

Tawny Mole Cricket

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FIG. 1

Type Pest: chewing insect (*Scapteriscus vicinus* Scudder)

- Another closely related mole cricket, the southern mole cricket (*Scapteriscus borellia* Giglio-Tos) also occurs in the Galveston-Houston area

Type Metamorphous: simple (egg, nymph and adult stages)

Period of Primary Activity: April through October

Plants Affected

- Bermudagrass and bahiagrass are the primary turfgrasses damaged by the mole cricket, although extensive damage can be sustained on cultivars of St. Augustinegrass, centipedegrass, ryegrass, zoysiagrass and bentgrass
- Tomato, strawberry, beet, cabbage, cantaloupe, carrot, cauliflower, collard, eggplant, kale, lettuce, onion, pepper, potato, spinach, sweet potato, turnip, flowers such as coleus, chrysanthemum, gypsophila, and other plants
- Mole crickets feed on other soil-dwelling insects

Identifying Characteristics of Insect Pest

EGG STAGE

- After mating and dispersal flights occur, females lay eggs in cells dug in the soil primarily during April with some egg laying occurring into early summer
- Eggs hatch in about 2 weeks

NYMPH STAGES

- Nymphs develop through eight juvenile stages (separated by molts) mostly during the summer months.
- Each successive growth stage (instar) is larger and looks more and more like the adult but lack fully developed wings
- Winter is spent as partially grown nymphs and as adults

ADULT STAGE (Fig. 1-4)

- Adults are 1 – 1¼" long, tan to dull brown in color, and have prominent eyes
- Front legs are enlarged, shovel-like and modified for digging
- Capable of flight (typically at night), can run quickly, but are poor jumpers



FIG. 2



FIG. 3



FIG. 4

- The tawny mole cricket was first detected in Texas in 1996 on Houston golf courses and has a more restricted range than the southern mole cricket along the Texas Upper Gulf Coast
- The southern mole cricket was first reported in Texas in 1982 in College Station and has continued to spread into the eastern portion of Texas (west of I-35 Interstate Highway)



FIG. 5

Description / Symptoms

SOUTHERN MOLE CRICKET

- The southern mole cricket feeds primarily on other insects and earthworms as both nymphs and adults
 - Damage caused by this species ranges from light tunneling resembling miniature mole runs in the sand traps and on manicured turf to a complete loss of stand in areas several feet in diameter

TAWNY MOLE CRICKET

- Unlike the southern mole cricket, the tawny mole cricket feeds almost exclusively on plant materials and its feeding on root and shoot can destroy a well-established turf planting
 - Its damage to turf can range from light tunneling and small mounds where the adults enter the soil, to a complete loss of stand. Under heavy populations, the soil will feel like it has been lightly rototilled and all the grass plants will be gone
 - Damaged areas may range from a few square feet to areas that are 20 – 50 feet in diameter, or whole portions of a green, tee or fairway or a lawn may be killed
- Seedlings may be girdled at the stems near the soil surface, though some plants may be completely severed and pulled into a tunnel to be eaten
- Tunneling near the soil surface dislodges plants or causes them to dry out, small mounds of soil are also pushed up
- Tunneling damages ornamentals and vegetables, reduces the aesthetic quality of turfgrass and in some cases causes it to die; interferes with the roll of the golf balls

Best Management Practices (BMP)

Good management practices usually help to prevent a pest outbreak or to reduce its severity. A healthy turf is one of the best strategies but mole crickets tend to make no distinction and cause extensive damage regardless of the condition of the grass. However, management with good cultural practices will help the turf area to recover after the mole crickets have been controlled

BIOLOGICAL CONTROL

- A parasitic fly, the Brazilian red-eyed fly (*Ormia depleta*), has been established in Florida and was released in Texas a few years ago, but did not establish.
- A parasitic nematode (*Steinernema scapterisci*) that is host-specific to both *Scapteriscus* spp. of mole crickets has been developed (known as Nematac STM); however, no local retail outlet has not been identified for this product but it is reported as being commercially available.

CHEMICAL CONTROL

- The use of chemical insecticides has been the standard control practiced for years. With most insecticide products, applications are best made when the mole crickets are newly hatched and in the early stages of development.
- Immature stages (nymphs) are most vulnerable to insecticides and usually can be eliminated before they damage the turfgrass areas. These treatments should be applied in May, June, and July since the nymphs are most sensitive to insecticidal treatments than adults
- Liquid and granular formulations of insecticides are commonly applied to the soil to suppress newly hatched mole cricket nymphs from April to June
- Insecticides containing imidacloprid, cyfluthrin, lambda-cyhalothrin and trichlorfon are recommended

The information given herein is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Texas AgriLife Extension Service is implied.

Use pesticides only according to the directions on the label. Individuals who use chemicals are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. If the information does not agree with current labeling, follow the label instructions. The label is the law.

Always remember to read and heed six of the most important words on the label: “KEEP OUT OF REACH OF CHILDREN”

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