot, look for patches where the bark and cortex have been removed (fig. 20.1). Damage to seedlings is usually noticed during lifting operations or when severely damaged seedlings change color in the fall. At that point, control is ineffective.



Figure 20.1—Feeding damage of the cranberry girdler on lower stem and roots of Douglas-fir seedlings. Photo by Thomas D. Landis, USDA Forest Service.

Biology

Adult moths (fig. 20.2) emerge in grass fields from May to July. Moths are visible during the day. They fly with quick, jerky movements for short distances. Female moths deposit eggs on and around nursery stock. Eggs hatch in 3 to 5 days, and larvae (fig. 20.3) feed in nursery beds from June to October, when they spin the cocoons and overwinter. Feeding by the late instars in August

to October is what damages seedlings. Moth populations vary from year to year because of the effects of predation and disease on larval survival. Birds such as starlings, killdeer, sandpipers, and black-birds feed on overwintering larvae. A naturally occurring soil fungus, *Beauveria bassiana*, also kills overwintering larvae.



Figure 20.2—Male adult of cranberry girdler. Photo by Ken Gray. Image courtesy of Oregon State University.



Figure 20.3—Larva of cranberry girdler. Photo by Ken Gray. Image courtesy of Oregon State University.

Control

Cultural

Avoid using cover crops that might provide host material for the cranberry girdler or other sod webworms. Cultivate or apply herbicides to noncrop areas to control weeds and grasses.

Chemical

Traps baited with an attractant and placed in grassy areas adjacent to the nursery can be used to monitor populations and to time insecticide applications for moth control.

Selected References

Cramshaw, W. 2004. Garden insects of North America. Princeton, NJ: Princeton University Press. 656 p.

Hollingsworth, C.S.; Antonelli, A.; Hirnyck, R., eds. 2009. Pacific Northwest insect management handbook. Corvallis, OR: Oregon State University Press. 698 p.

Kamm, J.A.; Morgan, P.D.; Overhulser, D.L.; McDonough, L.M.; Triebwasser, M.; Kline, L.N. 1983. Management practices for cranberry girdler (Lepidoptera: Pyralidae) in Douglas-fir nursery stock. *Journal of Economic Entomology*. 76: 923–926.

Kamm, J.A.; Robinson, R.R. 1974. Life history and control of sod webworms in grass seed production. Ext. Circ. 851. Corvallis, OR: Oregon State University Extension Service. 2 p.

Overhulser, D.L.; Morgan, P.D. 1989. Cranberry girdler. In: Cordell, C.E.; Anderson, R.L.; Hoffard, W.H.; Landis, T.D.; Smith, Jr., R.S.; Toko, H.V., tech. coords. Forest nursery pests. Agriculture Handbook 680. Washington, DC: USDA Forest Service: 86–87.

Tunnock, S. 1985. Suppression of cranberry girdler damage in beds of Douglas-fir seedlings, Coeur d'Alene Nursery, Idaho Panhandle National Forest. Rep. 85-4. Missoula, MT: USDA Forest Service, Northern Region. 7 p.