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New Mite Predators

Four species from Guatemala show promise in southern California

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The Guatemalan *Stethorus*—a small, black, lady beetle mite predator—is being propagated by the thousand in the insectary at Riverside for release in southern California avocado and citrus groves.

As a result of an exploratory trip through Mexico and Central America during the winter of 1953-54 to study the natural balance of pests of avocado trees in their native habitat, several species of natural enemies controlling mite pests of wild avocado trees were found in the Guatemalan highlands. Although Guatemala is a tropical country, frost may occur in the highlands above 5,000' during the colder months, so it was thought that beneficial species collected from this area could possibly be established in southern California.

Consequently, after methods were developed for their propagation, nine species of these mite predators were shipped to Riverside in the spring of 1955, and four of these—one cheyletid mite, two typhlodromid mites, and one *Stethorus*—are being propagated. All four are new, undescribed species.

Stethorus, particularly, shows promise. Over 7,000 of this predator have already been released in the southern counties where it is working and reproducing well, although it remains to be seen how satisfactorily it will work through the winter months. Large numbers will be used experimentally in mass liberations at critical times in attempts to prevent the development of injurious plant-feeding mite infestations.

Since *Stethorus* feeds on a wide range of mite species, it may be used in this experimental manner not only on avocado and citrus but on various truck and field crops and other trees. This is also true of the cheyletid mite and the two typhlodromid mites, which—as laboratory studies have shown—will feed on all mite pests of avocado and citrus trees except the citrus bud mite.

Propagation of these beneficial species will be continued until they have been given an opportunity to become established in southern California groves.

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