

54. *Lygus* Bugs

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Hosts

Lygus bugs (*Lygus* spp., family Miridae) feed on buds, flowers, and growing tips of many plants. Seedlings of Douglas-fir, true fir, pine, and spruce commonly are damaged by these insects. Hybrid poplars are also affected.

Distribution

Plants are attacked throughout the United States and southern Canada. Nursery damage is reported in the Pacific Northwest, North Central, and Southeastern States.

Damage

Most feeding damage occurs on 1-0 conifer seedlings and can severely affect the form of the seedling, causing forked seedlings or multiple tops ("bushy-tops").

Diagnosis

Use sweep nets to look for both adults and nymphs in nursery beds. Adults (fig. 54-1) are 5 to 7 mm long with a "V" marking on their backs. Nymphs (fig. 54-2) are 1 to 6 mm long, wingless, and appear similar to pale-green aphids.

Most damage to conifer seedlings occurs between June and September on 1-0 seedlings. Look for stem lesions (fig. 54-3) and distorted needles (fig. 54-4). Feeding also causes deformed or aborted buds and multiple tops (fig. 54-5). Some feeding also occurs in older seedlings and transplants.

In 1- to 2-year-old hybrid poplars, feeding produces a split lesion in the middle to upper stem. Lesions result in gall formation (fig. 54-6), and stems often break just above the wound. Feeding occurs from June to September.



Figure 54-1—Adult *Lygus* bug.



Figure 54-2—Nymph of *Lygus* bug.



Figure 54-3—Lesion on stem made by feeding of *Lygus* bugs.



Figure 54-4—Distorted needles resulting from feeding of *Lygus* bugs.

Biology

Adults overwinter in plant debris along the edge of fields and in transplant beds. In early spring, adults feed and lay eggs in stems of agricultural crops or herbaceous weeds. Within a few weeks, eggs hatch into flightless nymphs that, like adults, feed on plant juices. Three to four generations are completed per year in Northern States.

Adults are active fliers and readily move from one crop to another. Forest nursery crops apparently attract adults when nearby host plants mature, senesce, or are harvested.

Control

Because *Lygus* spp. have several generations per year, multiple pesticide applications are necessary to reduce damage. The insecticide fenvalerate has proven effective in controlling damage to Douglas-fir seedlings. In Douglas-fir nurseries pesticide treatments commence



Figure 54-5— Multiple tops resulting from feeding of *Lygus* bugs.

about 2 weeks after seedlings first show symptoms of *Lygus* feeding and continue until bud set.

Selected References

Sapio, Frank J.; Wilson, Louis F.; Ostry, Michael F. 1982. A split-stem lesion on young hybrid *Populus* trees caused by the tarnished plant bug, *Lygus lineolaris* (Hemiptera (Heteroptera: Miridae)). *The Great Lakes Entomologist*. 15(4): 237-246.

Schowalter, T.D.; Overhulser, D.L.; Kanaskie, A. [and others]. 1986. *Lygus hesperus* as an agent of apical bud abortion in Douglas-fir nurseries in western Oregon. *New Forests*. 1: 5-15.

South, D. 1986. The "tarnished plant bug" can cause loblolly pine seedlings to be "bushy-topped." Rep. 27. Auburn, AL: Auburn University, Southern Forest Nursery Management Cooperative.



Figure 54-6— Gall on poplar seedling resulting from feeding of *Lygus* bugs.