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## Surinam Cockroaches

The Surinam cockroach is not a new cockroach to Texas but it is often encountered in the winter months when plants are moved indoors. This cockroach is about  $\frac{3}{4}$  inches in length, has a shiny brown to black pronotum with a white band in the front and olive green wings. The cockroach nymphs look similar to the Oriental cockroaches but they can be distinguished by the rough appearance on the end abdominal segments on the Surinam cockroach compared to the smooth abdomen of the Oriental cockroach. This cockroach likes to burrow and are often brought into homes, greenhouses, shopping malls, restaurants through potted plants.

The cockroach hides during the day under the soil in containers, on the sides of the benches, under boards, barrels, in holes and crevices in the walls of buildings and other dark areas where they can conceal themselves. At night, they come out in great numbers and gnaw on the stems of plants. No males are found in the United States so this cockroach reproduces through parthenogenesis. The egg capsule is retained within the abdomen, so the female gives birth to live young.

### Some Control Options:

Removing leaf piles, woodpiles and other potential harborages will reduce the cockroaches' habitat. It is also important to seal exterior cracks and to ensure that all foundation and attic vents have tight-fitting screens.

Application of bait to infested potted plants will often control indoor infestations. Outdoors granular cockroach baits can be applied to active harborages and insecticidal sprays can be applied to foundation plantings, wood piles, mulch, and other infested locations.



Photo of Surinam cockroach. Photo by Robert Lord Zimlich, Copyright 2009:  
<http://bugguide.net/node/view/335456/bgimage>.

## Use of Oils to Manage Insects

The use of oils as part of a control program is becoming more favored instead of using synthetic pesticides. Oils can be distilled from petroleum such as horticultural oils, Volck oils, summer oils, dormant oils or mineral oils or oils can be extracted from plants and animals such as neem oil or fish oils. Oils are generally effective against aphids, scale crawlers, mealybugs, spider mites, whiteflies and small caterpillars.

When oils are applied, a thin layer covers the insect or mite. The oil clogs the spiracles or pores through which they breathe causing death by suffocation. Oils can also disrupt membrane function or structure or disrupt feeding. Multiple applications may be needed for control.

Sometimes oils can injure a plant causing leaf scorching, defoliation, reduced flowering and stunted growth however there are some items on the label to be aware of such as unsulfonated residues, viscosity, and distillation. Usually the higher the unsulfonated residue (UR), the less likely for plant injury. Also the lower the viscosity, the less likelihood for plant injury. In addition, the distillation range is a measure of the purity of the oil fraction so distillation ranges of 80°F or less are considered appropriate.

Apply oils when conditions are lower than 85°F and 90% humidity is recommended, since the longer the wet oil remains on the foliage, the greater the chance of phytotoxicity. Also it is not advised to treat stressed plants with oils and some plants are sensitive to oil such as azalea, hibiscus, impatiens, photinia, and spruce so they should not be treated.

## **Presence of Shore flies**

Shore flies are usually found in greenhouses, since they are attracted to algae growing on potting soil and under greenhouse benches. However, they can be found living on many house plants as well. Shore flies are frequently confused with fungus gnats, since they are usually found together. However shore flies have short antennae, a large head with red eyes, and smokey gray wings with 5 white spots on each wing. Also shore flies are stronger fliers than fungus gnats.

Female shore flies will lay eggs singly on the surface of algae. The eggs will hatch in about 2 to 3 days. The larvae will be found on the top layer of potting soil, feeding on the algae. Shore fly larvae are 1/8 inches in length, with a brownish-yellow, legless body. The larvae do not have a distinct head capsule, but their dark mouthparts and internal organs may be visible. The larvae mature in 3 to 6 days and then pupate. The pupae are also found close to the soil surface. The adult fly will emerge 4 to 5 days later and it will feed on the same materials as the larvae. The adult fly usually stays close to the breeding sites.

Eventhough the shore fly adults and larvae do not feed on plants, they still can present problems. Adults can be a problem, since they can transmit plant pathogens, such as *Pythium* and other root disease organisms. Also the shore flies' excrement can land on foliage and leave unsightly black specks.

### **Some Control Options:**

#### **Some Non-Chemical Control Options:**

- 1) Avoid over watering and limit fertilizer run-off. Allow soil to dry before watering again.
- 2) Algae should be removed from under and on benches, walls, and floors.
- 3) Compost should be aerated often and relocated away from doors and windows.
- 4) Pasteurized container mix should be used or treat potting soil with heat or steam before using it.
- 5) Remove standing water and eliminate any plumbing or irrigation system leaks.

#### **Some Chemical Control Options:**

Some chemical control options include using such active ingredients as bifenthrin, permethrin to control adults and azadirachtin, kinoprene, diflubenuuron, or cyromazine to control larvae.



Adult shore fly, (Ephydriidae). Photo by Bart Drees, Professor and Extension Entomologist, Texas A&M University.

*Mention of commercial products is for educational purposes only and does not represent endorsement by Texas AgriLifeExtension or The Texas A&M University System. Insecticide label registrations are subject to change, and changes may have occurred since this publication was printed. The pesticide user is always responsible for applying products in accordance with label directions. Always read and carefully follow the instructions on the container label.*