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TWIG GIRDLERS

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Twig girdlers (Fig. 1) are common throughout most of Texas and it is their characteristic damage to tree limbs that either causes complaints or evokes curiosity. Damage is most evident in the fall when leaves prematurely turn brown, die and the girdled limbs drop to the ground beneath infested trees. Destroying girdled branches is the most effective control measure.

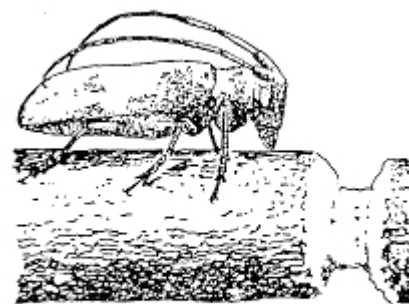


Fig. 1. A twig girdler and girdled branch.

Description

The twig girdlers are members of the insect family known as the longhorned girdler and the pecan girdler.

Collectively, they can be called twig girdlers or by their more specific common name. In all three, the antennae of the males are almost twice the length of the body, but in the

females they are only as long as the body.

Adult pecan and mesquite girdlers are similar in size and appearance. They range in size from 1/2 to 11/16 of an inch long, excluding the antennae, and are cylindrical in form (Fig. 1). Both species are light to dark brown in color with a wide gray band across the middle of the wings and are densely speckled with pink, orange or dark yellow spots. The mesquite girdler can be distinguished from the pecan girdler by the presence of three shiny, black dots immediately behind its head.

The huisache girdler is a larger and stockier insect when compared to the other two Texas species. It is brown in color with a light brown band across the middle and the upper surface of the body is peppered with small, shiny black dots. Length varies from 11/16 to 1-1/8 inches.

Oval, cream colored eggs are laid by the females under the bark of the girdled limbs. In about seven days the eggs hatch into larvae. The larva, or "grub" is legless, cylindrical, semi-robust and can extend and retract similar to the bellows of an accordion. It is creamy white in color except for a yellow head and dark brown mandibles. The transition from the larva to the adult is passed in a stage called pupa, which lasts two to three weeks. The pupa resembles the adult beetle in form but is a creamy white color. The eyes, mandibles and appendages gradually become darker as development progresses.

Biology and Habits

The pecan girdler, found throughout Texas except for the Trans-Pecos region, attacks and girdles a wide range of deciduous trees. The preferred hosts include pecan, persimmon, hickory, walnut, red oak, hackberry, elm, mesquite, huisache, tepehuaje, mimosa, retama, Texas ebony, citrus and various fruit trees. The huisache girdler inhabits the Gulf Coastal Prairie, South Texas and the Lower Rio Grande Valley regions. It confines its attack primarily to huisache, tepehuaje and mimosa but will also girdle mesquite, retama, Texas ebony and citrus. The mesquite girdler can be found in the southern Rolling Plains and the Trans-Pecos regions. As the name implies, this beetle prefers the limbs of mesquite but will also girdle several species of acacia.

The life cycles and girdling habits of all three beetles are basically the same. After mating, the female selects a living branch on a host tree, straddles the branch and penetrates the bark by cutting deeply into the wood with the mandibles (Fig. 1). Cutting a small section at a time, the process is continued until a clean incision has been excavated

around the branch. The female girdler is careful however, not to completely sever the branch from the tree, leaving it connected by a center portion of the heartwood.

Traveling the length of the girdled branch, the female bites a notch in the bark with the mandibles, deposits an egg in the notch and covers it with a protective secretion. Mesquite and pecan girdlers will girdle branches about the diameter of a pencil or slightly larger, about 2 feet long, and may lay (5 to 25 eggs per girdled branch.) The huisache girdler will girdle branches from 3/4 to 2 inches in diameter and 5 to 12 feet in length. These adults girdling habits can be very destructive to small trees, with severe growth deformities resulting from the pruning of branches.

Upon hatching, larvae feed on the dead wood of the girdled branch, burrowing just beneath the bark. The life cycle is completed in a year with the adult beetles emerging from the branches beginning in late August and extending to early October. The pecan girdler, however, differs from the mesquite and huisache girdlers in that a small percentage of its larvae do not complete their development until May or June of the second year which accounts for a small amount of damage each spring.

Eventually the girdled branch is bent down or broken off by the weight of the limb or by wind. In a heavy festation, it is not uncommon for the ground under pecan or hickory trees to be literally covered with girdled branches, many bearing clusters of nuts.

Control

The most effective control of girdlers is to gather the severed branches and burn them in the fall or winter. All branches should be collected from the ground, as well as those that may be hanging or lodged in the trees. This procedure will eliminate the source of infestation and the larvae which would otherwise develop into adult girdlers the following summer. Care should be exercised to collect fallen branches from nearby trees that may also harbor a population of the pests. If burning is illegal in your area, the branches can be shredded or cut into short lengths and taken to the nearest sanitary landfill.

The use of insecticides to control twig girdlers is a marginal practice at best, especially when 30-50 foot trees are involved. However, high value trees, such as young trees in nurseries or landscapes, that are in an area with a history of damage and infestation can be protected. Use insecticide products that contain azinphosmethyl (Guthion) or EPN for control of twig girdlers on pecan. On ornamental trees, use insecticide products

containing lindane or chlorpyrifos (DursbanR). Spray applications should be targeted for the month when the adults emerge, before the girdling damage can occur. Apply the initial spray during the first week of September and make subsequent applications in early October and November.

Insecticide label clearances are subject to change and changes may have occurred since this publication was printed. The pesticide USER is always responsible for the effects of pesticides on his own plants as well as problems caused by drift from his property to other property or plants. Always read and follow carefully the instructions on the container label.

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