Things to Expect

Citrus drop many young fruits in a natural thinning process. Navel drop more than others.

False chinch bugs migrate to greener pastures as the desert dries in the heat. They usually only attack plants with foliage on the ground.

Metallic flea beetles make their annual presence known. Especially fond of Mexican primrose (*Oenothera berlandieri*), they provide a much needed pruning to this plant.

Ironwoods begin to bloom in early summer. Its something to see.

Lawns will begin to show stressed areas if the sprinklers are not putting out water uniformly over the area.

Brown beetles suddenly appearing around the lawn indicate the emergence and mating time. See things to do for the treatments for the turf root feeding grubs that follow.

Cicadas buzzing incessantly mark the beginning of summer as no other sign.

Things to Do

Fertilize citrus after the annual natural fruit thinning. Doing it before the drop will make you think the fertilizer caused it.

Water lawns with a target of 1-in. per week during the hottest months. If some areas look weaker, check to ensure even water distribution.

Wildflowers - harvest seeds from your beds for next season. A simple way is to put a brown paper bag over the whole plant and pull it up. This lets the seeds stay in the bag.

Plant the base remnant from green onions. They will grow and you get multiple harvests from one “throw-away“ scrap.

Iron deficiencies are best treated with chelated forms of iron.

Transplant or plant palms in the summer. Warm soils stimulate the roots to start growing.

Provide a light shade (less than 50%) over tomatoes. This helps the plant and discourages the sun-loving insect that carries curly top virus from visiting the plant.

Terry H. Mikel  
Extension Agent, Commercial Horticulture

Local Agent Wins Award

Congratulations to Terry Mikel as the recipient of the 1999 American Nursery and Landscape Association’s Nursery Extension Award. This award aims to promote interest in and appreciation for the high quality of extension efforts that benefit the nursery industry. Terry writes horticulture articles for the *Communicator* and Saturday issues of the *Arizona Republic*.

Win a Prize!

Don’t miss the Reader’s Survey inside on pages 10 and 11. We work hard on each issue of the *Communicator* and value your input. Plus, we’re giving away one of the first copies of our new book, *Desert Gardening for Beginners*, to one lucky winner. Just be sure to complete the survey and return it by June 1, 1999 to be eligible for the drawing. You can mail the pre-addressed survey, or drop it by the office, or fax it to 602-470-8092 (please mark it “Attention Shany Hosier”).
In This Issue

A Gardener Is..., N. Reed .................. p. 14, 19
Arizona Rare Fruit Growers, D. Gross .......... p. 19
Ask a Master Gardener, S. Hosier .............. p. 5
Biotechnology: Threat or Salvation, R. Ryan .... p. 8
Calendar of Events, V. Carsey ................. p. 21
Computer Corner, K. Caudle ................... p. 20
Everything's Coming Up Roses, L. Bell .......... p. 10
Garden Book Reviews, L. Borer ................ p. 19
Garden Books for Kids, S. Leezer .............. p. 17
Garden Recycling, C. Gallagher ............... p. 20
Garden Tourist, J. Andrunas .................... p. 18
Gardener Profile: Marylou Coffman, S. Hakala . p. 15
Healthy Gardener: Africanized Bees, V. Burke .. p. 6
Neophyte Nook: Weed Control, M. Mekelburg .. p. 4
New Desert Gardening Book ..................... p. 16
Quick Takes, D. Clark ........................ p. 3
Rarin’ to Grow, V. Carsey ........................ p. 7
Reader’s Survey ................................ p. 11
Rosemary, C. Humme ........................... p. 7
Sautéed Onions, Peppers & Corn .............. p. 17
School Gardening Journal, L. Honaker ........ p. 16
Southwestern Low Desert Conference
Speaker Highlights, V. Carsey ................. p. 14
Summer Citrus Care Tips, G. Chott ............ p. 4
Turf and Water Use, K. Cohen ................... p. 13
Things to Do & Expect, T. Mikel ................ p. 1

From Me to You

Hot weather is coming, and soon. Don’t go inside and hide during the summer heat! There are things you can grow during our summers. I planted zinnias seeds a couple years ago and they were peeking out of the ground in 3 days — they would never do that in our cooler weather. Cantaloupe can be grown in a small backyard, depending on how many dogs and children are around. I grew so many one summer that I had to give some away. Nothing compares to the homegrown taste of fresh vegetables. Whatever you grow during our summer, try to group them together so it will be easier for you to take care of them.

If you have not been out to nurseries during the summer, start visiting them in the early cooler mornings. You might be surprised at the new introductions you see. As usual, check to make sure that anything you buy will survive our summer heat. You see Queen’s Wreath (Antigonon leptopus) growing everywhere, but did you know there is a deeper pink variety called “Baja Red?”

You can keep flowers blooming longer by deadheading them (picking off the dead blossoms). I keep snapdragons and pinks blooming during the summer by doing this. I talked to a gardener that had deadheaded his African daisies and had a 2nd blooming season. The first year, he cut off all the individual flowers; next year he took his weed eater to them. This year he just mowed them, and they were blooming again, almost as heavy as ever, in 2 weeks!

Val Carsey
Master Gardener
Quick Takes

No blooms, or next to none? Is it something you did — or didn’t — do? Maybe it is, maybe it isn’t. Going beyond such factors as frost damage and other adverse weather conditions, there are other, less obvious, reasons for spotty bloom.

• Maturity: Some species need to reach a certain age before they put on bloom. The jacaranda tree, for example, often takes 4 to 5 years to start blooming.

• Pampering: Some old favorites actually like the rough life. Bougainvillea is one of these. It produces a much better show if it is neglected a bit. No fertilizer, not too much water, and soil that is not too rich are the key to the best performance.

• Pruning: With some plants, flower buds are produced toward the end of the previous year’s growing season. If hard pruning removes the buds, there will be little or no material left to produce flowers in the Spring. Thus, if you need to prune your gardenia, prune selectively. Don’t shear it.

• Location: Some types of plants require more sun than others. Sunlight sufficient for good, healthy growth of foliage may not be enough to support flower production.

• Tidying Up: Don’t remove bloom spurs. Some species produce these stubby, leafless branches that persist after the current-year bloom has fallen. For Texas Mountain Laurel (Sophora secundiflora) and other plants with that characteristic, those bloom spurs are the foundation for next year’s crop of blossoms.

• Genetic Characteristics: Sometimes genetic programming is involved. With some varieties of citrus the typical pattern is to alternate between a year of heavy bloom and a year of light bloom. Many of the Mandarins (Tangerines), particularly the Kinnow, exhibit this trait.

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So you think you’ve got woodpecker problems? Things could be worse; just ask NASA. Woodpeckers riddled the insulation that coated the space shuttle Discovery’s external fuel tank, delaying the scheduled June 1995 launch for more than a month. The space agency estimated that the damage and consequent delay cost it $1 million.

For those dealing with more down-to-earth woodpecker problems, here are some things to consider. Woodpeckers do eat prodigious quantities of insects and are a valuable part of our ecosystem. All the same, there’s no disputing that the birds’ rhythmic pecking, called “drumming,” can become a major annoyance especially if the woodpecker’s chosen sounding board is your downspout, gutter, or chimney cap. The drumming, primarily a springtime phenomenon, seems to be related to the process of attracting mates and establishing territories.

When it comes to solving the problem, there are some things you can’t do and some things you can. You cannot trap, shoot at, or kill woodpeckers. Woodpeckers, and the closely-related flickers and sapsuckers, are protected by Federal law. You can, however, attempt to scare them away from pecking sites by using such items as predator silhouettes, foil strips, noisemakers, and by placing netting so as to prevent access to the surface under attack.

And there is at least one woodpecker activity that you don’t need to be concerned about: the cavities that the bird excavates in saguaro cactus. In this instance, cactus and woodpecker have maintained a mutually satisfactory co-existence for centuries. Woodpecker excavations do not put the saguaro at risk.

For more information, including a detailed list of ways to discourage unwanted woodpecker activity, contact Wendy Servoss, Wildlife Biologist, at the Phoenix office of the USDA’s Wildlife Services. Wildlife Services offers a packet of materials that can be mailed to you free of charge. Phone Number: 602-870-2081.

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Suppose someone tells you that he or she knows a way to produce new little plants by taking just a single leaf from a healthy plant and then rooting that leaf. You’d be thinking “leaf cutting” and you would be right. Next they tell you that, for this particular heat-loving landscape plant, the best way to do it is to cut off a leaf, together with an inch or so of stalk, and place the leaf downside up on the rooting medium. They comment that having the stalk to use as a handle makes it easier to steady the upended leaf while you pin it flat. Beginning to sound a little far-fetched?

They might well be describing one method of propagating the Umbrella Plant (Cyperus alternifolius). This plant,

Continued on page 5.
Summer Citrus Care Tips
Care of Citrus Trees
When Owners Are Gone

Water is the most important asset during the hot summer months. Watering systems must be working properly for “deep watering.” Deep watering means to water the soil down 3 ft. deep for adult citrus trees. A steel rod pushed into the wet soil will show the depth of water penetration. Determine watering time this way before leaving for the summer or for vacations. For adult trees, set the timer to water at 10-day- to 2-week intervals (or every 7-10 days in sandy soils). Trees that were transplanted 3 or more years ago are considered mature trees. Water out to the tree drip-line, but do not water the tree trunk.

For newly planted trees: after planting, deeply water every 2-3 days during the first 2-4 weeks. Thereafter, deeply water at 5-7 day intervals all summer. Deeply water to below the depth of the rootball.

Avoid pruning or trimming citrus trees during the summer if possible. When leaves are removed, this opens up the possibility for sun intrusion onto the bark of the tree trunk or branches. Sunburn of the trunk or branch bark can seriously damage a tree, leading to diseases. Protect tree trunks or any branches that are exposed to late morning through late afternoon sun on all citrus trees. Use white latex paint sold for that purpose.

Proper fertilizing in January, May and August is a good way to assure a good fruit crop and a healthy tree. Don’t over-fertilize, this may burn the tree roots. Contact the Master Gardeners at the Maricopa County Extension Office for Publication MC91 for information on fertilizing citrus trees.

A reliable neighbor, friend or gardener who will check your trees for proper care is an invaluable asset. Usually a check done weekly or biweekly is adequate. If you don’t want to leave it to their discretion, inform your “tree” sitter on the exact care for your trees.

George Chott
Master Gardener

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Neophyte Nook
Weed Control Strategies

One of the primary areas that I see a need for education is in the world of weed control. Too many homeowners assume that a thorough yard clean-up with a string trimmer once or twice a year is good weed management.

But as the old saying goes, “One year’s seed is seven year’s weeds.” Letting weeds go to seed and whacking them down occasionally will never get you ahead of the curve. According to the Arizona Pesticide Applicator Training Manual: “Controlling weeds is best done with a season-long, integrated approach...using cultural practices, mechanical procedures, and chemical control.”

Good cultural practices include using weed-free seed, sod or mulch, and keeping turf and groundcovers healthy to squeeze out weeds. Mechanical procedures include hand pulling, hoeing, and proper timing of turf aeration and dethatching.

Herbicides come in pre-emergents, to get the weeds during germination, and post-emergents, to get them after they’re up. Our two rainy seasons in the low desert are conducive to using a pre-emergent, as each application lasts about 6 months. Timing the application within 3 weeks of adequate rain to activate the pre-emergent is important. If you miss, you’ll spend more time watering in the chemical than it took to apply it.

Post-emergents must be applied on a rain-free day, and are most effective when weeds are young and actively growing, and when humidity is high and temperatures are in the 65°F to 85°F range. Also, while the spray nozzle should be set to atomize the spray, winds should be no more than 7 mph to prevent drift.

Be sure to wear protective clothing and, if you do this for a living, be licensed with the Arizona Structural Pest Control Commission.

Mike Mekelburg
Master Gardener

Please visit our web site: http://ag.arizona.edu/maricopa/garden/
Ask a Master Gardener

If peach trees are grown from peach pits, will they produce the same quality fruit of the original tree?

I am growing several different vine crops in the garden at the same time. Will cross-pollination occur? Will there be a resulting off-flavor of the fruits?

The answers can be found if we dredge up some botany we forgot we knew. Pollination is the transfer of pollen grains (containing male sex cells) to the pistil, or female part of the flower. This can be accomplished in thousands of ways, including wind, direct physical contact, gardeners’ “bee” brushes, insects and other animals called vectors.

Fertilization is the next step. It is the fusion of male sperm and female egg, and takes place in the ovule of the female. The result is a new generation of plants, called the F₁ generation. These offspring lie dormant inside the seed, waiting for optimal environmental conditions to germinate. If a plant fertilizes itself (i.e. “breeds true”), then the offspring will be genetically identical to both the parent and each other. If the plant is fertilized by another individual (i.e. “outcrossing” or “cross-pollination”), then the offspring will each have some mix of characteristics from both parents.

Once the egg has been fertilized by a sperm, many changes to the surrounding female tissue occur. The ovule will become the seed containing a baby plant, and the ovary, petals, and other parts can become the fruit or nut. So you see, the parts that we eat are all female parent tissue, not part of the new generation. Some people erroneously think that planting certain varieties near each other will result in odd-tasting fruits. Impossible! If the fruits taste funny it is due to 1) an environmental condition, disease, or pest; 2) the seed you purchased was contaminated with seeds from another variety; or 3) the plants you grew last year were able to sneak a few seeds by you into the soil!

Shanyn Goodnight Hosier
Instructional Specialist

Quick Takes (Continued from page 3)

with leaves that seem to have been borrowed from a fan palm, is often recommended for poolside plantings in the Phoenix area. But why place the leaf wrong side up? Because success depends on getting the upward-angled leaves of C. alternifolius in good firm contact with the rooting medium. To maintain that close contact, the leaf is pinned down, using hairpins, bent paper-clips, or something similar.

Why does it work? Because, like other plants that are capable of being propagated by means of leaf cuttings, C. alternifolius has leaves that contain meristem tissue. This tissue with clusters of cells capable of dividing makes possible propagation by leaf cutting. Why bother? After all, C. alternifolius re-seeds itself, and can also be propagated by division. Call it the “amaze-your-friends” syndrome, or just the opportunity to try something new.

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If you are planning a trip back East, you might want to take advantage of a free offer from the Gardens Collaborative. The organization offers a brochure/map highlighting the 24 world-renowned gardens, arboretums, and historic houses in the Philadelphia-Wilmington area. Send your request, and a self-addressed envelope with two stamps, to: Gardens Collaborative, 9414 Meadowbrook Ave., Philadelphia, PA 19118.

Dolly Clark
Master Gardener
Healthy Gardening

Africanized Honey Bees

We have all heard about “killer bees,” but what are they really? “Killer bees” are a strain of honey bee known as Africanized honey bees. They look like the common European honey bee and away from the hive they are no more aggressive than other bees or wasps.

In 1956, Warwick Kerr, Brazil’s most prominent geneticist, brought the first queen bees to Brazil from Africa in order to improve honey production in Brazil. In 1957, swarms escaped from Rio Claro Apiary and began mating in the wild. The bees gradually headed north. In 1965, the term “killer bee” appeared in Time magazine and the term, a media invention, has persisted. In 1986, Africanized honey bees entered southern Mexico, and by October 1990, the first Africanized honey bees in the U.S. were discovered near Hidalgo, Texas. By early July 1993, the bee invaders reached southern Arizona.

A sting by one Africanized honey bee is the same as one sting by a common European honey bee; it is not more powerful or more potent. So why did they become known as “killer bees?” Africanized honey bees defend their hives quickly and more aggressively, and in greater numbers. They have been known to follow people for more than a mile and can attain speeds of 12-15 mph.

With one bee sting (whether European honey bee or Africanized honey bee) most people will have a local reaction. This involves local pain at the site for a few minutes and swelling and a mild rash which may last 1-2 days. If the stinger is still present, remove it. Do not pull with fingers or tweezers, because this will squeeze more venom into the wound. Scrape the stinger out using a fingernail, the edge of a credit card, or a dull knife. Rub each sting for 20 minutes with a cotton ball soaked in meat tenderizer (or apply a baking soda solution) to neutralize the venom and relieve the pain. Then wash the area with water and swab with alcohol. If the sting is to the eyelid or ear, consult your health care provider. Other immediate treatment includes cold compresses or ice for the swelling, oral antihistamine medicine, such as Benadryl, and analgesic medicine, such as Tylenol.

Systemic reactions occur with a severe allergic reaction or mass envenomation. Systemic reactions occur within 15 minutes of stings and may include the following:

- Skin: flushing and hives.
- Respiratory: upper airway obstruction, laryngeal edema (feeling of throat narrowing), difficulty breathing.
- Abdominal: bowel spasm, diarrhea, uterine contractions.
- General: circulatory collapse, shock, low blood pressure, fainting, loss of consciousness.

If you are one of the 1-2% of the population with a clinical hypersensitivity to insect stings, this is a medical emergency. Call 911 if there is a phone nearby, or use an emergency Epinephrine injection if one is available (Ex. Epi-Pen).

If you receive more than 10 but less than 15 stings, (and you are not allergic to bee stings), this may cause vomiting, diarrhea, headache, and a fever. This is a toxic reaction related to the amount of venom received. You should consult your doctor for advice, after removing the stingers and instituting local measures.

Mass Envenomation occurs when one suffers more than 15 stings. This is also a medical emergency. If you witness this, encourage them to run and seek shelter. Call 911. If in a remote area after the attack, use Epinephrine injection (if available in a prescribed bee sting kit), institute first aid for shock and get help ASAP.

What should you do if you are attacked by Africanized honey bees? Run away as fast as you can into a house or shelter or a car. Do not stand still to try to fool the bees. Do not try to swat the bees. Do not stop to retrieve your belongings. Run away; some suggest you run as fast as you can in a straight line, others suggest a zig-zag pattern may confuse the bees. If no shelter is available, run through tall brush, since this may confuse and slow down the bees since they don’t see well and have trouble navigating through bushes and leaves. If you cannot run or escape, cover up with a light-colored blanket or tarp. Bees will target your head and eyes, so try to cover them up if possible.

What can you do to be safe around bees? Remember to always be alert to your surroundings. Check your home and yard for bees and bee hives. If you find a colony, leave it alone. Call a beekeeper or pest control company for removal. If the bee colony is in a public neighborhood Continued on page 18.
Plant Profile: Rosemary
*Rosmarinus officinalis*

We all see so much rosemary around that oftentimes we take it for granted. Basically, there are two kinds of rosemary: the prostrate variety we are so familiar with, and the upright varieties. I fear that many times rosemary is used in the landscape only because it will grow here in the desert. A young kid once asked me why flies walk on the ceiling. The only response I could think of was “because they can.” Rosemary is the plant that will grow in the full sun with little water, gets few, if any, pests, suffers from practically no diseases, has no thorns, is evergreen, is controllable and for many other reasons is popular.

How many of us realize what a store of wonder lies in our humble rosemary? Rosemary is classed as a tender perennial. It grows from seed, which germinates around 50°F, or from cuttings. Cuttings should be cut about 6-in. long in the soft wood stage. They can be taken any time the plant is actively growing. Kept damp and warm, they will root in about 2 months. Rosemary also roots well when layered, which it will do for you naturally if you let the stems get a little long and drag on the soil.

The cuttings need to be stuck into a very quick draining medium. I’ve never noted a huge improvement using any of the hormone compounds, always getting about 60-75% survival rate. Regular misting or bottom watering are required for a good stand. I do all this by hand; I bet that a mist system on a timer would get better rooting.

Our rosemary first blooms in the early spring and might continue throughout the growing season. After the flowers are spent, the seeds will form and ripen in the calyx. They are easily harvested by rubbing the branch over a paper sack and letting the old flowers with their seeds fall in. Then just let everything dry thoroughly in the sack. Rub between your palms to release the seeds and winnow away the chaff to get the shiny little seeds. This is a very enjoyable process because of the great smells.

Which ever way you propagate, pot your babies up into 4” pots of a coarse soil-less mix and give them lots of bright light and a balanced fertilizer starting with a very dilute solution for the first week and graduating up to full strength after 3 wk. After about 6 wk. they’re ready to establish in the garden or into larger pots. Rosemary is a great plant for pot culture and in fact is very popular in topiaries. It’s easy to maintain to a small size, especially if there’s a good cook around. It is one of the most versatile herbs in the kitchen.

Rosemary gets its name from two Latin words — *Ros Marinus* which means “Dew of the Sea” or “Spray of the Sea.” This name comes from rosemary’s natural habitat growing near the Mediterranean Sea. It grows best in areas of 12 to 60 in. of rainfall per year in a Zone 9 (USDA) climate. The adult plant needs at least 2 ft. of soil depth and it will grow in a pH range from 4.5 to 8.7. Studies have shown the best essential oils production is at the alkaline end of the range in a heavily calcium laden soil. However the largest plants are produced nearer the acid side where upright varieties can reach 6 ft. tall and 4 ft. wide.

The upright plants can be had in at least 14 varieties. The variation is primarily in growth habit, hardness and most noticeably, in flower color. Flowers can be had in various shades of blues, violets, pinks and white. The characteristic smells of rosemaries come from the oils packed in the leaves. Fresh leaves contain about 2% essential oils and dried, it contains around 15%. Some of the compounds contained in rosemary are insecticidal. Particularly one ingredient, *d-limonene*, is the active ingredient in many flea soaps.

*Charlie Humme*
*Master Gardener*

**Rarin’ to Grow**
**May & June**

**Flowers:** Mexican Sunflower, (Tithonia), Salvia and Sanvitalia (to May 15); Coreopsis, Dusty Miller, Impatiens and French Marigolds (May only); Celosia (Cockscomb), Coleus and American & African Marigolds (to June 15); Balsam, Cosmos, Four O’Clocks, Globe amaranth, Kochia, Lisanthus, Portulaca (moss rose), Purslane, Sunflower, Vinca, and Zinnia.

**Vegetables:** Okra in May, Cantaloupe/Muskmelon in May and June and Armenian cucumbers in June. Start getting your soil ready for the busy planting season of vegetables in July and August.