



## Lithops: The Complete Care Guide

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Lithops are simultaneously the easiest and the hardest succulents to care for. They practically demand to be ignored; you'll find they fare far better with little intervention. But alas, they are too interesting to be ignored completely. What follows is the most comprehensive guide to lithops on the internet.

### What are Lithops?

*Lithops* is the scientific name of the genus, but it is also often used as a common name. It stems from *lithos* (rock) and *opsis* (similar to). Other

common names for these fat plants include: living stones, flowering stones, and (affectionately) butts. In Namibia, the locals refer to them as “cattle hooves” or “sheep hooves” due to their hoof-like appearance.

*Lithops* hail from southern Africa. They are found in very arid regions, some of which receive less than 4 inches of rain a year! This is the driving factor in why they look so strange – water conservation. While all succulents are adapted to conserve water, none do it so well as the *Lithops*.



wimastergardener.org

They rarely drink at all, and when they do, it isn't very much. In fact, some wild *Lithops* never see rain. They survive by drawing moisture from mist or fog a few times a year.

The *Lithops*' unusual shape is for more than just water conservation, however! In the wild, they grow level with the surface of the ground, mixed in amongst the rock and sand. It's very difficult even for experienced horticulturalists to find wild *Lithops*, so you can imagine that grazing animals have an even rougher time of it. Even more fascinating is the way they get sunlight. It probably occurred to you that, being underground and all, only the very top of the plant gets any sun. Well, those flat-tops are comprised of cells that act as windows, allowing the light to penetrate deep into the plant where it can reach more chlorophyll. This ingenious adaptation lets them live underground, safe from predators and from the sun.

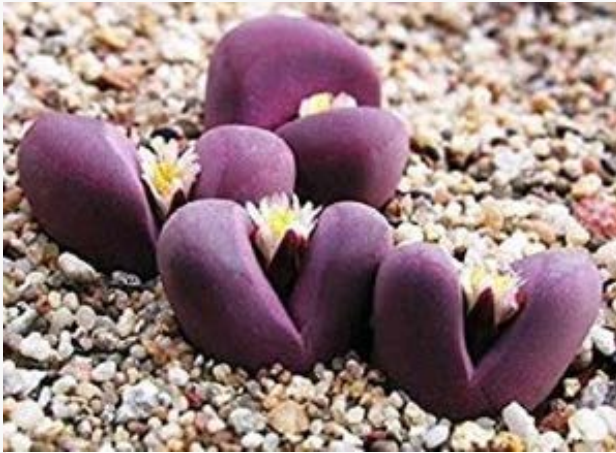
The structure of the plant is fascinating, too. *Lithops* don't have a true stem. They usually have two leaves which taper down in a conical fashion directly to a tap root. The roots are large compared to the plant, up to 6 inches, so a deep pot is necessary. An older specimen of some species will have more than one pair of leaves connected to the same root, and they grow in a crowded cluster.

You might be interested to know, there are tales of people using these plants for water in emergencies. It certainly fits with the stereotype of

eating cacti when lost in the desert! Whether or not that is true, it is a fact that *Lithops* are non-toxic to people and animals. Look [here](#) for some cacti and succulents that are *definitely* edible.

## Lithops Soil

Like most succulents, *Lithops* are from arid regions. Because of that, they require fast draining soil. Sublime Succulents has written [all about succulent soil](#).



amazon.com

But these guys in particular usually require even more specific soil type. You see, they're basically rocks. Rocks that grow a little bit. Rocks like to be around other rocks. That's why we recommend you plant your *Lithops* in a growing medium with very little organic matter. One half succulent soil mixed with one half perlite is acceptable, but the less soil you have the better. **The optimal growing medium for *Lithops*** is one heavy with [perlite](#), [coarse sand](#), [gravel](#), [pumice](#), and/or [lava rocks](#). Approximately 1/5 of the medium should be organic matter (soil) and the rest should be mineral. In fact, *Lithops* do very well in a soil-less medium. They don't really need dirt, as it turns out.

When you purchase new *Lithops* or find another reason to [repot](#) them, you should try to do it during a growing season (spring or autumn). The best time to replant succulents is right before you water them. Watering helps promote new root growth, and helps to stabilize succulents in a new pot. However, if you need to replant *Lithops* at a time when you shouldn't be watering (summer or winter), just don't water it.

## Lithops Watering

This is the most important part of *Lithops* care – and the one that most

people get wrong.



cactusjungle.com

By the time succulent enthusiasts acquire their first split rocks, they've probably been growing for a while. They know all about [basic succulent care](#) and have [propagated](#) many a fat plant. But *Lithops* don't follow those same rules. They have a very distinct seasonal cycle that determines watering schedules.

**Summer:** Do NOT water! They are

dormant during the summer, and any watering could kill them. They expect this season to be bone-dry with no humidity or rain. Watering will cause them to become mushy and rot. Make an exception only if they become very wrinkled – then you can water a very small amount of water and they will plump up again within a week.

**Autumn:** In the early autumn, *Lithops* resume growth. The first sign is often a bud that forces its way out from between the leaves. This shoot becomes a flower, and you can often see the beginnings of new leaves around this time. Jump-start the growing process by giving it a full watering at the beginning of this season, entirely drenching the plant. Continue watering as necessary. Remember to never water a succulent if the soil is still damp from the last time.

**Winter:** Do NOT water! During this season, the new pair of leaves are drawing water from the old ones. They will appear to shrivel over time, and the new pair will steadily grow. If you water, the old leaves will try to drink it, which ultimately confuses the plant's growth and will cause both sets of leaves to die. Just leave your *Lithops* entirely untouched during this season. Additionally, make sure they are not exposed to temperatures below 55°F. They are made of mostly water, and don't do well in cold temperatures.

**Spring:** Once the old leaves have shriveled up into paper-like husks, you

may finally remove them and resume watering. Water lightly to encourage the new bud to begin growth, then gradually increase it to full waterings as necessary.

If you follow these guidelines on watering, your *Lithops* should live a full life (40-50 years). Be aware that for some *Lithops*, watering may only be necessary 3 or 4 times a year. For others, you can water them every couple of weeks during their growing seasons (spring and autumn). When it is time to water, water them like any other succulent – pour water near the base of the plant until the soil is drenched and water begins to drain out of the bottom. If in doubt, don't water until you see visible wrinkling on the leaves. You will still have plenty of time to rectify any thirst problems before permanent damage comes to your plant. If possible, water in the morning. This allows the water to evaporate during the day, and less harmful moisture is retained in the roots.

## Lithops Sun

Like all succulents, *Lithops* love lots of sun. Place them in a place with lots of direct light. If you're in the Northern Hemisphere, a south-facing window is ideal. Flip that if you're in the Southern Hemisphere. Lacking an ideal window, a [grow light](#) might be necessary to

supplement their light.

If your plant begins to grow elongated, or leaning to one side, it is suffering from [etiolation](#). While not inherently harmful, it is not especially aesthetic.



plantrescue.com

If you're just bringing home a new pal from the store, be cautious about introducing it to bright light too quickly.

Sun burn is a very real issue for succulents. Either use a [shade cloth](#) initially, or put them in an area with less direct sun. You'll want to work them up to about 5 hours a day of direct light, and the remainder of the day in indirect light. Proper lighting is important in maintaining the vibrant coloring of succulents.

## Lithops Propagation

As you well know, lots of succulents can be propagated via leaf. Unfortunately, *Lithops* only have two and they need them both! Some species will grow more than one head, and the pairs of leaves will bunch up around a shared root system. This often takes many years to develop, but if you find yourself in possession of such a *Lithops*, you can separate the roots and split up the buds to have more plants.

The most common way of rearing new *Lithops* is via seed. You can order [mature plants online](#), but if you want a lot of them and don't mind waiting, you should buy some seeds and get sowin'. Growing *Lithops* through seed is similar to most other succulents. Here's an article about [how to grow cacti and succulents from seeds](#).



strangeplants.com

In fact, if you have a few *Lithops*, you can get your own seeds! Their flowers look just like daisies, and range from white to yellow to orange. During autumn, when the flowers open up, cross-pollinate them. They don't self-fertilize, but you can use a Q-Tip or a paintbrush (or a [plant pollinator](#)) to transfer pollen from one flower to another. When the flowers die they leave behind pods that open up when doused in water. You can open them manually, of course, and collect the seeds.

## Additional Notes

- *Lithops* rarely, if ever, require fertilizer. However, if you are in a soil-less medium, you should consider a very small, diluted amount of fertilizer yearly. If your *Lithops* failed to flower the last year it might be because it's too young. They generally begin flowering after about 3 years. Add a small amount of fertilizer in the spring to encourage flowering.
- Plant your *Lithops*

about half an inch above the soil surface, rather than level with it. Then, fill the rest of the pot with colorful stones of various shapes and sizes. This creates an aesthetic that is unique to *Lithops*. It mimics closely their natural habitat while emphasizing that natural camouflage that makes them so popular.



balconygardenweb.com

- While there is a defined seasonal cycle for these plants, individuals may be at different places due to their history. If you get multiple *Lithops* from different sources, be careful treating them all the same until you are certain their cycles are synced (or close to it). Watch each plant closely to make sure your care is not harming it. After a couple seasons, they should all be on the same page!
- Due to drastically different watering needs, *Lithops* do not pair well with other plants. They should always be planted alone or with others of their kind.