WINTER 2017

The Garden Beet

University of California
Agriculture and Natural Resources | UCCE Master Gardener Program

In this Issue

This newsletter is provided by the UCCE Master Gardener Program of Orange County. We are UC trained Master Gardener volunteers ready to answer your gardening questions. Master Gardeners extend research-based information to the public about home horticulture and pest management through classes, hotlines, community events and demonstration gardens. Whether you want to know what to plant when, how to manage a pest, or how to become a master gardener, you can find it by visiting our website at http://mgorange.ucanr.edu

GENERAL CARE AND MAINTENANCE OF PALMS

By Don Hodel, UC Cooperative Extension Horticulture Advisor
Los Angeles Country

Care and maintenance practices of landscape palms are relatively easy and simple. Only occasional pruning to remove dead leaves and/or fruit stalks to prevent dangerous or messy litter, regular irrigation, and one or two, annual applications of a "palm-special" fertilizer are necessary.

Fertilization:

Palms are sensitive to deficiencies in nitrogen (N), potassium (K), and magnesium (Mg). Fertilize according to label directions with a "palm special" fertilizer, one that has high N, K, and Mg with micronutrients. Nitrogen deficiency shows as a generally yellowing of all leaves. Potassium and magnesium deficiencies appear on older leaves and are characterized by yellow or orange flecking and yellowing along the outside of the leaf.

A micronutrient deficiency can occur with improper soil pH or when root activity is low, which can be due to a number of factors, including low temperatures, mechanical damage, disease, and too much water/poor drainage/lack of oxygen. Its symptoms appear on the newest leaves and include interveinal chlorosis and/or stunting.

Irrigation:

Irrigate established palms at about 100% of evapotranspiration at the site. In coastal Southern California, this averages about 30-44 inches of water annually. Palm roots need lots of oxygen, so well-drained soil is critical. Poor drainage and/or too much water keep soils constantly wet and are bad for palms, especially those that have been recently planted and are in the establishment phase.

Establish an irrigation regime based on soil moisture levels, not a calendar or clock. Irrigate large, established

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landscape palms when the soil two inches deep becomes dry. If the soil at that depth is moist, do not irrigate. At each irrigation apply enough water evenly over the root zone to moisten the soil to about one foot deep. This is about 1.5 to 2 inches on sandy or light soils and about 2 to 2.5 inches on clay or heavy soils. If necessary, divide each irrigation into several shorter irrigations to avoid run off.

Mulch:

Remove all groundcovers and shrubs within two feet of the palm trunk. Apply a mulch of organic matter about three inches deep around the base of each palm.

Pruning and Sanitation:

Overzealous leaf removal and trunk skinning with a chain saw can leave gaping wounds through which diseases can enter the trunk and cause decay. Be conservative when pruning and refrain from using a chain saw. Prune out only dead leaves or, at the most, leaves up to the horizontal (an

imaginary line through the middle of the crown, from 3 to 9 o'clock). Avoid removing leaves above the horizontal. Although sometimes esthetically pleasing, refrain from excessive trunk skinning and ball shaping since they can create large wounds. Unpruned trees never have *Fusarium* or *Thielaviopsis* diseases (see below). Prevention through sanitation and more conservative leaf pruning and trunk skinning is the only way to control these diseases.

Disease Problems:

Two deadly fungal diseases of Canary Island date palm (CIDP) are linked to pruning. Pruning tools spread *Fusarium* wilt (FW), which causes a decay of the vascular system. The first symptom of FW is the leaves dying in the lower part of the crown first and then progressively moving up to the top. A leaf just turning from green to brown that has green leaflets on one side of the frond and brown leaflets on the opposite side is diagnostic for this disease.

There is no cure and it is 100% fatal but nearly 100% preventable through safe and sanitary pruning practices. Disinfect all tools before pruning each tree by soaking them for five minutes in household bleach or sterilizing the blade with a blow torch for 5 seconds per side. Prune these palms with a straight-edged saw rather than a chain saw. The former can be thoroughly disinfected before pruning a tree while it is nearly impossible to clean a chain saw.

Do not replant a CIDP at a location where a palm with FW was removed because the disease survives in the soil and it can be taken up by the roots of the newly planted palm. Indeed, it is probably most prudent not to replant with any palm because host range susceptibility to FW has not been fully established. Although never observed in a landscape situation, FW was successfully passed to a California fan palm (*Washingtonia filifera*) using FW-contaminated soil from a date palm with FW in an experiment at the University of California, Riverside.

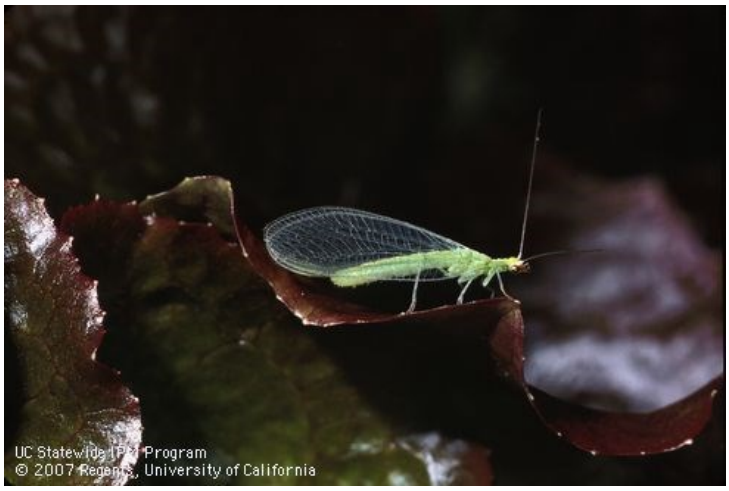
The second disease is *Thielaviopsis*, which causes interior, wet or dry trunk decay. Coined "sudden crown drop" (SCD), this decay cannot be detected visually from the outside bark, which appears normal. Sufficient healthy tissue remains inside the trunk to maintain a normal-appearing crown of leaves. However, this amount of healthy tissue is insufficient to maintain the structural stability of the tree. Eventually, and without warning, the immense weight of the crown of leaves and/or excessive wind load snap the trunk, bringing down the potentially destructive and deadly crown and upper part of the trunk. Like FW, there is no cure or treatment for this disease. The use of a heavy rubber mallet to pound

and sound systematically for hidden decay in the upper part of the trunk can be useful in detecting SCD.

A third disease, called “pink rot,” commonly accompanies these two diseases. The fungus *Gliocladium* causes pink rot. It is an opportunistic and weak pathogen. It cannot infect and kill healthy, vigorously growing palms. It can only infect and kill wounded and/or stressed palms, and as such, frequently accompanies FW or Sudden Crown Drop. Indeed, it may be pink rot that actually kills the palm before the FW can kill it. Fungicides, such as Cleary's and Mancozeb, can temporarily control pink rot; however, unless the disease and/or environmental conditions stressing the palm are corrected, pink rot will continue to be a problem.

GREEN LACEWINGS: A NATURAL ENEMY OF MANY GARDEN PESTS

Natural enemies are organisms that kill, decrease the reproductive potential of, or otherwise reduce the numbers of another organism. Natural enemies that limit pests are key components of integrated pest management programs. Important natural enemies of insect and mite pests include predators, parasites, and pathogens.



Green lacewings are generalist predators and are commonly found in agricultural, landscape, and garden habitats. Adult green lacewings are soft-bodied insects with four membranous wings, golden eyes, and green bodies. Adults often fly at night and are seen when drawn to lights. Some species of green lacewing adults are predaceous, others feed strictly on honeydew, nectar, and pollen.

Females lay their tiny, oblong eggs on silken stalks attached to plant tissues. Depending on the species, eggs are laid singly or in clusters, each on an individual stalk. Eggs are green when laid, then darken before hatching.

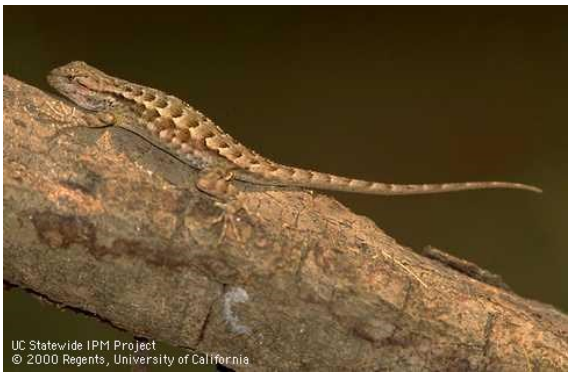
Lacewings undergo complete metamorphosis with eggs hatching about four days after being laid, and larvae develop through three instars before pupating. Larvae, which are pale with dark markings, look like tiny alligators. Larvae are flattened, tapered at the tail, measure 3-20 mm (1/8 to 4/5 of an inch) long, have distinct legs, and possess prominent mandibles with which they attack their prey. Larvae prey upon a wide variety of small insects including mealybugs, psyllids, thrips, mites, whiteflies, aphids, small caterpillars, leafhoppers, and insect eggs. Pupation occurs in loosely woven, spherical, silken cocoons attached to plants or under loose bark.

All stages of lacewings can survive mild winters and can be found throughout the year in many agricultural areas of California. Green lacewings are commercially available and are among the most commonly released predators.

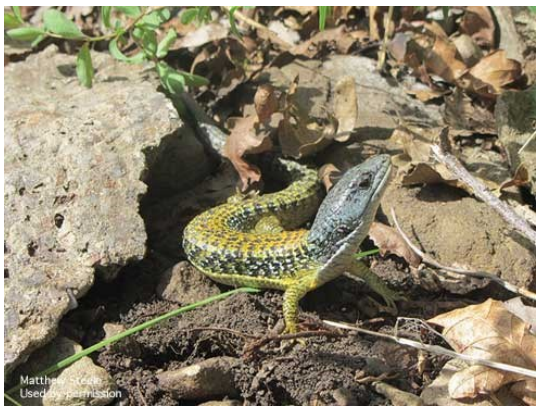
LIZARDS—GOOD IN THE GARDEN

Some lizards eat plants, though most lizards feed on insects. In California, the most common types feed on beetles, ants, wasps, aphids, grasshoppers, and spiders. Lizards cause no measurable damage to plants in gardens and may be beneficial by eating pest insects and should be left alone.

The most commonly encountered genus of lizards in California is *Sceloporus*, including the western fence lizard, *S. occidentalis*, sometimes commonly called the blue belly lizard. This lizard is one of the quickest and most versatile of the reptiles. It is also one of the most easily seen. During its active period from April to October, it frequents rocks, trees, fences, and buildings. These lizards are 6 to 9 inches long and olive, brown, or black with a pattern of paired blotches or wavy cross bars or stripes down the back. The name "blue belly" comes from the blue patches on the sides of the belly. The adult male also has blue patches on the throat. By flattening his sides and raising his head the male shows his blue markings to announce his presence and frighten away other males.



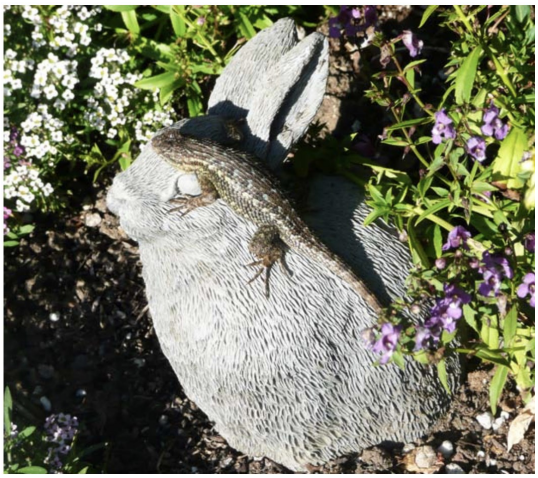
A common foothill resident is the alligator lizard, genus *Elgaria* (formerly called *Gerrhonotus*), that is 8 to 13 inches long and yellowish-green to olive brown. These lizards are primarily found in forested areas at elevations of 1,000 to 11,000 feet. They are not territorial and have a home range of 1 to 2 acres. In contrast to their common name, they are not closely related to alligators and are in fact a generally harmless lizard.



Lizards are generally egg layers; however, some species of horned lizards (horned "toads") and the northern alligator lizard produce their young alive. The most common species of lizard in California, the western fence lizard, lays 3 to 20 cream-colored, soft-shelled eggs in pits of damp soil. Eggs are generally laid from May to August, and the young typically hatch from July to September. Lizards rely on their environment to warm themselves and hibernate during winter months.

An interesting trait of lizards is their ability to lose their tails when handled roughly or pursued by an enemy. The separated tail continues to wriggle while the rest of the lizard escapes. This seems to be a method of self-defense and does no particular harm to the lizard. In time, a new tail will usually grow back.

Occasionally, lizards can enter homes and buildings through small openings, especially gaps beneath doors. They are excellent climbers so they can enter at any structural opening 1/4 inch or larger.



Should a lizard enter your home, there are several ways to capture and release it outdoors. None of the methods is easy; so, once the lizard is relocated outdoors make sure it can't reenter the home.

For the adventurous, there is a method of capture known as "noosing." Noosing involves using a pole such as a fishing rod to slip a noose over the lizard's head and gently

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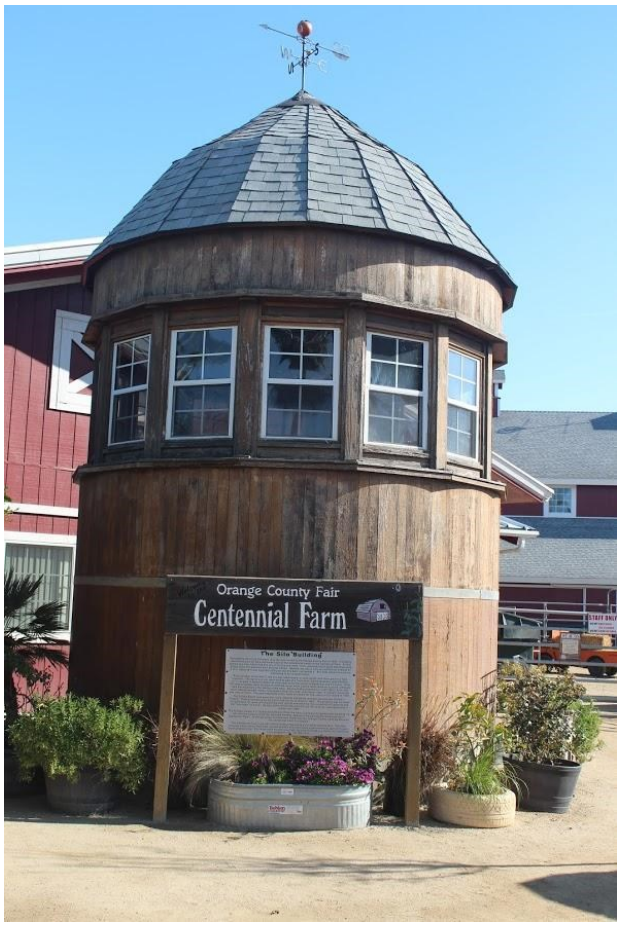
OUT & ABOUT WITH MASTER GARDENERS - CENTENNIAL FARMS

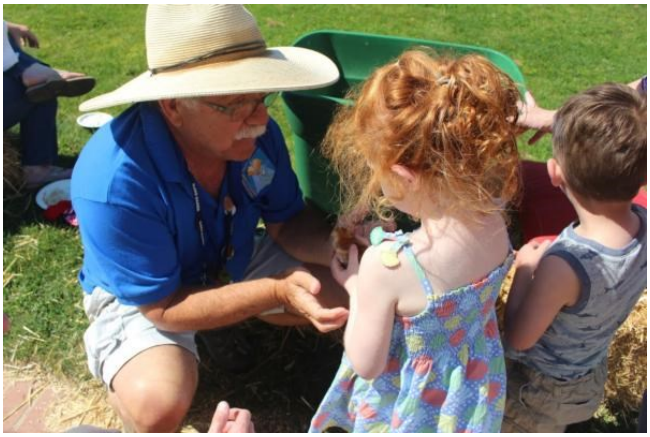
Orange County Master Gardeners are proud to volunteer alongside community volunteers at the OC Centennial Farm serving as docents for student tours. Located on the OC Fair and Event Center grounds, this three-acre farm was created over 25 years ago to



educate youth about the importance of agriculture in our daily lives. Students who visit experience a wide variety of fruit and vegetable gardens and an array of livestock.

The walking Farm tour introduces the students to the entire Farm featuring the animals, the milking barn, a bee hive, vegetable and herb beds, as well as fruit and nut trees. Where appropriate students are allowed to hold, touch or smell items at the different exhibits. There is a lesson on chicks from a fertilized egg to hatching at 21 days. Students plant radish seeds in containers which they take back to their classrooms. While planting the seeds, they learn about the five things required for a plant to grow – soil, sunlight, air, water and food (nutrients).

The majority of the tours are given to Pre-K, kindergarten, first-grade and special education classes. Master Gardeners like to engage the students



on the tour. One popular way is to 'build' a pizza with them while walking the farm. The docents point out the growing wheat that is used to make the crust of the pizza, tomatoes which are used for the sauce, and other veggies and fruit of their choice used for toppings. Finally when they visit the cows and goats, they learn that cheese is made from milk from these animals.

Centennial Farm is located at 88 Fair Dr., Costa Mesa. Most docent-led tours occur weekdays, 9 a.m. to 12:30 p.m. during the school year. Reservations for Farm tours can be made online only. The Farm is open to the public Monday – Friday 1 p.m. to 4 p.m. and weekends 9 a.m. to 4 p.m. For more information visit: http://ocfair.com/community-programs/centennial-farm/tours-and-reservations/.

WHY HAVE A BACKYARD ORCHARD?

Most likely for home food production with the hobby and exercise experiences that come along with it. Fruit trees, their form, fruit, bark, and foliage, may also serve an aesthetic role in the home landscape.

Sometimes, the incentive for having fruit trees in your backyard may simply be nostalgic, by sparking fond childhood memories.

For whatever reason, the home orchard is a popular and can also be a fruitful endeavor. When the decision to create a home orchard is based on little more than the desire to plant a few trees and anticipate fruit, then failure can be the probable outcome. When a home orchard is based on an understanding that it is, in fact, a living expression of genetics interacting with soils, weather, tree spacing, pests, and many other factors, then the outcome will likely be one of success.

For a wealth of information ranging from site and tree selection to planting, harvesting and postharvest to so much more visit: http://homeorchard.ucanr.edu/

Continued from Page 4 Lizards In the Garden

tightening the noose to capture the lizard, which can then be safely carried outdoors and set free. This method requires a degree of skill because the noose must be slowly lowered over the lizard's head and then quickly but gently tightened by lifting the lizard with the pole before it escapes. Nooses can be made out of relatively stiff materials like dental floss or fish line.

Another way to trap a lizard is to carefully put a small box or other container over it. With the lizard in the box, gently slip a piece of cardboard under the box to cover the opening. Pick the entire unit up and take it outside to be released.

Alligator lizards move somewhat slower than western fence lizards and often can just be grabbed gently by hand and taken outdoors. Because an alligator lizard may bite, you can wear a glove when you grab it.

If you are fortunate enough to have these bug-eating visitors in your garden, welcome them!

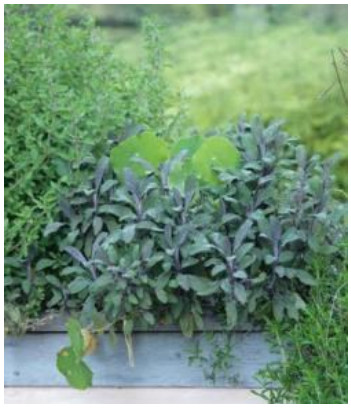
TIPS FOR THE WINTER GARDEN

1. **Winter Gardens are abundant in So Cal!**

Unlike those in many parts of the country, Southern California gardeners can just keep on growing. While most of our veggies and other plants (including weeds!) don't grow as fast in the winter, we can continue to plant and harvest many varieties of fruit trees, vegetables, and herbs.

2. **Fortunately, December is a quiet month in the garden.**

During the busy days of December, the veggie garden can produce delicious produce for your holiday meals. This is still a good time to plant and harvest greens, broccoli,



cauliflower, peas, and other cool weather vegetables. And it is a great time to plant and use herbs! Rather than buying expensive packets of herbs that may or may not be so fresh, why not plant three or four of your favorite herbs in a pot outside your kitchen? Many types of herbs are available in 3 or 4 - inch pots at local nurseries now. You'll have fresh sage, thyme, parsley, marjoram, rosemary, and other fragrant herbs to snip and use throughout the holidays. A pot of herbs also makes a beautiful hostess gift!

3. 

So much to do in January!

In Southern California gardens, January is a busy month. In the vegetable garden, cool

weather vegetables are still thriving. As always, water them as needed, keep the weeds under control, and check for pests. This is the time to prune your roses. Visit http://ucanr.edu/sites/mgslo/files/272360.pdf for detailed pruning guidance. It is the also the month to plant bare root roses and bare root deciduous fruit trees. Bare root plants are less

expensive than potted ones and, because they are planted when they are dormant, they experience less planting shock than those planted from pots. Apples, pears, pomegranates, peaches, nectarines, apricots,

Continued from Page 7 "Tips for the Winter Garden"

cherries, and other deciduous bare root fruit trees are available this month.

4. **February is really the beginning of spring in Southern California.**
This is the time to start prepping your vegetable garden for warm season planting. As the weather warms up, you may notice that some of the cool weather vegetables and greens are becoming infested with aphids. Here are some suggestions for controlling aphids, starting with the least toxic. Be sure to treat the underside of leaves. Repeat treatments at frequent intervals may be necessary.

If only a few leaves are affected, you can run a gloved finger along the surfaces, squishing as you go.

- Blast the plants with water from a hose or sprayer.
- Spray with an insecticidal soap.
- Spray with a botanical insecticide containing neem oil. Follow label instructions.

If the aphid problem is not severe, you can leave the job to Mother Nature. Aphids are a favorite meal for many beneficial insects, such as lady beetles, soldier beetles and lacewings. Create a good habitat for these beneficials in your garden, and they will help you manage the aphid population.

Following the final harvest of your cool weather vegetables and greens, it is time to prepare the soil for the spring planting by clearing weeds and debris, cultivating, and adding compost and organic vegetable/ tomato fertilizer. Early February is also the time to start warm season plants, such as tomatoes and peppers, from seed.

5. **February is time to start feeding.**

Deciduous fruit trees and roses are coming out of dormancy in February. This is the time to begin feeding with organic fruit tree and organic rose fertilizers. Citrus trees also need feeding this month with organic citrus fertilizer. Follow the directions on the fertilizer packages, and look forward to spring!

There is nothing pleasanter than spading when the ground is soft and damp.

- John Steinbeck

CALENDAR

Norman Murray Community Center Gardening Series

24932 Veterans Way, Mission Viejo, 92692

- California Natives, Dec. 7th 10:00 a.m. -11:00 a.m.
- Butterfly Gardens, Feb. 1st 6:00 p.m. - 7:00 p.m.

Food + Farm Lab Garden Workshops

10:00 a.m. - 11:00 a.m.

Great Park Farm + Food Lab, Orange County Great Park, 6990 Marine Way, Irvine, 92618

- Pruning Fruit Trees, Jan. 20th
- Raised Beds Part I, Feb. 17th

Yorba Linda Public Library Gardening Series

7:00 p.m. - 8:30 p.m.

18181 Imperial Hwy, Yorba Linda, 92886

- Colorful Spring Gardens, Jan. 4th
- Seed Saving, Jan. 24th
- Tomato Gardening, Feb. 8th

Osher Lifelong Learning Institute Gardening Series

1:00 p.m. - 2:30 p.m.

Ruby Gerontology Center, 800 N. State College Blvd, Fullerton - CSUF Campus 92831

- Rose Care, Jan. 18th
- Tomatoes, Feb. 1st
- Warm Season Veggies, Feb. 15th

Susie Q Senior Center Gardening Series

9:00 a.m. – 10:00 a.m.

380 Third Street, Laguna Beach, 92651

- California Natives, Jan. 20rd
- Eat Your Greens: Plant a Salad Bowl, Feb. 10th

Foothill Ranch Library

2:00 p.m. – 4:00 p.m.

27002 Cabriole, Foothill Ranch 92610

- Roses, Jan. 13th

December 2017

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31						

January 2018

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14	15	16	17	18	19	20
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28	29	30	31			

February 2018

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28			

The glory of gardening;

Hands in the dirt, Head in the sun, Heart with nature.

To nurture a garden is to feed not just the body, but the soul.

- Alfred Austin