

## *Eurytoma tumoris* . . .

# A NEW INSECT PEST OF CHRISTMAS TREES

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A Scotch pine Christmas tree repeatedly infested by *Eurytoma tumoris* with several branches removed for better visibility.

**A**LTHOUGH THERE ARE many plant-feeding and parasitic members of the family Eurytomidae, those attacking coniferous plants are not common. In 1962 a new insect species, *Eurytoma tumoris* Bugbee was found on Scotch pine, (grown for Christmas trees) in Santa Cruz County, which caused severe and permanent galling, or gouting, of the terminal and lateral branches. A few Monterey pine and lodgepole pine trees grown in the vicinity also showed signs of infestation, but since no adult insects emerged from these species, it cannot be said with certainty that the same insect was involved.

Seriously infested trees are almost worthless as Christmas trees. The unsightliness of the galls and the shot-like holes appearing where the adult insects emerge make them unmarketable. Some splitting of the bark has also been noticed on affected parts of trees, although height growth apparently is not influenced by infestation.

At the present time, damage by *Eurytoma tumoris* is not widespread and has not been seen outside of Santa Cruz County. Less than 10% of the Scotch pine trees in a large planting in that county

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A new insect species, *Eurytoma tumoris*, has been found damaging pines grown for Christmas trees in Santa Cruz County. The trees are disfigured by galling or gouting of terminal and lateral growth and by shot-like holes made by the adult insects as they emerge from the galls. Damage so far has not been widespread, however, and has not been seen outside the county.

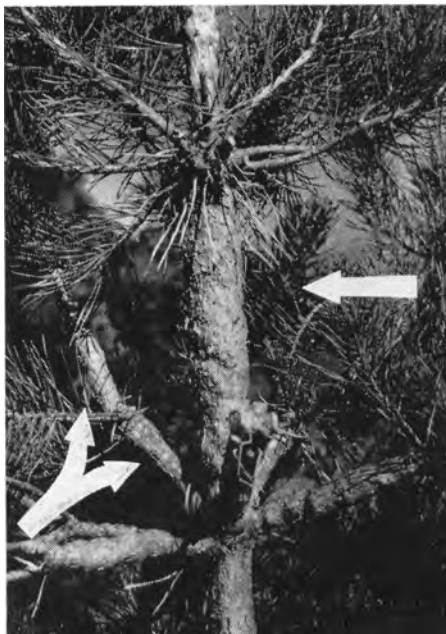
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were infested. Many of the infested trees showed signs of repeated annual attack since 1957; yet adjacent trees, in many instances, were totally free from infestation.

### Insect description

The adult *Eurytoma tumoris* is a tiny, black, wasp-like insect. Emergence of the adults through holes in the galls begins in early April, reaches a peak in late April or early May, and continues until late in May. They are sluggish fliers, and are commonly found at rest on the needles. After mating, eggs are inserted through the bark on one-year-old terminal and lateral growth. This occurs from late April through late May. The site of egg deposition can be determined by the presence of a droplet of pitch on the bark

Close-up of galling caused by the attack of *Eurytoma tumoris*.



exuded through the oviposition puncture. Since the adults fly freely only when disturbed, and owing to the pattern of infestation in the planting, it is believed that females commonly lay their eggs in the same tree from which they emerged.

Upon hatching, the young, white-colored larvae feed at first in the phloem-cambial region. Gradually, invasion of the wood occurs; and by late summer a deep cylindrical pit is formed in which the larva feeds and later overwinters. New galls first become evident in mid-June and continue to enlarge until late fall.

### Control

Although specific control measures were not evaluated, the information gained from this investigation should permit the rapid development of a control program—if the insect ever gains important status as a pest. About 10% of the immature insects in the galls died from unknown causes. Evidence of parasites or predators on any stages of *Eurytoma tumoris*, however, has not been observed.

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Cross section of infested stem showing pits made by the larval stage of *Eurytoma tumoris*.

