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SPINY-BACKED SPIDER

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General Description

A spiny-backed spider, *Thelacantha brevispina* (Doleschall), often called a crab spider, is becoming a serious annoyance in Hawaii. Contrary to rumor, the spider was not introduced by any government agency to control fruit flies. It was first discovered in Hilo in December 1985, and has since spread throughout the island of Hawaii. This pest has also been observed on Maui since 1988, on Molokai since 1989, on Oahu since 1990, and on Kauai since 1988. Its range extends from the western Pacific to the islands north of Madagascar.

This is one of two species of spiny-backed spiders in the state. The other is *Gasteracantha cancriformis* (Linnaeus), which has been in Hawaii since the 1950s and is quite difficult to find today. Both are shaped like tiny crabs, approximately 1/2" across at their widest point.

The more recently discovered spider, *T. brevispina*, has two distinct white spots on its back and shorter spines (Fig. 1) than those of *G. cancriformis*, which has six red spines approximately 1/8" long. *G. cancriformis* has a white abdomen and black spots on its back. The sharp spines of these spiders make them unpleasant morsels for birds, lizards, and other predators; however, solitary wasps have been known to fill their mud cells with them to feed their larvae.

T. brevispina females form a resilient orb (or circular) web on trees, shrubs, ornamentals, agricultural crops, telephone and electrical poles and lines, and other manmade structures in residential and farming areas. Unlike other spiders, the spiny-backed spiders form community webs in areas with high insect populations. The female spiders hang by their short legs in the center of the webs. The radii, or supporting lines, for these webs are adorned with a series of woolly tufts of whitish silk believed to act as lures for insects. The male is much smaller than the female and may be found hanging from a single web off the female web. After mating, females lay their egg masses on surfaces other than their webs. The eggs are enclosed in a thick, fluorescent-green web covering (Fig. 2). The web covering turns yellow when the eggs hatch.

The spider's annual population level has fluctuated, exploding at certain times of the year. Population levels at six monitored locations in Hilo

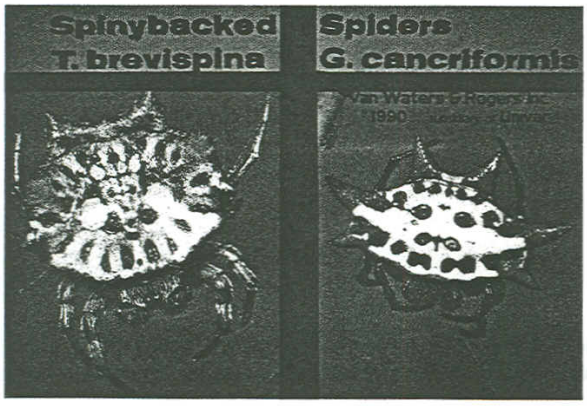

Figure 1. Adult female spiders. (Photo courtesy of Larry Allen)

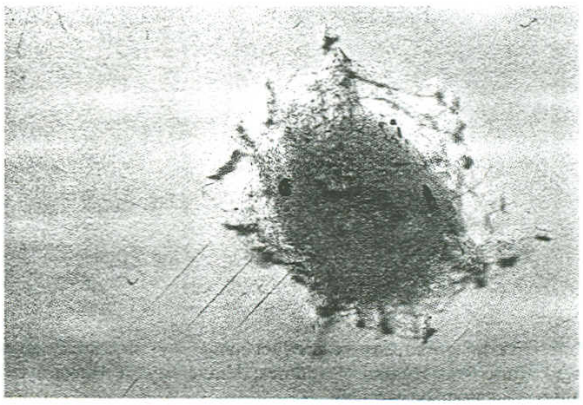

Figure 2. *T. brevispina* egg mass.

have peaked during February, March, and April. From June to December the spider was nearly nonexistent.

This spider is not known to be an indoor pest, but people outdoors have complained of being bitten when it fell on them or got into their clothing. The bite has caused localized swelling in some individuals. Seek immediate medical attention if you are sensitive to spider or insect venoms.

Control

University of Hawaii and Hawaii Department of Agriculture personnel have explored various means of controlling this new pest. Surveys were conducted to determine the potential effects of various parasitic wasps that are known to attack spider eggs in Hawaii, including one that was purposely introduced by the Hawaii Department of Agriculture in 1939 to control the black widow spider. Surveys showed that a predatory wasp (an ichneumonid) was attacking the eggs of the new spiny-backed spider, thereby reducing its population. Unfortunately, another parasitic wasp (a eulophid) was discovered attacking the predatory wasp, thus reducing its effectiveness in controlling the spiny-backed spider.

University entomologists at the College of Tropical Agriculture and Human Resources also conducted insecticide screening tests to combat this pest. They determined that Johnston's No Roach[R], Strike Roach Ender[R], Black Flag Ant and Roach[R], and Raid House and Garden[R] aerosols caused 100 percent female mortality within 24 hours. Before using these insecticides, read the label on the container for safety precautions and allowable application sites. Application to plants may cause severe burning.

Crushing the green egg masses will also help reduce population levels.

References

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