

Mosquitoes

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Over the last several weeks, there has been an increase in mosquito activity in Sunflower. This is not unusual as even though we live in a desert, mosquitoes can become quite serious pests in our area during the warm months of the year, particularly during the monsoon. There are about 50 species of mosquitoes in Arizona, but I have been seeing one species in particular, *Aedes aegypti*. This species is originally from Africa but is now found in tropical and subtropical areas worldwide. It is found in the southern tier of states from Florida to California, including southern Arizona. *A. aegypti* is an important carrier of several viral diseases in other parts of the world.

A. aegypti is often considered a “domestic” species since it lives in close association with humans. It is a small, dark colored mosquito with white bands on the legs and a white, lyre-shaped marking on the back. It is the female mosquito that bites us as she needs a blood meal to develop her eggs. She is attracted to us by carbon dioxide (CO₂) that we exhale and chemicals that we emit from the skin such as CO₂, 2-ketoglutaric acid and lactic acid.

A. aegypti is somewhat unique in that this species does not breed in ground pools. Instead, the female lays her eggs just above the water line in all sorts of human-produced containers capable of holding water, both inside and outside the house. When water is added to the container either by rainfall, or by humans, the eggs are submerged and subsequently hatch producing the aquatic larvae called wrigglers and pupae called tumblers. The life cycle is temperature dependent and may take about 7 days from egg hatching to adult at 35°C. This species can breed in very small quantities of water. Several years ago I reared out 51 *aegypti* adults that were breeding in a dog’s water bowl. Because this species has a short flight range, encountering adult mosquitoes most likely means that the breeding source is not too far away. *A. aegypti* is not the only species that breeds in human-produced containers.

Since *A. aegypti* breeds mostly in human-produced containers, mosquito numbers can be significantly reduced by properly disposing of containers that are no longer being used. Examples are old tires, empty buckets, cans or cups. Properly maintaining containers that currently do have a specific purpose also helps reduce mosquito numbers. For example, water in bird baths should be aerated or frequently changed, water harvesting containers should be properly sealed or screened so that female mosquitoes can’t enter the container to lay eggs, empty flower pots should be turned over, overflow dishes for potted plants should be emptied, pet water bowls should be kept clean with frequent changes of water, and rain gutters should not be blocked so that water doesn’t collect. A very common source of *aegypti* breeding is in plant cuttings being grown in vases with water. These vases should be monitored frequently to make sure mosquito larvae are not present in the water. Snowbirds should, to the extent possible, not leave exposed, unattended containers that might collect rain water during the summer monsoon.

Eliminating mosquitoes at their source is the most environmentally sound and effective way of controlling them.

