**Lithops**

by Nora Graf

Lithops are unusual plants. They are sometimes called living rocks but that is just the beginning of the interesting characteristics. They were discovered by William John Burchell, a botanist and artist, who first thought he had found an odd-shaped stone. Lithops are a succulent that form their own genus within the ice plant family. The name comes from ancient Greek, lithos meaning stone and ops meaning face. Their native lands are Namibia and South Africa. Lithops are supremely adapted to dry habitats being able to survive long droughts up to 20 months long. The average rainfall where they live is about 2 inches per year. Plants may completely disappear during droughts. The plant does spread by division but since it is so slow-growing it takes many years for the plant to expand.

They look odd, like two rocks nestled against one another. What you are seeing is actually two leaves that are opposite one another and attached at the base. The tops of the leaves are somewhat flattened and are the only exposed part of the plant. Leaves have a mottled appearance that helps camouflage them. Over time the fissure between the leaves gets larger and a flower is produced in October and November. The flowers are dramatically large, somewhat daisy-like and yellow or white, maybe more like a cross between a daisy and a cactus. Most species' flowers have a spicy-sweet aroma. Lithops don't flower until they are between 3 and 5 years old. Cross-pollination is required for seeds to form. The seed pod is a dry capsule which opens when it gets wet. Seeds are actually ejected by raindrops falling on them. When the capsule dries it re-closes. Once the plant flowers the two leaves start being absorbed by the plant and replaced by two new leaves. The new leaves form inside the old leaves.

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Lithops are often sold as houseplants and I’m sure they are available if you want to give them a try. They need a well-drained soil. The recommendation is 25% decomposed granite or pumice, 50% compost and 25% sharp sand. Or you can use a commercial...
I mentioned back in May that I have been doing the newsletter for 20 years and said that there might be some changes coming. Well I’ve decided that it is time to cut back a bit.

My “retirement” is busier than ever and trying to keep my gourd art business going is really more than a full-time job. So the newsletter will be going to 6 issues a year.

There will be issues for Feb/March, April/May, June/July, Aug/Sept, Oct/Nov and Dec/Jan. For example, the Feb/Mar issue would be available by Feb 1 (or close to it), April/May would be April 1 and so on. Deadlines will obviously change also. Short announcements would be needed by the beginning of the last month of the issue so for the Feb/Mar issue announcements would be needed by the beginning of the last week of January. Long articles would be needed by the 10th of the same month.

Well, that is a bit confusing but I will work up a deadline calendar that will appear in the newsletter starting in December. I try to make sure time sensitive materials go in at the appropriate time. Other items may not go in immediately but will show up in a later issue.

Everyone is still welcome to submit articles and announcements. In fact articles, are greatly appreciated! Just keep the deadlines in mind.

Lithops need bright light but not direct sun, at least four to five hours per day. In higher elevations they might need full sun to get enough light. A sign of a lighting problem is if you see the plant growing way out of the soil. They are getting too much water and not enough light. The leaves should be at the soil level. You only want to see the leaf surface. Excessive heat can kill the plant. Another interesting twist is that if they experience poor lighting because of a long period of overcast days or in the wrong location in a house they will lose their tolerance of bright light. If that happens they need to be reintroduced to bright light gradually.

Do not fertilize except every few years. Any fertilizer should be applied in early spring or early fall. You will need a low-nitrogen, water-soluble fertilizer for houseplants mixed at 1/2 the recommended dose.

Few pests bother these plants. Sometimes mealy bugs or root mealy bugs may harm them. Control is simply soapy water or a q-tip dabbed with alcohol. Sometimes birds will peck holes in them. In home environments spider mites can be a problem. While it is tough to see the mites, evidence of them comes in small white spots of scar tissue on the leaves. You can use a miticide for control.

For more information: [http://www.lithops.info/](http://www.lithops.info/)

If you are interested in growing lithops there is a nursery in Tucson that sells them.

**Living Stone Nursery/Plants of the Southwest**

[http://lithops.net/aboutus.htm](http://lithops.net/aboutus.htm)

50 E. Blacklidge
Tucson, Arizona
520-628-8773
Open Wednesday thru Saturdays, but best to call ahead.
MG Recognition Picnic

Thanks to everyone for the work they do for the Master Gardeners program!

150 hours
Karen Austermiller
Jean Cole
Nancy Gibson
Joni Harvey
Jack Jackson
Barbara McCurry
Tricia Michelson

500 hours
Debbie Allen
Anita Fleming
Linda Kimberly
Rich Peterson
Susan Peterson
Joan Tyler

1000 hours
Faun Vogel
Ron Zmyslinski

1500 hours
Judy Cowan
Bob Gessner
Bev Turnbull

2000 hours
Herdis Macellan
Sue Smith

Emeritus - 10 continuous years of active status
Sally Berkshire
Jan Billiam
SanDee Kinnen
Janet Mansoldo
Joan Tyler

Special Recognition for Plant Database Research and Inputs
Doug McMillan
Janet Schieber
Bev Turnbull

Special Recognition for Longevity as Helpdesk Volunteers
Bill Cart – Prescott office
Carlon Woodson – Camp Verde office

250 Hrs
Lee Vadnais, Kathy Sisley, Jan Grams, Trudy Black, Lois Janowski

250 Hours
Debbie Allen
Rich Peterson
Susan Peterson
One of the more common cactus types we use in landscaping is the hedgehog cactus. Most of the species are small and compact and have beautiful flowers, which makes them a welcome addition in the xeriscape garden or in pots.

The name comes from Ancient Greek, echinos meaning hedgehog and cereus meaning candle. Two other species are also called hedgehogs: Pediocactus and Echinopsis. The hedgehog part refers to the spiny fruit. The cacti are cylindrical, ribbed and small to medium-sized. One reference described them as bushy, although I am not sure that is a good description. Perhaps a better description is that they form clumps, although some species have solitary stems. They do have tight spines, which can be decorative. The flowers are quite beautiful in most of the species. The claret cup cactus, with its gorgeous, red-orange flowers is a hedgehog cactus.

Cactus are masters at surviving our hot dry weather and the cold of winter. A thick wax-like coating covers the stems. The coating is thickest on the sunny side and helps keep the cactus from losing water. The thick cover of spines also helps protect the plant from the heat. Species vary in height—tallest can grow to about twenty inches while most range between six and eight inches.

Hedgehogs are easy to grow. They need a light soil, lots of sun and a dry winter to flower. The cactus is very cold-hardy; some species will go as low as -23°F in dry conditions. Keep in mind that some species are more sensitive than others and small young plants are likely more sensitive than an older plant. In the winter the cactus may start looking shrunken but once the weather warms and they get a little water they spring back.

Hedgehogs bloom between April and June. Depending on the species, the flowers range from pink to fuchsia to red. Each of the flowers remains open three to five days. Once the flowers are pollinated an edible fruit develops.

If you are going to add hedgehogs to your landscape always purchase from a reputable dealer. Do not go into the desert and dig one up unless you are on private land and have the permission of the landowner. There are laws against digging up cactus on public lands. If you have a friend with one you like, ask if you can take a few stems. You do not have to dig up the whole plant. Mark the south side of the plant and make sure you place the plant in the same direction it was originally growing. If you forget to mark it, look at the plant carefully; the side with the heavier spines faces South. It might not be easy to figure that out so marking is best. Plant in the spring or fall in full sun.

These guys won’t do well in the shade although I have heard of people that grow them in areas that do get some shade. Hedgehogs prefer rocky, gravelly or welldrained soil. To plant, remove the plant from the container and place in a shady, dry area. Cut off any broken or damaged roots. Allow the roots to dry out for about a week so any cuts or breaks can dry out. (This applies to cactus dug from the ground. Cactus in pots like you would get at a nursery can be planted directly out of the pot into the ground.) Dig a hole that is only as deep as the plant so you can keep the stems at the soil line. Water once and then wait a month before watering again. During the winter you probably shouldn’t have to water at all; in fact, once the plant is established (unless it is an unbearably hot and dry summer) it should survive on only rainfall.

The names of these plants seem to be in flux. Species can be quite different in different areas. The information below is the synopsis of some complicated and long articles.

**Echinocereus coccineus**, or Scarlet Hedgehog—This cactus forms clumps that can range from 20 to 500 stems. Stems sometimes form a rounded mound. The spines are ashy white to gray, brown, yellowish, reddish or black, often dark-tipped. The flowers are usually crimson or scarlet, occasionally red-orange and rarely rose pink. It flowers March to late June. It is mainly found in desert scrub, grasslands, pinyon-juniper and oak woodlands, forests, rocky slopes and cliffs. The size of the stem varies. In mild climates they can be quite large but if transplanted they shrink.

**E. engelmannii** or Engelmann’s Hedgehog—It is sometimes called the Strawberry cactus. Engelmanns is very common and found throughout the Southwest and Mexico. It is the one that is most commonly found growing around the county. The flowers are bright magenta and open in April and into late May, depending on the location. The fruit is very spiny. When young, the stems are upright but over time the stem lays down. Spine color is variable.

**E. fendleri**, Fendlers or Pinkflower hedgehog—This is another com-
mon hedgehog that is found throughout the Southwest and Mexico. The stems on these remain erect and form clumps of about 20. The flower can be any shade of pink from nearly white to deep maroon. It blooms April to June. The fruit is red. The flesh of the plant is edible. It can be found in mesquite thickets, grasslands, chaparral, pinyon-juniper or pine-oak woodlands.

**E. fasciculatus also known as Pinkflower Hedgehog**—An example of one of the reasons it’s a good idea to use the plant’s scientific name. This cactus has 5 to 30 stems per clump. The three-inch flowers are rose pink to magenta with mid-stripes darker and a darker center. Fruits are bright red or orange red with the pulp white or sometimes pink. It flowers from March to June. It is found in the Sonoran desert, semi-desert grasslands and chaparral.

**E. rigidissimus or the Arizona Rainbow cactus**—Rainbow cactus have upright stems no more than a foot tall and they form a cluster. They like dry, sunny, rocky slopes and grassy areas. The stems have horizontal bands of pink and white. The flowers are purplish-lavender and seem too large for the stems. The plant blooms May to August depending on location. Fruit is greenish or dark purplish brownish, the pulp white. This cactus lacks central spines so it looks considerably different from other hedgehogs. The spines create a lacy look, hence its sometimes nickname of lace cactus.

**E. triglochidiatus or claret cup or king cup cactus** (var. arizonicus is an endangered species)—This is a complex plant as extreme types with different appearances may be the same species. It is native to the low desert, rocky slopes, scrub and mountain woodland and is most abundant in shady areas. It is considered a mounding cactus, having up to 300 stems in a clump. It is considered one of the most beautiful cactus with flowers of bright scarlet to orange-red flowers on the plant from April to June. The plants are pollinated by hummingbirds. Fruit is green to yellow-green or pink and rarely red. The pulp is white.
**Giant Vegetable News**

This is the time of year where bragging rights for gardeners are decided. Giant vegetables is an entire category of gardening that is little talked about in Arizona. In other parts of the world, entire festivals highlight these giants. First and foremost is the battle for the largest pumpkin.

![Image of a giant pumpkin]

**World’s Heaviest Pumpkin Tips the Scales at 2,096 Pounds**

MAINZ, Germany — A Swiss gardener has grown the world’s heaviest pumpkin — and it weighs almost as much as a small car. Beni Meier, 30, had to use a special vehicle to transport the fruit, which tipped the scales at 2,096.6 lbs. An official from the Great Pumpkin Commonwealth association was at the weighing, which broke a world record previously held by California couple Tim and Susan Mathison. (story and picture from NBC News)

In the United States, the winner was just a few pounds lighter.

The smashing winner was grower John Hawkley, 50, from Napa CA, an accomplished contender on the worldwide weigh-off circuit, who established a new North American record with a goliath 2,058 pound Atlantic Giant that dominated today’s 41st Annual Safeway World Championship Pumpkin Weigh-Off on a picture-perfect morning in this west coast pumpkin mecca.

**Other Giant Vegetable News**

The Giant Cabbage Contest at the Alaska State Fair was held Aug 31-Sept 1. Introduced in 1941, the first winner was 23 pounds and won $25. In 2012 the winner was 138 pounds and the grower won $2000 and set the Guinness world record. The 2014 winner grew a cabbage that weighed 117.05 pounds. The 24 hours of sunlight in the Alaskan summers lead to giant vegetables.
Next Meeting

November 19, 6:30pm, Prescott Extension Office
840 Rodeo Dr.

Bob Gessner & Kathy Palmer-Gessner will be talking about Monarch butterflies.