



FIG. A



FIG. B

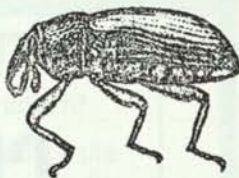


FIG. C

DAMAGING WEEVIL IN AREA

Golf course superintendents and similar turf specialists with valuable grass areas to maintain should be aware of the *Hyperodes* weevil. It can be a very damaging pest.

DAMAGE

The *Hyperodes* weevil is a relatively "new" insect pest that feeds on grass, particularly annual bluegrass. For this reason, some individuals have called the pest "the annual bluegrass weevil." In recent years this insect has caused considerable damage to golf course turf on Long Island, New York. The amount of damage varies from small yellow-brown spots on greens to the dying out of large portions of greens, tees, fairways and grass tennis courts. The damage can be distinguished from other disturbances by the complete or partial severing of the grass stems, often in areas about the size of a dime. This causes small bare spots with a few yellow blades surrounding each. When these weevils are numerous they can kill large areas of grass in just a few days. This "die-out" seems to be confined to areas of annual bluegrass that have been maintained at 1/4 or 1/2 inch. Apparently there is no damage to the taller annual bluegrass in golf course roughs. Most of the conspicuous damage has been noted in spring and early summer, a number of weeks earlier than the chronic "summer die-out" of annual bluegrass ordinarily occurs.

DESCRIPTION

Hyperodes is a member of the weevil family, a large group of over 3,000 species in the United States. A weevil can be distinguished from other beetles by its peculiar elongated snout. Several kinds of weevils can be found on golf courses, but *Hyperodes* is by far the most abundant in areas that have had problems. The adult (Fig. C) *Hyperodes* weevil varies from mottled brownish-black to shiny black and is about 3/16 inch long. The snout is about 1/5 as long as the weevil body, and has elbowed antennae attached near the chewing mouth parts at its tip. The adults can be found on the surface of the greens from early spring until late fall. Their presence on fairways has been noted from early spring until mid summer. The adults are especially active just after dusk and climb to the tops of grass blades where they are comparatively easy to find with the aid of a flashlight.

Adults feed on many types of plants, including grasses, clover and plantain, but they prefer *P. annua*. Adult feeding is confined mostly to grass leaf blades and the upper portions of stems and causes little damage.

Several other life stages of the *Hyperodes* weevil can be found, but they are not as obvious as the adults. In areas that have been conspicuously damaged one can

generally find pupae (Fig. B) or pre-pupae (Fig. A) (the mature larvae that are about to pupate) at a depth of 1/4 to 3/4 inch in the sod. Both pre-pupae and pupae are cream colored and about 3/16 inch long, but they differ markedly in form. The pre-pupa is a legless "C" shaped grub with a dark head, while the adult features are evident on the pupa.

The *Hyperodes* larvae are legless and range in size from nearly microscopic when young to 3/16 inch long when ready to pupate. The cuticle of the larva is somewhat transparent, and the larva appears to be mostly white to cream colored because of the contents of the insect. The smaller larvae are very difficult to find.

LIFE HISTORY

On Long Island there is one complete generation of turfgrass weevils in the spring and what appears to be a partial second generation late in the summer. Eggs of the first generation are laid throughout April and May. The larvae are numerous from mid-May through early June. Pupae and young adults are most numerous throughout June, with a peak in mid-June. The development of the spring generation lasts two months, from late April to late June.

Eggs of the second generation are laid during July and August. Larvae are present during August and early September and pupae and young adults are present throughout September and October. Exact knowledge of life history in the northeastern part of the state is uncertain.

The complete spring generation causes far more damage than the partial second generation. Greens and tennis courts receive intensive care which tends to maintain lush growth of *P. annua* throughout the summer. This growth of *P. annua* appears to favor a second generation of turfgrass weevils.

CONTROL RECOMMENDATIONS

The turfgrass weevil can be controlled by insecticides applied at the proper times. Present recommendations are granular Diazinon at a rate of four pounds active ingredient/acre, or Dursban emulsifiable concentrate at a rate of one pound active ingredient/acre. Diazinon is applied on suspected problem areas in mid-April and again in mid-May. Chlorpyrifos is applied once about May 1.

Future field tests could prove that lower rates of application or one treatment per year will adequately control the turfgrass weevil.

From a newsletter by William H. McEvoy, Cooperative Extension Specialist, Horticulture, Cornell University, Voorheesville, N. Y.

INSECT PROBLEM NOTED

On a recent visit to Hanover Country Club in Hanover, N.H., substantial damage by *Hyperodes* weevil was observed on bentgrass putting green turf. This insect has been previously reported as causing extensive damage to *Poa annua* in New York State, but this appears to be the first reported incidence of damage to turfgrass in New Hampshire.

As was the case at Hanover Country Club, the most extensive damage to turf is caused by the larvae of this weevil. On the date of observation (July 1), the adult stage was abundant on the surface of the grass; a few pupae were observed in the soil but no larvae were

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found. While some recovery of the turf was noted, the adult will continue to feed and an application of insecticide would be in order. Dursban 2E at 1 lb. active ingredient/acre is recommended for treatment.

Enclosed with this newsletter is a copy of a recent release from Mr. William H. McEvoy, Cooperative Extension Specialist in Horticulture for New York State (Cornell) which gives more specifics on *Hyperodes weevil* and its control. If you suspect an occurrence of this insect, please do not hesitate to request assistance.

OTHER PROBLEMS

The highly variable weather thus far this season has had an adverse effect on *P. annua* (when doesn't it?), with losses being noted in several geographic areas. While some of the damage is unquestionably related to physical conditions (drought, etc.), other affected areas appear more typical of fungal damage. Isolations from apparently diseased material have not been consistent, with more *Pythium* than *Helminthosporium* being recovered.

Fusarium blight has been recorded on bluegrass sod which was exhibiting excessive growth due to high nitrogen fertilization. Such problems serve to further my reliance on a fall/late-fall balanced fertilization schedule which greatly reduces the need for heavy spring applications of fertilizer.

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