COOPERATIVE EXTENSION

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SUN WIND CACTUS WATER MOON

UNIVERSITY OF ARIZONA

Robert E. Call
Extension Agent,
Horticulture

the Cochise County Master Gardener

NEWSLETTER

VOL. 4, NO. 1 JANUARY 1993

VERBENACEAE

Barbara Kishbaugh
Staff Writer

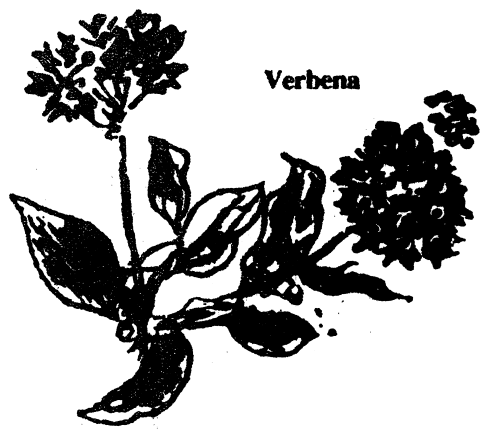
Walking through my garden with a visitor one day, I pointed out the lantana which had been successfully transplanted from a neighbor's yard. The visitor told me it was not lantana but verbena instead. Determined to learn the difference, I purchased one plant of each at the nursery.

At a glance I could perceive no difference. Both plants had similar purple flower clusters at the end of stems. Upon closer inspection, the verbena had tiny orchid-type blossoms with open centers while the lantana flower had a solid center. The verbena had spearmint-shaped leaves and the lantana were smooth-edged.

Both plants belong to the verbenaceae family of which there are over 200 species. Verbenaceae are perennial but usually purchased as an annual. The verbena is quite hardy and blooms almost continuously until cold weather. The plant spreads easily and fans out quite close to the ground, uplifting the flowers at the ends of the plant. At twilight the flowers seem almost to glow with color. The lantana is a bushier type plant, taller and quite messy in appearance when frost comes. It is not frost tolerant.

Purple is the most common color for verbenaceae, however pink, yellow-orange, cream, and white are also available. For our area the purple verbena is recommended since it is frost tolerant, easily transplantable, and gives that ethereal sundown shine.

A most beautiful color print of desert sand verbena is displayed in the April 1992 *Arizona Highways* magazine.



Verbena

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WHERE DO FLIES GO IN WINTER?

Jackie Dillon-Fast
Staff Writer

The answer to this question depends largely on the species of fly. We generally notice flies at two points in their development: when they are adults flying around busily preoccupied with mating and egglaying and when they are maggots mining between leaf surfaces, tunnelling into roots, and feeding on developing fruit in our gardens. Flies, in fact have four stages of development: egg, larva, pupa, and adult. In the language of entomologists this is called a complete metamorphosis. Most species of fly spend the winter buried 1 to 6 inches beneath the soil in their third or pupal stage of development. Some species, however can overwinter as adults or even as maggots (the larval stage of development).

The fly life cycle begins with the adult laying eggs on a host, usually on leaves or developing fruit, and occasionally in the soil around the base of the plant (depending again on the species of fly). The eggs then develop into maggots, the feeding stage for the fly. Maggots resemble plump worms and may be legged or legless; hairy, spiny, or smooth; white or yellow, brown or green; with chewing mouthparts for munching on foliage and fruit. Although they may increase in size during the larval stage, they change very little in appearance.

After feeding voraciously in your garden, the maggot enters the third stage of development—the pupal stage. During pupation the insect stops feeding or even moving, often forming a hard case around its body (a cocoon or pupal case) for protection. Within this casing the insect profoundly changes from the worm-like maggot to the winged, legged, antennaed adult fly. The adult fly does not feed but spends its time in procreation followed quickly by death. This final stage is the shortest and most active stage in the life of the fly.

For gardeners the easiest and most effective time to control the fly population is just after egglaying or as the maggots emerge, which for single generation species may be in early or late spring, and for multiple generation species will occur throughout the growing season. The number of generations produced in any given year will depend on the species of fly and environmental conditions such as the availability of food, the presence of predators, and the control measures taken by the gardener.

HOW TO XERISCAPE

1. Start with a plan
2. Limit turf areas
3. Install efficient irrigation system
4. Harvest rain water
5. Improve the soil
6. Use low water plants
7. Remember appropriate maintenance

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Articles to be published in next month's newsletter must be received at the Sierra Vista Cooperative Extension Office by January 27.

THE AGENT'S CORNER

Robert E. Call
Extension Agent, Horticulture

QUESTION: What should I do to keep my poinsettia blooming and growing throughout the year?
ANSWER: Poinsettia (*Euphorbia pulcherrima*) is a tropical plant that originated in Mexico. As a member of the Euphorbia family they have white latex sap. They require bright but not direct sunlight. Dim light or darkness will shorten its life. These plants should be watered when the soil surface feels dry to the touch. If a poinsettia is allowed to wilt its life span will be shortened. Watering should insure that the entire root ball is moistened. Poinsettias should not be allowed to sit in water because their roots are very prone to root rots. Ideal temperatures should never exceed 72°F during the day time or 65°F at night. Plants do well in high humidity environments. Low humidity and temperatures over 75°F are detrimental to the plants. Beware of placing plants near heat vents, on top of televisions, or in areas that are drafty or have sudden changes from hot to cold. Concentrations of 1/8 to 1/4 of recommended strength houseplant fertilizer applied at each watering will "spoon-feed" the plant and help maintain a healthy plant during the holidays. During the winter months with less sunlight and cooler indoor temperatures plant growth will be slowed, therefore the amount of fertilizer should be decreased as well.

After the colorful bracts, (we think of them as flowers), fall, place the plant in a cool room and let the soil stay nearly dry until spring. Repot the plant in new soil and cut back the stems to six inches above the pot rim. Then move to a sunny location, water well and watch for new growth. Increase fertilizer 1/4 to 1/2 strength each time you water. Pinching back terminal growth encourages branching and more blooms. Poinsettias are short-day plants; meaning that flowering is induced as day lengths shorten. To insure return holiday blooms keep in absolute darkness from sundown to sunup for 10 weeks beginning in October. If this is too much work the old plant can be discarded and a new one purchased for the next holiday season.

QUESTION: My Christmas Cactus did not bloom this year. What happened?
ANSWER: There are several "holiday" cacti. They are Christmas Cactus (*Schlumbergera bridgesii*) with smooth leaf margins or edges; Thanksgiving Cactus (*S. truncata*) which blooms earlier and has sawtooth leaf margins and two oppositely pointed tips at the end of each leaf; and the Easter Cactus (*S. gaertneri*) which blooms naturally in the spring and has smooth leaf margins. These cacti species originated from the Brazilian jungle and grow naturally as epiphytes in the branches and bark of trees.

These plants are short-day plants, like poinsettias. Flowering is initiated by cool temperatures (45 to 55°F), drier soil, and the naturally shorter days of spring or fall. The Christmas Cactus did not bloom because one or more of these conditions were not met.

To induce flowering determine what type of cactus species you have. Ten weeks before blooms are desired place the plant in a cool closet or dark cupboard from sundown to sunup, never letting any light reach the plant during seclusion. Keep the soil drier than normal. Once flower buds are set you can cease this practice and increase watering. [Source: *Houseplants*. The American Horticultural Society, 1980. pp. 81 and 85.]

PLANT A HUMMINGBIRD GARDEN

Elizabeth Riordon
Staff Writer

Hummingbirds were here in Southern Arizona before gardeners and would stay even if no one cared to feed them. A hummingbird garden is actually a way to draw the naturally occurring birds into a place where you can easily relax and watch them.

Most of a hummingbird's diet is small insects. Nectar or sugar water is a treat and an energy boast but probably isn't a daily necessity. Without it you will see an occasional hummer, but with a well-designed and properly maintained feeder you will have a delightful year-round experience. (Watch for next month's article on hummingbird feeders.)

Bright hues of red, purple, pink, and orange are noticed and explored by the birds. Try planting anything with these colors. If you walk outside wearing a red hat or shirt you will soon hear a buzzing hummer checking you out. Even a tiny bit of color will be of interest to them. You don't need a mass of color. Simply remember that hummingbirds look for reds. Bees, moths, and butterflies head towards yellow and white.

Your hummingbird garden needs to be comfortable for birds, people, and bird food (i.e., small insects). Dry stone over plastic with home perimeter insect control and regular weed killer won't provide a reliable supply of little birds. A shady, or for the winter sunny, irrigated patch of insecticide-free grass will provide masses of little gnats which you will barely notice, but which will be necessary bird dietary protein. Spiders will also feed on the gnats and provide webs which are used as hummingbird nest glue.

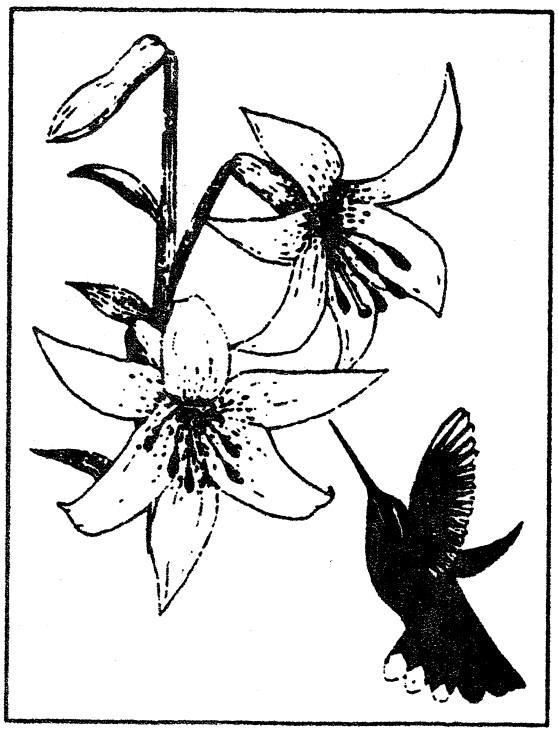
Red and orange flowers will bring the hummers. Even a geranium in a pot will be investigated. Salvia, nasturtium, coreopsis, impatiens, amaranth, and penstemmen were of interest to the birds in my garden. Sweet smelling flowers like honeysuckle and cosmos will draw both hummers and insects.

Hummingbirds like to perch within sight of feeders while they chirp out a territorial song. Bare branches on medium to high trees and bushes give them a place to sit where they are easily observed. Unsheared bushes provide open sheltering networks of leaves and branches for nest building and weather protection.

Put out a feeder, plant nasturtiums and coreopsis seeds, put in red flowers, and sit in the shade in your unweeded, unpoisoned, untrimmed, unsheared (naturally-shaped, therefore) garden and have a great bird-watching rest this summer.

DID YOU KNOW...

- The wingbeat of at least one species of hummingbird is up to 4,800 strokes a minute.



UNIVERSITY OF ARIZONA RELEASES "IMPROVED PLANTING STANDARDS"

The University of Arizona Plant Sciences Department recently released new recommended Planting Standards to improve the viability of new trees when transplanted in our Arizona soils. These planting standards are a compilation of research studies of other Universities, American Forests, International Society of Aboriculture, and independent research of leading national Horticulturists with modifications for Arizona soils and climates.

Dr. Jimmy Tipton, Horticultural Specialist at the University of Arizona Cooperative Extension stated, "We currently have our own studies in progress and will be releasing our findings in about five or six months. However, the evidence of the other studies is so overwhelming we decided to release this information now."

IMPROVED PLANTING STANDARDS

1. Planting hole should be three to five times the diameter of the root ball and no deeper. The sides of the hole should be rough or sloping. Trees develop a root system that extends one and a half to four times the canopy diameter and lies within two feet of the soil surface. This lateral root system supports the tree and absorbs water and nutrients. Transplanting practices should encourage root spread.

2. Set the top of the root ball at or slightly above the soil surface. Trees planting in holes deeper than the root ball tend to subside as irrigation compacts the soil beneath the root ball.

3. Remove the tree from the container. Avoid lifting the tree by its trunk. Disentangle and spread any roots that had circled in the container. Score the sides of the root ball to encourage lateral root growth.

4. Place the tree in the hole and backfill. Do not add amendments to the soil. Do not tamp with your feet. Form irrigation borders (if used) just outside the root ball. Amended backfills tend to restrict root spread and reduce top growth. Amended backfills also tend to wick water away from the root ball.

5. Spread mulch on the soil surface to a depth of three to four inches. Keep mulch away from the tree trunk.

6. Do not prune unnecessarily. Root initiation and growth is stimulated by stem buds and leaves. Therefore shoot pruning reduces root growth and prolongs establishment.

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NEW MASTER GARDENER CLASS

The 1993 spring class of Master Gardening will convene on February 24 at 6:00 pm at the County Health building located on Foothills Dr. in Sierra Vista. The three hour class sessions will be held each Wednesday thereafter for 12 weeks. Class size will be limited to 20 people.

Master Gardening is a partnership program where instruction on gardening, soils, irrigation, landscaping, and pest diagnosis and control are taught. Upon course completion students volunteer service to assist communities in the county with gardening, conservation, and environmental education, programs, and projects. With completion of the course and volunteer service persons will become Master Gardeners.

There is a $50 fee for the course to cover materials and those interested in attending or for further information are asked to call the University of Arizona Cooperative Extension office in either Willcox (384-3594) or Sierra Vista (458-1104).

COMING EVENTS

- The Arizona Native Plant Society will be holding a plant salvage on January 9 and 23. You are asked to meet at 9:00 am with shovels, crowbars, *etc.* at the intersection of Hwy 80 and Davis Road (approximately 3 miles S.of Tombstone) for the drive to the 47 Ranch. For information call Cathy Wertz at 432-4055. Commercial collectors are welcome. Cacti, ocotillo, and other plants will be available.
- On January 16 the Arizona Native Plant Society will be meeting for a clean up in Gold Gulch Canyon, Bisbee. Meet at Ricardo's in Nicksville at 8:30 am or at the Warren baseball park at 9:00 am. A pot luck lunch will be served at 1:00 pm.
- The next meeting of the Arizona Native Plant Society will be January 27 at 6:30 pm at Cochise Community College in Sierra Vista. Tucson botanist, Mark Fishbein will speak on Sky Island Alliance Conservation Program. For details call Nancy Stallcup at 378-1169.