

CONTROLLING ORANGE APHIDS on MILKWEED

The family Asclepiadaceae, to which the milkweeds belong, includes a very common landscape (and freeway) plant, the oleander (*Nerium oleander*). It is native to the Mediterranean region and has been introduced to California, where it thrives in difficult situations. Introduced along with the oleanders, unfortunately, came a species of aphid (*Aphis nerii*) that is a specific pest on plants in the milkweed family. As so often happens with non-native introduced species, the natural controls on the populations of this species of aphid have been left behind.

A gardener growing milkweeds for the larvae of the monarchs must keep the aphid colonies under control, otherwise the aphids can enervate a plant. A milkweed plant that is supporting large, dense colonies of aphids is much less desirable to the female monarch searching for a host plant on which to lay her eggs. Keep in mind that the management of the aphid colonies has to begin early in the growing season and be done *before* the monarchs arrive to breed. Luckily, here in Marin, most of the monarchs arrive in late summer so there is time to deal with the aphids without worrying about damaging butterfly eggs or larvae or beneficial predators, and still have vigorous host plants growing when the monarchs do arrive.

Strategies for Control:

- First, I simply use a strong spray of water and my fingers to crush and remove the initial colonies.
- Second, I'll use a castile soap spray on colonies that aren't being controlled by just knocking them off the plants.
- Third, if stems are inundated by aphids, I will cut them out and put them in the trash can to be removed from my property. Sometimes I cut only the top half of the stem where the aphids have congregated; the plants respond by sending out lateral shoots and more flowering stems.
- Fourth, if colonies still persist, I'll use a Neem oil spray to kill them, but be aware that the oil spray can also kill caterpillars and other soft-bodied beneficial insects. It is not harmful to bees, butterflies, beetles, birds, mammals, or earthworms and other creatures in the soil.
- Fifth, in the fall, when these herbaceous perennials die back, I cut out all the old stems, clean up at the base of each plant, and apply a sprinkling of Neem seed meal, available from Green Jeans Garden Supply. The intention is to kill off the over-wintering stem mothers.

Neem seed oil comes from the Neem tree (*Azadirachta indica*), a native of India, and the seed meal is a by-product of the oil extraction. It is a vegetable oil with triglycerides and many triterpenoid compounds. The oil is a bioinsecticide and acts as a deterrent to feeding (phagorepellent), which repels a variety of soft-bodied, sucking and chewing insects like aphids and caterpillars. It is also a hormone disruptor and interferes in the development of the adult form. Neem seed oil and the meal are also antiseptic and anti-fungal, and both products are biodegradable. Placing meal on the ground protects the plants roots from grubs, root nematodes, and root aphids and, hopefully, reduces or eliminates the aphid stem mothers.