

**INSECTS** from page 54

myworm is seldom a problem of cool-season turf.

**Greenbug**—Damaging populations of greenbugs can occur from June through August. Populations and incidents of damage frequently vary from area to area, even within the same city.

Symptoms of injury include turf under the dripline of trees and in open areas having a burnt orange color. When symptoms are apparent, numerous aphids (40 or more) may be seen on a single grass blade. Close examination of damaged turf is necessary because the aphids are small. If left untreated, a heavy infestation can kill the turf.

**Fall (Sept.-Oct.)**

**Chinch bugs**—In the northern U.S. the second generation of chinch bug is at peak numbers in September. Nymphs complete their development to adults in late October. Most chinch bugs overwinter in the turf, but some move

to protected areas before winter.

Generally, infestation levels at this time are not high enough to warrant the use of insecticides. Early fall rains and infection by a parasitic fungus (*Beauveria* spp.) usually provide sufficient control.

**Billbugs**—During September, billbug adults that developed from summer larvae are often seen on sidewalks, driveways, or other paved surfaces. Before winter, these adults seek shelter in thatch, along sidewalk edges or near foundations and overwinter there. Many, if not most, overwinter in turf.

In some areas a partial second generation may occur. Larvae of this generation have been known to cause visible damage in September and October.

**Grubs**—Most species of grubs are in the third of their three stages of development and are feeding actively. When soil temperatures decrease in late October, the larvae

burrow deeper into the soil to overwinter. If soil temperatures remain warm, larvae stay at the surface and continue feeding. Severely cold winters have little effect on survival.

**Black turfgrass ataenius**—By September, adults of the current generation begin to fly into protected areas, such as golf course roughs, to overwinter. Larvae that have not completed development to adults before the first frost are killed.

**Sod webworm**—Northern sod webworm larvae are small and cause little if any damage in the fall. Late in the fall the larvae construct a cocoon-like shelter in which they overwinter.

**Greenbug**—Severe infestations of greenbug have been known to occur as late as the first week of December. Areas having a history of infestation should be re-examined when mild temperatures extend late into the fall. Heavily-infested turf will not survive through winter. **LM**

**INSECT EXPERT OR NOVICE?**

**Quiz yourself or your crew to see how much training is needed.**

1. Droughty, dormant turf often masks chinchbug and billbug damage.  
true  
false
2. The rastral pattern of the northern masked chafer is two parallel rows of spines.  
true  
false
3. Black turfgrass ataenius lay most of their eggs in \_\_\_\_\_.  
April  
May  
June  
July  
August
4. *Beauveria* is a fungus that infects and kills chinchbugs.  
true  
false
5. The northern masked chafer completes its life cycle in \_\_\_\_\_ year(s).  
one  
two  
three

6. Chinchbugs have \_\_\_\_\_ mouthparts.  
chewing  
piercing-sucking  
rasping
7. Grubs consume \_\_\_\_\_.  
turf roots only  
thatch  
soil  
soil, turf roots and thatch
8. Bluegrass billbug adults lay eggs in \_\_\_\_\_.  
soil  
thatch  
grass crowns  
grass stems
9. Greenbugs feed on tree leaves.  
true  
false
10. \_\_\_\_\_ is a common pest of golf greens in the cool-season region.  
sod webworm  
armyworm  
black cutworm
11. Most species of grubs overwinter as \_\_\_\_\_.  
larvae  
pupae  
adults  
eggs

12. Chinchbugs can be controlled by spring application of insecticide.  
true  
false
13. Mites have \_\_\_\_\_ legs.  
four  
six  
eight
14. The phone number of the Poison Control Center nearest my place of business is posted where it is readily available to me and my employees.  
true  
false
15. Resistance is usually not the problem when poor insect control is obtained with insecticide.  
true  
false  
If you got:  
15 right you're super  
14 right: a job well done  
13 right: not bad  
12 right: OK but...  
11 or fewer correct means you need some training!

1. True. 2. False. 3. May. 4. True. 5. One. 6. Piercing-sucking. 7. Soil, turf roots and thatch. 8. Grass stems. 9. False. 10. Black cutworm. 11. Larvae. 12. True. 13. Eight. 14. True (I hope). 15. True.