Desert Favorite

By Master Gardener Andrea Meckley

Coolibah (Eucalyptus microtheca) is one of the most common Eucalyptuses planted in the Southwest. This Australian native tree tolerates heavy soils, alkaline soils and a hot dry site. Also called Blue Ghost Eucalyptus this evergreen will grow 30 feet high by 25 feet wide to form a bushy, round-headed single or multi-trunked tree. Preferring a well-drained soil Coolibah has a moderate to fast growth rate and is considered to be a low to medium water use tree. The leathery leaves have a blue-green color and have a strong scent similar to menthol. Inconspicuous small creamy white flowers in summer are followed by small woody capsules that do not cause much of a litter problem. Coolibah can tolerate full sun, reflected heat, strong winds, and modest cold temperatures 25F-18F. During the cold snap in the winter of 1990-91 when temperatures got in to the single digits most Eucalyptus’ in southern Nevada were damaged yet recovered in years following. Landscape uses for this tree are erosion control, shade, wall or screen and as a wind break. Coolibah has one of the hardest and strongest timbers in the world however, difficult for wood-working because of the interlocking grain. It is unsuitable for construction yet makes durable poles and fence posts and great firewood.

Aborigines obtained water from the shallow roots, by cutting forearm-sized root segments, then holding them vertically, after debarking. Sometimes they blew into the distal portion to enhance the flow. Aborigines used the branch and leaf as a fish poison. Folk-remedy reports this plant can be used as an antiseptic and disinfectant and the inner bark can be poulticed onto snakebites. In the classic Australian bush song "Waltzing Matilda," the Coolibah tree is a reference to the Eucalyptus microtheca. These trees are easy to care for and are not prone to any particular disease or pest. Rugged and so nice to look at with its weeping effect, this tree deserves consideration in tree selection.
Companion Planting

~For sweet-tasting carrots your soil must have sufficient lime, humus, and potash. Too much nitrogen will cause poor flavor, as will a long period of hot weather. Carrots growing in temperatures above 70ºF tend to form shorter, thicker roots and have less available sugar. This is because respiration is higher in warm weather so the carrot tops are using up the free sugar so it does not accumulate. In cool weather respiration is lower and more free sugar remains in the root. Optimal temperatures are between 60ºF and 70ºF for sweetness.

Storing Herbs for Winter Use

**Freeze herbs whole.** To freeze herbs whole, wash and pat them dry. Then pack them in freezer bags in a mass. To use, slice off a chunk, chop it up, and drop it into your sauce or casserole.

**Freeze individual leaves or stems.** Lay individual leaves or stems on a cookie sheet to freeze and then pack in a freezer container. You can pull out a leaf at a time as you need it.

**Mince herbs and freeze them in water in an ice cube tray.** They are ready to drop into soups or stews with no further fuss.

**Make herbs into a paste to freeze.** Puree herbs or chop them with oil. The flavor blends into the oil, and the oil becomes a barrier that protects the herbs from freezing, thawing, or drying out in freezer conditions, thus preserving their fresh flavor and color. Puree or chop about ½ cup oil to 2 cups hard-packed leaves. Pack the paste into airtight, freezer-safe containers, label and date them, freeze immediately to avoid the risk of spoilage.

October Reminders

1. Time for fall vegetable and flower planting.
2. Begin to cut back from a summer water schedule to a winter schedule.
3. Plant spring bulbs as soon as it drops below 90ºF degrees.
4. Do not fertilize perennials this month.
5. Check tree ties and loosen if necessary.
6. It’s the ideal time to plant succulents.
7. Prune hedges for the last time this year.
8. Continue to watch for Cochineal Bugs on cacti.
9. Apply potassium fertilizer to Bermuda for root strength.
10. Divide perennials that are overgrown.
11. Check for root rot on perennials grown in the shade.
12. Perfect time to plant spring flowering perennials.

Western flower thrips are the major problem with growing fruit in our valleys. These tiny insects appear at the time of bloom and begin ripping and tearing into the surface of the immature fruits as soon as the blossoms drop from the tree. If left unchecked they continue to rip and shred the fruit surface with their rasping mouthparts causing the fruit to scar, leak sap, shrivel up and rot. The leaking sap crystallizes and remains attached to the fruit where it is scarred. The resulting fruit is deformed, ugly and looks inedible. See page 4 for fact sheet.

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Calling all Master Gardeners

Do you have gardening experience to share, but you hate to write? Remember our mission of helping to educate others? Well, here’s a chance to share your knowledge and not have to write it yourself - I will gladly interview you!

Whether you have a single tip or a story to tell, I’d love to hear from you and share anything that others might find helpful or inspiring. I won’t even have to publish your name if you don’t want me to.

Here are some ideas:
1. Garden Journaling: need tips, drawings, forms, websites you’ve used, etc.
2. Garden Helpers: any short tips or hints. For example, I know someone who uses roller blade kneepads instead of garden kneepads because they are stronger and don’t slip around.
3. Shady Spots: A dozen (or more) good plants for shady areas.
4. Problem Plants: picky plants; poisonous for pets or children; invasive spreaders; confusing, mislabeled or misidentified plants
5. Hollyhocks: Would you believe that several of the better books don’t include this plant? I’d like to know your experience working with these.
6. Potted Vegetables: What veggies work well in pots, what are tips for good production?
7. Cute Couples or Companion Plants: What are two plants that grow well together?
8. Books and Resources: What are some books or websites that you would recommend and why?

One thing to keep in mind is that, except for the books and resources, the info you share should come from your own experience or something from a book that you’ve “proven.” If you’re sharing a simple tip, you can just leave it on my voice mail at 702-397-2604 x 4 or stoesserd@unce.unr.edu. Include your name, phone number where I can reach you for questions, and tell me whether you want your name (or initials) included.

October Planting

<table>
<thead>
<tr>
<th>Beets</th>
<th>Cilantro</th>
<th>Onions</th>
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<tbody>
<tr>
<td>Bok Choy</td>
<td>Chard</td>
<td>Parsnip</td>
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<td>Broccoli</td>
<td>Endive</td>
<td>Parsley</td>
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<tr>
<td>Brussels sprouts</td>
<td>Greens/Lettuce</td>
<td>Peas</td>
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<td>Cabbage</td>
<td>Garlic</td>
<td>Radish</td>
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<td>Carrots</td>
<td>Kohlrabi</td>
<td>Rutabaga</td>
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<td>Cauliflower</td>
<td>Leeks</td>
<td>Shallots</td>
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<tr>
<td>Celery</td>
<td>Nasturtiums</td>
<td>Turnips</td>
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The Garden in Bloom

The Garden in Bloom is a series of year round, month-by-month flower gardening classes designed to educate people on producing a fabulous ongoing display every month of the year!

Classes are every First and Third Monday of the Month at the Clark County Fair garden.
8:30 -10:00 a.m.

Veggies by the Season

Veggies by the Season is a series of year round, month-by-month gardening classes designed to educate people on producing timely vegetables in their backyard gardens.

October 9 – Extending your harvest
October 23 – Seed Sprouting
5:30 -7:00 p.m.

For more information call Denise at 702-397-2604 x 4

“You know you’re a Master Gardener if you have a decorative compost container on your kitchen counter.”
Western Flower Thrips [*Frankliniella occidentalis* (Pergande)]

L. Irene Terry, Entomologist ~ Diane G. Alston, Entomologist

Complete article can be found at: [http://utahpests.usu.edu/ipm/htm/fruits/fruit-insect-disease/western-flower-thrips](http://utahpests.usu.edu/ipm/htm/fruits/fruit-insect-disease/western-flower-thrips)

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**Do You Know?**

- Western flower thrips (WFT) are a frequent pest of nectarine, and an occasional pest of apple and other fruits in Utah
- WFT can be abundant on numerous weed and crop hosts
- They cause damage by feeding on and laying eggs into fruit buds, flowers, and fruits; a halo or “pansy spot” can form
- Injury to apples is primarily cosmetic, and is most common on light-skinned cultivars
- White netting marks and silvering damage occurs on nectarine fruits
- Monitoring method: shake thrips out of a blossom cluster and count adult females.
- Management: late petal fall stage is the most effective time to treat to minimize thrips damage
Western flower thrips are native to western North America and are widespread throughout this region. This species feeds on hundreds of different weed and crop hosts. Western flower thrips can rapidly build up during bloom on all apple cultivars, and are especially abundant in the warmer areas of the Mountain West. These warmer areas generally have other crop and weed hosts that serve as reservoirs during the late winter and early spring, from which thrips rapidly emigrate to the more attractive and abundant resources of apple blossoms. This thrips species can cause cosmetic damage to apple fruit which lowers the grade of apples. Primarily the green-skinned ‘Granny Smith’ is the cultivar that is blemished, but blemishes can also occur on ‘Ginger Gold’. All stages of thrips except pupae are found on the blossoms, but it is the adult female that causes the damage when she oviposits into the developing bud or fruitlet.

Thrips are a group of tiny, elongated, and fringe-winged insects that are commonly found in flowers of most plants.

Many feed on plant tissues as well as pollen. They feed by a “punch and suck” method, whereby they push their mouth cone into plant tissue or pollen, and then suck the contents through their straw-like stylets. A few species of thrips are now worldwide pests, and one of these is the western flower thrips. In this region, western flower thrips damages not only apples but also many horticultural and field crops, such as tomatoes and cotton. Even though western flower thrips can transmit plant viruses to some crops, apples are not affected.

**HOSTS**

- apple
- nectarine/peach
- pear
- plum
- grapes
- tomato
- pistachio
- strawberry
- many field crops, such as alfalfa and cotton
- many weeds

**LIFE HISTORY**

**Western Flower Thrips Life History**

Western Flower Thrip primarily infests fruit crops during bloom and when fruitlets are young. They can be found in fruit crops later in the season, but damage is minimal.

**Adult**

Adult western flower thrips can be distinguished from other insects by their fringed wings, their tubular body shape and color.
Female—Damage Causing Stage

- **Size, color, and shape:** Females are about 1/25 of an inch long and have many color forms. These vary from pale yellow thorax and abdomen to yellow thorax and dark abdomen to very dark color throughout their body. In higher elevations, females are black. Wings are fringed on the margins and are clear to yellow in color. (Fig. 1)
- **Where:** The female feeds on tissues of the apple blossoms and pollen.
- **When:** During pink through petal fall of the apple bloom period.
- **Behavior:** Females usually mate once, and then not again for several weeks, presumably after the stored sperm from the first mating is depleted or no longer effective. A female can lay >100 eggs depending upon the nutritional quality of her hosts. The female uses her saw-like ovipositor to insert eggs into plant tissue. Damage occurs when she oviposits into the young bud or fruitlet. Females do not have to mate before they can lay eggs.

Male—Non-damaging Stage

- **Size, color, and shape:** Smaller than the females (about 2/3 the female length). Males are all light yellow throughout their body. Wings are clear and yellow like those of the female (Fig. 1).
- **Behavior:** Usually sexes co-occur in the blossoms, but males can form large aggregations on blossoms, where they mate with females that land on the flowers to look for food and oviposition sites. The males feed on flowers and pollen.

Egg—Damaging Stage

- Eggs are laid into leaf, bud, and floral tissues of apple during the bloom and early fruit set period. Eggs can only be seen through a microscope unless the area around the egg forms a damaging scar on the vulnerable fruitlet or bud. This damage is visible in young fruitlets.
- Unfertilized eggs develop into males and fertilized ones are females.

Larvae

- First instar larvae molt to second instars in 1 to 10 days and second instars molt into pre-pupa in 3 to 14 days depending upon temperatures.
- Larvae generally stay in the flower to feed on pollen and nectar, although they will move between different blossom clusters.
- **Size, color, and shape:** About 1/50 inch long and 1/75 inch wide, translucent white to yellow, and tubular in shape (Fig. 1).
- Larvae can be mistaken for leafhopper and Campylomma nymphs, which are about the same size and color. However, thrips larvae are more elongate and worm-like.
- **Where:** Although very mobile, larvae will remain in the blossom clusters (all stages of blossom development) while pollen is available.
- **When:** Larvae begin to hatch from eggs within 4 to 15 days after adults move into blossoms and are found throughout the bloom period.
CROP INJURY

Apple fruits

- Oviposition scars are formed where eggs are inserted into fruit tissue
- Scars can enlarge into extended halos or “pansy spots” with a central spot of russet; as the fruit expands, pansy spots can increase in size
- Scars are more common on light-skinned apples

Nectarine fruits

- Thrips feeding and oviposition injury cause white netlike blemishes and silvering
- Nectarine fruits are highly sensitive to thrips injury while peach fruit are protected by their fuzz

Other fruits

- Strawberry fruits can be deformed from thrips feeding and oviposition on flowers and fruitlets
- Plum and grape fruits occasionally show thrips scarring

MANAGEMENT

Monitoring

Two methods can be used to monitor thrips: sticky traps and direct counts in blossoms of fruit crops.

*Sticky traps:* White, yellow, or blue sticky traps will attract and trap adult western flower thrips. Traps can be hung in branches of apple trees or on posts in fields adjacent to the crop. Trap captures indicate thrips movement into and within apples, but direct counts are better for estimating activity in the blossoms.

*Direct counts:* This method is easier because it does not involve setting out traps. Blossoms of any plant can be shaken or flicked vigorously into a white cup (either Styrofoam or plastic), even without removing the blossom from the plant. In tree fruits, four blossom clusters per tree should be sampled on at least four trees for each block of trees and cultivar being evaluated. The larger adult female thrips can be distinguished from the smaller and lighter colored male. Blossom clusters with >5 female thrips are considered very high. However, studies setting action thresholds have given ambiguous results possibly because thrips densities can change rapidly within a day. Cold and wet conditions can cause thrips to move into warmer more protected hosts. Following warmer weather, thrips move rapidly back into fruit blossoms.

Timing control

Studies conducted in apple to test whether to spray at a particular bloom period have been inconclusive. Some results indicate “pink,” others “petal fall,” and others still “peak bloom” as the best time to use insecticides to prevent damage. Several complicating factors appear to affect the results. Thrips numbers at a particular bloom stage varies from year to year, and counting both sexes of thrips may lead to an inaccurate assessment of adult female numbers. The time during bloom when fruit is set varies. Egg laying
habits also vary throughout bloom. Some studies showed that most eggs (>90-95%) were laid in locations that did not cause fruit damage; such as leaves, leaf buds, blossom stems, blossom petals, etc., and that the locations vary with bloom stage. Therefore, timing sprays based upon a specific bloom stage is not recommended. Decisions to treat for thrips should be based on monitoring and assessments of fruit set.

Most results suggest that controlling thrips in the petal fall stage is the most effective because most flowers have been pollinated and young fruitlets are developing. Thrips concentrate in the remaining blossoms and fruit at the time and are more exposed to the insecticides. Better insecticide coverage is achieved on the remaining open blossom and petal fall clusters. However, if the campylomma bug is also a problem in the orchard and sprays are required during bloom, some benefit may result from a pink or peak bloom spray.

**Insecticides**

Recommended insecticides:
- formetanate hydrochloride - minimize bee hazard by spraying before bees are placed in the orchard; apply late evening or at night if fruit trees are blooming
- spinosad

**Biological Control**

There are a number of predators and parasites that attack western flower thrip. One naturally occurring predator is the minute pirate bug (*Orius* spp.), a small black and white-colored bug with piercing-sucking mouthparts, that can kill thrips larvae and adults. Immature *Orius* nymphs, that are orange-colored and have a pungent odor, are also effective predators. Banded wing thrips are also good predators. As the name suggests the wings of these thrips have dark and light bands, and can be easily distinguished from the western flower thrips. Predaceous mites can be purchased and released to kill thrips. However, these will attack only larval thrips and therefore are not effective for preventing the damage caused by the ovipositing female. Only those biological controls that target the adult female have any chance of reducing damage, and they must respond quickly when adult female thrips first move into the blossoms.

**Ground Cover and Weed Management**

During the spring, alternate hosts (clover, weed hosts in nearby fields, other ground covers) should be monitored for the presence of thrips and management of these hosts can help reduce populations in apples, nectarines, and other sensitive crops. There are a couple of approaches.

1. Plant a highly attractive ground cover such as clover. If it blooms at the time of apple bloom, it may help to dilute the population in apples. However, apple blossoms are still the most attractive host; and, if clover is mowed when full of thrips, thrips will move into apples. Also, if the ground cover blooms long before apples, then it can provide a reservoir of thrips that will move into apples during bloom.

2. No ground cover or repellent ground cover or mulch. This will keep thrips away and not allow them to build up before or during bloom. Some highly reflective UV mulches may repel thrips. These tactics do help in other crops, but have not been tested in apples.

Decisions concerning ground cover must be made in conjunction with other management concerns, such as frost/freeze control, other pests, such as mites, stink bugs, etc. In addition to ground covers, management of weeds, crops, and apple cultivars in adjacent areas may be of benefit, and some of the same issues mentioned above for ground covers will be important.
The Garden in Bloom
Month by Month

Come join us and learn how you can ensure a fabulous ongoing display every month of the year!

Location: Clark County Fairground
1301 Whipple Ave
Logandale, NV 89021

Time: 8:30 - 10:00 a.m.

When: Every first and third Monday of the month at the Clark County Fair Demonstration Garden next to the fine arts building.

This class is Hands-On!

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