

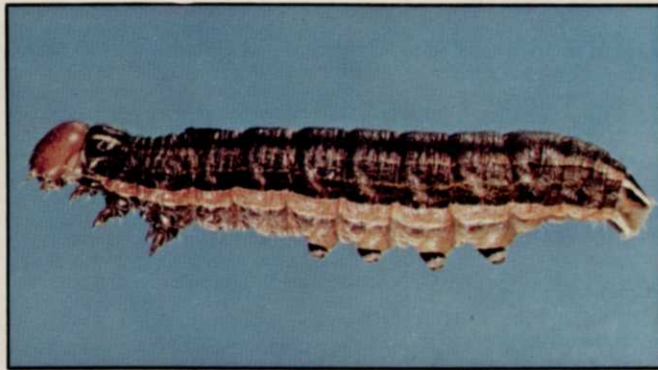
Turfgrass Insect Identification Quiz

By Dr. Harry D. Niemczyk, Professor of Turfgrass Entomology, Ohio Agricultural Research & Development Center, Wooster, Ohio

Quiz yourself. Answers are on the next page.



A. _____



B. _____ C. _____ D. _____



Photo courtesy Dr. H. Tashiro

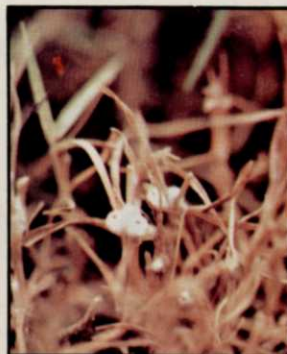


Photo courtesy Dr. J.A. Reinert



E. _____ F. _____ G. _____



Photo courtesy Dr. H. Tashiro

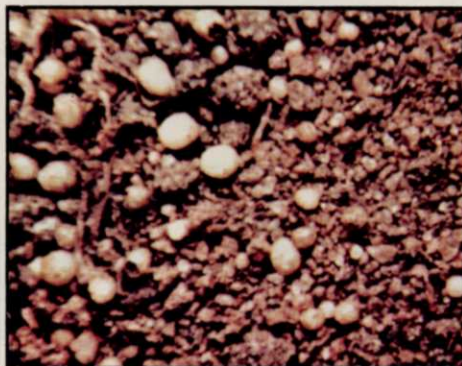


Photo courtesy Dr. J.A. Reinert



H. _____ I. _____ J. _____

Turf

June. Depending upon location, eggs hatch from early June through August with peak hatch during June.

In areas where damage occurred previously, sprays of Baygon® (propoxur) or Sarolex® (diazinon) or granular Mocap® (ethoprop) at labeled rates have shown effectiveness when applied in early June. Irrigation (½ inch or more) should be applied after treatment. Bait formulations with Baygon®, Dursban®, Malathion or Sevin® have also been effective when applied during late June. Irrigation should not be applied for 3-4 days after application of baits.

E. Black Turfgrass Ataenius — Eggs laid by beetles during May hatch in June and the larvae begin feeding on the turf roots immediately. From late June to mid-July, symptoms of injury include wilting of the turf, in spite of irrigation. In July, larvae move deep into the soil, pupate and emerge as adults. In states such as Ohio, these adults lay eggs during August producing a second generation of larvae capable of damaging turf.

If a preventive program was not applied, existing infestations may be spot or generally treated with Proxol®, Turcam®, diazinon or Nematicide/Insecticide at label rates.

F. Black Cutworm — By June larvae of the black cutworm are large enough to cause visible damage to golf course greens. These larvae pupate in the soil or thatch and emerge as moths that lay eggs on the turf in July. The larvae of this second generation are present on greens in August.

Cutworm larvae can be controlled with a wide range of insecticides such as Dursban®, Proxol®, Aspon®, Sevin®, and others, at labeled rates. Irrigation following liquid applications is generally not advisable.

G. Greenbug — Damaging populations of greenbug can occur from June through August. Populations and incidents of damage frequent-

ly varies from area to area, even within a city. Symptoms of injury include turf under the dripline of trees and in open areas having a burnt orange color. When such symptoms are seen, 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.

Greenbug infestations may be controlled with liquid treatments of Dursban®, 1 lb AI/Acre or diazinon at 2.5 lb AI/Acre. If reinfestation occurs following treatment with these insecticides, Orthene (acephate) EC at labeled rates has been effective.

FALL (SEPTEMBER-OCTOBER)

A. Chinchbug — In northern areas such as Ohio, the second generation of chinchbug is at peak numbers in September. Nymphs complete their development to adults by late October. Most chinchbugs 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 usually provides sufficient suppression.

B. Billbug — During September billbug adults that developed from summer larvae are often seen wandering about on sidewalks, driveways or other paved surfaces. Before winter, these adults seek shelter in thatch, along sidewalk edges, or near the foundation of houses and overwinter there. However, if many, if not most, overwinter in the turf.

C. Grubs — Most species of grubs are in the third of their 3 stages of development and are feeding actively. When soil temperatures decrease in late October the larvae burrow deep into the soil to overwinter. However, during the mild winter of 1982-83, the larvae

remained in the top 3 to 6 inches of soil.

Treatments of existing grub infestations can be accomplished as late as early-to mid-September using standard grub insecticides and sufficient (½ inch or more) irrigation. Treatment after this time may or may not kill the grubs before they move deeper into the soil to overwinter. Whenever treatment is applied, the grubs should be in the top one to two inches of soil.

D. 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 frost are killed.

E. Mole Crickets — Mole cricket nymphs develop through the summer and most become adults by fall. However, recent studies in Florida show some egg laying continues throughout the year.

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

Late fall infestations may be controlled with the same insecticide used to control the pest during the summer.

ANSWERS TO TURF INSECTS

- A. masked chafer (adult)
- B. hairy chinchbug (nymph)
- C. bronzed cutworm (larva)
- D. winter grain mite
- E. hyperodes weevil (adult)
- F. Rhodesgrass scale
- G. Japanese beetle (adult)
- H. hyperodes beetle (larvae)
- I. ground pearls
- J. hairy chinchbug (adult)

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