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Kaktos Komments

a bimonthly publication of the Houston Cactus and Succulent Society
to promote the study of cacti and other succulents



Melocactus curvispinus
by Liliana Cracraft



Houston Cactus and Succulent Society
Founded in 1963
Affiliated with the Cactus & Succulent Society of America

Membership

Andrea Varesic

On September 23 HCSS had another in-person meeting. Our attendance was 15 members and two guests. Our guests were Kandi Vargas and Sarah Ortiz. Additionally, we had three new members join our club. Let us all welcome Sarah Ortiz and Mark and Julie Candela. As door prizes, we had three books that were kindly donated and they were won by Mark Candela and Karina Boese. Josie, our president, discussed the uncertainty of our times and the plant show and sale. The board members will decide if we will hold it later in this year or in the spring of 2022.

As a club we wish to extend our condolences to Mr. Tom Cardinal on the loss of his wife. Our prayers and thoughts are with him and his family.

Our October meeting was held on the 27th. We had eight members and two visitors, Mary Zhou and Chao Sun, attend. Karla and Wally discussed how to show a cactus in our next show and sale. Karla discussed the categories for the show and the scoring. The rules for the show were emailed in August to all the members. Wally presented the succulent of the month, *Haworthia attenuata*. The cactus of the month presenter was unable to attend.

Please feel free to reach out to me with any news on our HCSS members at avaresic@att.net.

News From The Cactus And Succulent Society Of America (CSSA)

One more time, CSSA is inviting the membership from affiliated clubs to play a role in the election of their new officers.

In addition to the President, Vice president, Recording Secretary, Treasurer, and the immediately Past President, the CSSA Board has 12 additional positions for Directors. They are asking us to vote for 3 (out of 4) candidates for these positions.

Early next month you'll receive an e-mail message asking for your votes. The biographies of the candidates will be included. The dateline to submit your votes will be November 20, 2021. After all the votes are received, Liliana Cracraft, the CSSA Affiliate Representative will be responsible to send the official ballot via US Mail before the December 1 deadline. Your help in this important endeavor is much appreciated,

In other news, CSSA will continue to offer the superb presentations via Zoom every other Saturday at 12:00 Houston time. These presentations are free of charge. Watch your email for the next invitation.

Calendar:

November 10, 2021 7:00 pm Board Meeting via Zoom

November 17, 2021 7:00 pm Membership Meeting, Metropolitan Multi-Service Center
 Program:

January 1, 2022 Deadline for submitting articles for the KK.

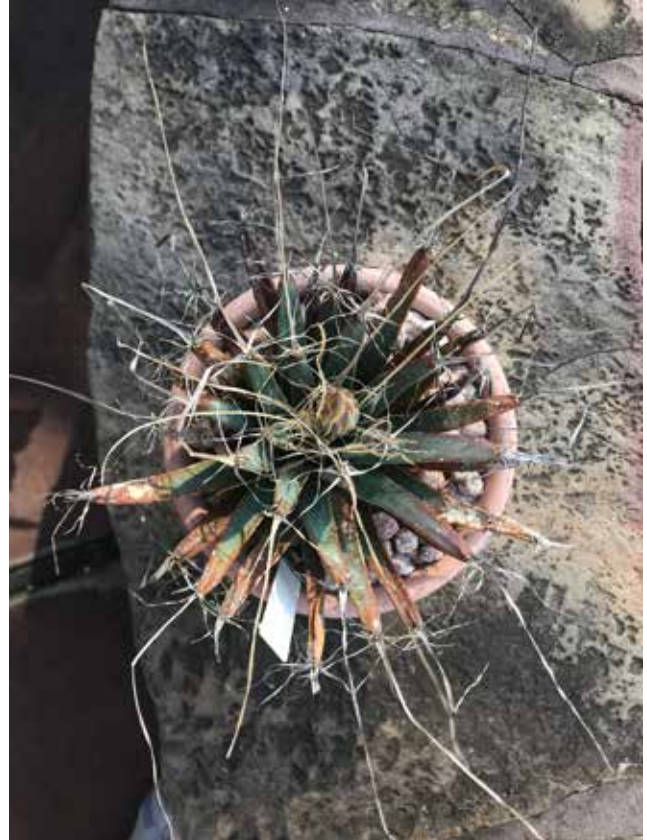
November Cactus of the Month

Andrea Varesic

Leuchtenbergia principis

It is the only member of this genus. It is known as the agave cactus or prism cactus. The cactus is named after an amateur botanist Maximilian Eugen Joseph, Duke of Leuchtenberg.

L. principis is native to north-central semi desert Mexico. It is very slow growing and will grow to a height of 70 cm. The stem is cylindrical and becomes bare and corky with age. The tubercles are long, thin, grayish-green and 6 to 12 cm in length. The tubercles are topped with papery and flexible spines that are 1 to 20 cm long. It begins to bloom in spring to autumn at 4 to 5 years of age. The flowers are fragrant, yellow and 5 to 10 cm in width. It is closely related to *Ferocactus* and has been hybridized to it. Fruit is green to violet, 2-3cm long and bears hundreds of seeds. It is easily propagated from seed. It is cold tolerant to -8°C for short periods of time. There are three forms: 1. *L. principis* 2. *L. principis* f. *cristata* 3. *L. principis* f. *monstrousa*



November Succulent of the Month

Karla Halpaap-Wood

*Orbea melanantha***Family:** Apocynaceae**Synonyms:** *Caralluma melanantha*, *Orbeopsis melanantha*, *Stapelia melanantha***Common name:** black-flowered caralluma

The genus name is derived from the Latin word *orbis*, which refers to the central raised disc or annulus, found in the flowers of most species, but in *O. melanantha* it is not very distinct. *Orbea melanantha* was discovered by Rudolf Schlechter in 1894 and he named it *Stapelia melanantha*.

Origin and Habitat: South Africa, Northern Province and Transvaal, Maputo district in southern Mozambique, Grows among *Acacia* trees, on stony ground with other stapeliads in altitudes above 1000 m.

Description: Very distinct stapeliad, easy to identify.

Fat 4-angled stems, 5-10 cm long, up to 2 cm in diameter, light green when grown in shade and speckled with red or brown to purplish, depending on the amount of sun it receives. Older stems are smooth, but show rudimentary leaves and teeth (tubercles) when young. It is distinguished from all other species of *Orbea*, except *Orbea lutea*, by its dense clusters of more or less simultaneously opening, uniformly colored fairly large flowers (50 mm across). It spreads when planted outside or hangs down in hanging basket. Flowers are dark purple to nearly black, extremely bad rotten smell. They attract flies. They bloom as a cluster of flowers on long hairless stems. Plant blooms summer to fall.



Cultivation: Like all stapeliads they need very well draining soil and should never stand in water. In the summer when it's hot they can be watered frequently. I leave mine out even when we have lots of rain. But as soon as it get's cold they should be mostly dry. Like all stapeliads they are susceptible to rot when too wet. The most common pests include scale on the stems and mealy bugs on the roots.

Propagation: Easiest with stem cuttings. Stems should be laid, not buried on gritty soil and will then root from the underside of the stems.

Can be propagated from seeds too, but I have never seen fruit on mine.

References:

<http://pza.sanbi.org/orbea-melanantha>

http://www.llifl.com/Encyclopedia/SUCCULENTS/Family/Asclepiadaceae/30303/Orbea_melanantha

Illustrated Handbook of Succulent Plants: Asclepiadaceae, p 197

Orchids of Southern Africa by H.P. Linder, H. Kurzweil, A. V. Hall · 1999 p 202



December Cactus of the Month**Cindy Gray*****Neochilenia taltalensis* (*Eriosyce taltalensis*)**

The last time the *Neochilenia* species was presented was Jan/Feb 1985 by Vernon Butler and the *Neochilenia napina* was presented by Josie Watts in May/June 2002. I wonder if Josie still has the plant.

The genus *Eriosyce*, family Cactaceae, includes 35 species of cactus native to Chile, Peru, and Argentina. Some species are: *Eriosyce taltalensis*, *Eriosyce senilis*, *Eriosyce paucicostata*, *Eriosyce napina*, *Eriosyce esmeraldana*, *Eriosyce crispa*, *Eriosyce curvispina*.

Scientific synonyms: *Neochilenia taltalensis*, *Neoporteria taltalensis*, *Pyrrhocactus taltalensis*. This species is native to Atacama, Chile and has a wide range from Antofagasta south to Caldera (costal Altacama Desert) Atacama, Chile. 0 to 700 meters above sea level.

Found in inaccessible areas in the coast and into the nearby hills (lomas costeras) mainly on rock crevices in cliffs and rocky slopes. It is also found in dry sandy soils in flats below the fog zone. The species is very scarce but seems stable. The total population size is estimated to be 700 mature individuals. Illegal collection is the only major threat.

They are cacti with a spherical body, solitary and of a blackish green or brown color that reach 12 cm in diameter. They have 11-15 ribs with white oval areoles that have 5-11 dark radial spines and 6-12 long central spines (4 cm in length). Fibrous roots, arising from a short, conical taproot. Flowers appear at the apex of the plant and can be cream, yellow, red, fuchsia pink or white. Mine has bloomed but I do not remember the flower color.

They are used in pots and planters because of their small size. If grown indoors, they should be located in well-ventilated areas.

Eriosyce taltalensis needs direct sun exposure and a hot, dry climate. The winter safety temperature is 38 °F. The soil can be a mixture of coarse siliceous sand, clay garden substrate, and vermiculite. I use a mix of garden soil, perlite, expanded shale and chicken grit. Transplant is done in early spring.



Water moderately, wait for the substrate to be dry. They resist drought very well. In winter there is no need to water.

Fertilize in mid-spring with mineral cactus fertilizer.

The main dangers for these plants are overwatering and high humidity caused by poor ventilation.

Propagation is a slow and difficult process from seeds sowed in spring in a seedbed with a slightly humid sandy substrate.

Soils require a very fast mineral draining drying soil (70-80% grit and 20-30% of land soil). To prevent rotteness, it is also advisable to surround its root neck by very rough sand or grit, this helps with fast water drainage and an appropriate air circulation.

I purchased my *Neochilenia taltalensis* at the April ACSS Show 2019 at the sale table at East Austin Succulents table in April. I repotted my purchase with my soil mix of Miracle Grow Garden soil, perlite, expanded shale or pea gravel and chicken grit. Mine has been neglected and doing well in my green house.

References:

Edward Anderson "The Cactus Family" Tiber Press, Incorporated, 2001
James Cullen, Sabina G. Knees, H. Suzanne Cubey "The European Garden Flora-Flowering Plants: A Manual for the Identification of Plants Cultivated in Europe, Both Out-of-Doors and Under Glass" Cambridge University Press, 11/Aug/2011

www.consultaplantas.com/index

www.llifle.com

December Succulent of the Month

Cindy Gray

EUPHORBIA neohumbertii

Euphorbia neohumbertii also known as *Euphorbia neohumbertii* var. *neohumbertii* is in the family of Euphorbiaceae. Native to Madagascar.

Euphorbia neohumbertii is a succulent plant with erect, 4 sided stems in grey to purple and large green leaves that grow on top of the stems. It grows up to 3 feet (90 cm) tall. In the winter, when leaves drop, very prominent scars are left on the stems. In the spring, the stems are topped with scarlet flowers with yellow tips.

Euphorbia neohumbertii are very easy to care for. The plants require a little pampering to become established, but once they are, they are very self-sufficient. More die from too much care and watering than neglect. *Euphorbia Neohumbertii* need well-draining soil and full to partial sun is best for its growth. It prefers a warm climate with an optimal temperature of 60° F - 85° F / 16° C to 29° C. If living in a cold area, it is better to plant in an indoor environment. It prefers full to partial sunlight. Provide good sunlight at least 3-5 hours daily, turn regularly so that your plant does not grow lopsided.

They are not particular about soil pH, but they cannot tolerate wet soil. Unlike most succulents, *Euphorbia*'s do not handle long periods of drought well. It may need weekly watering during the summer. Water whenever the soil is dry several inches below the surface. Water deeply or use the soak and dry method but do not let them sit in wet soil, which can cause root rot.



The succulents can be grown from seed, but they can be difficult to germinate or even find. They are usually propagated by cuttings. This can be tricky because of the exuding sap. Rooting hormone is recommend with Euphorbia's. They tend to grow problem-free, and may be susceptible to mealy bugs, scale insects, occasionally spider mites.

Unfortunately, there is not a lot of information on the plant. I had never seen on until I received an email from East Austin Succulents on sale plants and knew I have to have one. Hum, I think this is how all got all on my cactus and succulents.

I used my basic potting soil mix for my both of my plants. See December Succulent of the month for mix. Unfortunately, my first plant suffered from too much water and drown. I have babied my second plant. Purchased from East Austin Succulents mail order both times arriving with beautiful large green leaves. Mine flowered in the spring, the flowers were beautiful. Was living on my patio under pergola with a clear cover and shade on Saturday until I have moved mine to my greenhouse for the winter, still debating on whether to move indoors.

Vendors for *Euphorbia neohumbertii*:

East Austin Succulents – <https://eastaustinsucculents.com>

Kyle's Plants – <https://kylesplants.com>

Planet Desert – <https://planetdesert.com>

Etsy – <https://etsy.com>

References:

<https://succulentnetwork.com>

<https://worldofsucculents.com>

<https://plantingman.com>



PSEUDOBOMBAX ELLIPTICUM: A FASCINATING PLANT

By LILIANA CRACRAFT

I first became interested in *Pseudobombax ellipticum* when I purchased one plant from Dave Thomas at one of the HCSS Sales about 10 years ago. It's been great to have had this plant for all this years and amazingly, it survived the big freeze of February 2021.

P. ellipticum belongs to the family *Malvaceae*, sub-family *Bombacoideae*. *Pseudobombax* is a small genus of 20 species. Only 3 of those are of interest to succulent enthusiasts and are presently in cultivation; *P. ellipticum*, *P. garandiflorum*, and *P. palmeri*.

P. ellipticum grows in México, Central América (Guatemala, El Salvador, Honduras, and Nicaragua), and has been introduced in the Caribbean and Hawaiian islands, southern Florida, and the coasts of southern California.

The list of common names for this plant is so extensive, that it must be presented in a table. In México and Central America, many of the names used are not only in Spanish, but also in several native languages. Within Mexico, the name changes between different states and towns or villages.

Country/Countries	Common Name(s)
U.S.A	Shaving bush tree, Dr. Seuss tree, Amapolla tree
Central América	Acoque, Amapola, árbol de doncellas, árbol de señoritas, Calinchuche, Clavelina, Jilinsuche, Matías, Pilinsuchil, Pumpo, Shaving brush, Shilo, Shilo Blanco, Shilo Colorado.
México	
Los Tuxtlas, Veracruz	Xilixochitl/Xiloxochitl (Nahuatl language)
Tehuacán, Puebla	
Central part of Veracruz	Lelos, Leles, Lele
Misantla, Veracruz	Chiquizas
Pueblo Viejo, Veracruz	Palihuiches
North of Veracruz	Xanacol/Chanacol (meaning hair up), Pompones de Estambre, Cabello de Angel (angel hair)
Tuxtla Gutierrez, Chiapas	Sospó (Soque language)
State of Morelos	Bellotas,
State of Michoacan	Escobetillo
Tehuacan, Puebla	Colorin, Pemuches, Flor de Pochote, Flor de Cabellito
State of Oaxaca	Coquitos, Tayatas, Gué Tiki (Zapotec language)
Oaxaca Coast	Flor de Itayata/Itallata
State of Guerrero	Flor Bailadora, Clavellín
States of Jalisco, Durango, Guerrero, Sinaloa, Morelos, Michoacán, Guanajuato	Clavellina
San Luis Potosí	Mocoque/Moxcoque
Yucatán	Amapolla



P. ellipticum is a deciduous shrub or tree changing the color of its leaves, and then eventually shedding them in the fall. It can be up to 60 feet high. It grows in dry and rocky habitats or poor soils in elevations from sea level to 1800 meters.



The grey-green trunk can be straight or tapering, coated with a whitish bloom mostly when young, and without prickles. It is typically enlarged in its basal part, with a function of water storage for the summer drought, and the diameter of the engorged part can reach 1 meter. Its branches are close to the base of the stem. Leaves are palmately compounded. This means having three or more veins, leaflets, or lobes radiating from one point.

The flowering period occurs in winter and early spring, usually while the leaves are still absent. The flowers can be pink or white, are usually solitary, and are quite fragrant. If peeled back, they are somewhat sticky. The flowers look like brushes, or strange carnival decorations, for its white or purple petals which curl back toward the axe of the flower and its numerous, long straight purple (or white) stamens coming outside the corolla. Fruits are elongated and full of tiny seeds.



P. ellipticum can be propagated by seeds and cuttings. Seeds can be obtained by retrieving the fruits before they open, and leave them to dry. They can be germinated within approximately 30 days. The cuttings, 40 to 100 cm in length, are usually rooted when planted in bags of sand and watered daily, or when planted directly in the field. *Pseudobombax* should survive minimum temperatures in the high 20's for short periods of time, but it is best to protect it when the temperatures fall below 32°F.

This plant has multiple uses. Its wood is used for firewood, or for wood carving handicrafts. In Central America the flowers are used in decorations at homes and in churches, and to make a highly intoxicating drink. In the State of Puebla in México, the flowers are used during Holy Week to decorate the churches. In Florida, Hawaii, and Southern California, they are grown as ornamental trees.

I recently purchased seeds from the CSSA Seed Depot. I initially planted them in little bullets designed to grow tomatoes. They germinated within a month and now I have a pair of good looking plants. The color of the future flowers is unknown.



References

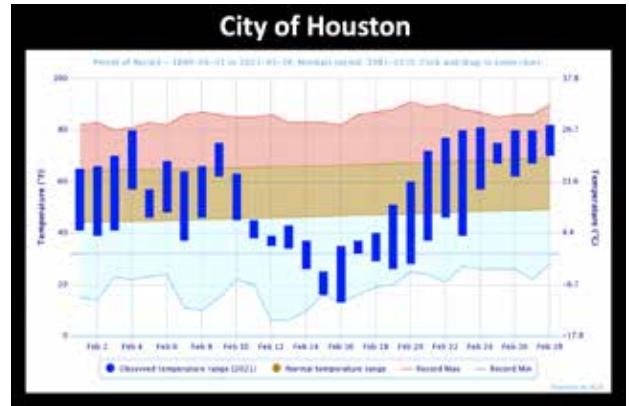
Illustrated Handbook of Succulent Plants: Dicotyledons. 2002. Springer-Verlay, Berlin, Heidelberg, New York.

February 2021 Freeze Results

Karla Halpaap-Wood

As we approach the colder time of year we all remember last February and hope this won't repeat.

The week of February 14th 2021 we had unusual cold temperatures with 3 days when the temperature never reached above freezing. The minimum in Galveston was 20°F, Hobby 15°F, Intercontinental 13°F and College Station 5°F. The days before the freeze we all worked hard to protect as many plants in our collections as was possible by either just covering them, bringing them in garage, greenhouse or house. But then most lost electricity for hours to several days, so electric heaters stopped working. Joseph even had below freezing temperatures in his house. Liliana and Mike lost many valuable large plants that were in the greenhouses. I was lucky as our electricity outage never lasted more than 8 hours at a time. One of the doors in the greenhouse blew out in the wind, but the heater continued to blow warm air on the plants, so I did not lose much. Tom was smart and dug lots of his landscape plants out and stored in the garage.



<https://www.weather.gov/wrh/Climate?wfo=hgx>

Following is a list of plants that made it or did not. Several of the members contributed to it. Some plants might be in both the survivor and freeze list, that means that plant survived with one member, not the other. This could be caused by different location in the yard or just different area in Houston.

Maybe we can learn from it for next time.

Survivors left outside without protection or only light cover:

Agave bracteosa (planted out and no cover light damage, no damage in pot and planted out with light cover)

Agave Lechuguilla (damaged, but survived)

Agave lophantha

Agave ovatifolia

Agave salmiana ferox

Agave weberi (light damage, but survived, Hobby and Friendswood area)

Agave zebra (ID not 100% sure)

Beaucarnea recurvata (ponytail palm) - covered with blankets, lost all leaves but comes back

Sotol

Opuntia engelmannii var. linguiformis

Opuntia humifusa

Opuntia leptocaulis

Opuntia leucotricha

Opuntia lindheimeri

Opuntia macrocentra

Opuntia pilifera

Echinocactus grusonii (golden barrel cactus) - light cover with blankets, no damage at all

Escobaria missouriensis: in the ground; not covered

The following cacti grow outside in Katy and all survived the winter freeze. They had light covering (frost material) and plastic cover)

Note: tall cactus in picture froze and did not survive



© Jo Webb, Katy, TX

Astrophytum
 Cleistocactus strausii-silver Torch
 Echinopsis Hybrid White
 Echinopsis chamaecereus (Peanut cactus)
 Echinopsis Tubiflora
 Gymnocalycium
 Mammillaria longimamma

Mammillaria marksiana
 Mammillaria spinosissima
 Mammillaria wagneriana
 Parodia leninghausii
 Parodia magnifica
 Stenocactus (Brain Cactus)
 Trichocereus grandiflorus (torch cactus)

Plants that froze left outside uncovered or light cover:

Agave americana marginata
 Agave angustifolia marginata
 Agave colorade
 Agave desmetiana
 Agave var protoamerica
 Agave sisalana
 Agave tequila
 Agave weberi (in Humble)
 Aloe maculata. (Most froze, some survived, light cover)
 Yucca filamentosa
 Jatropha dioica

Opuntia braasilia
 Opuntia brasiliensis
 Opuntia cochenillifera
 Opuntia dillenii
 Opuntia elata
 Opuntia gomei old mexico
 Opuntia gosseliniana
 Opuntia lideneimeri plains hybrid
 Opuntia microdasys
 Opuntia quimilo
 Consuela rubescens
 Opuntia ruffida
 Opuntia santa rita
 Opuntia scheeri
 Opuntia snow
 Opuntia stricta

Contributors to these lists were:

Karla Halpaap-Wood, Liliana Cracraft, Bruce Moffett, Dick and Phyllis McEuen, Joseph Rodd, Tom Cardinal, Jo Webb (HCSS Facebook group member)

Understanding Drainage:

An experiment to test water retention of different potting media

By Joseph Rodd

Sphagnum peat moss (Majestic Earth)
Typical garden compost (in this case, Calloway's)
Organic compost with mycorrhizal fungi (Nature's Creation)
Cactus, Palm, and Citrus Potting Mix (Miracle-Gro)
Perlite (Vigoro)
Expanded shale (Nature's Creation)
Red lava rock (KolorScape)
Fine grade pumice (General Pumice Products)
Medium grade pumice (General Pumice Products)
Decomposed granite (KolorScape)
Lava sand (Nature's Creation)
Pea gravel (Vigoro)
Sharp/construction/all-purpose sand (Quikrete)
Play sand (Pavestone)
Small black lava rock (unbranded, from Quality Feed and Garden)
50% perlite, 50% organic blend*
50% sharp sand, 50% organic blend*
33% each: perlite, sharp sand, organic blend*
25% each: perlite, organic blend*, pea gravel, sharp sand
30% each: perlite, shale, pea gravel; 10% N.C. compost
* "organic blend" is 50% N.C. compost, 50% peat moss

Background

We all know that a well-draining potting medium is essential to healthy cacti and succulents. But what actually drains well? There's a lot of conflicting information out there, and some of it has gotten me into trouble in the past. For instance, I've added lots of sand to soil mixes only to end up with very heavy planters that seemed to stay wet for a long time in our humid Houston climate. The goal of this project was to understand for myself how different potting media affect drainage rate, and ultimately design mixes that dry more rapidly.

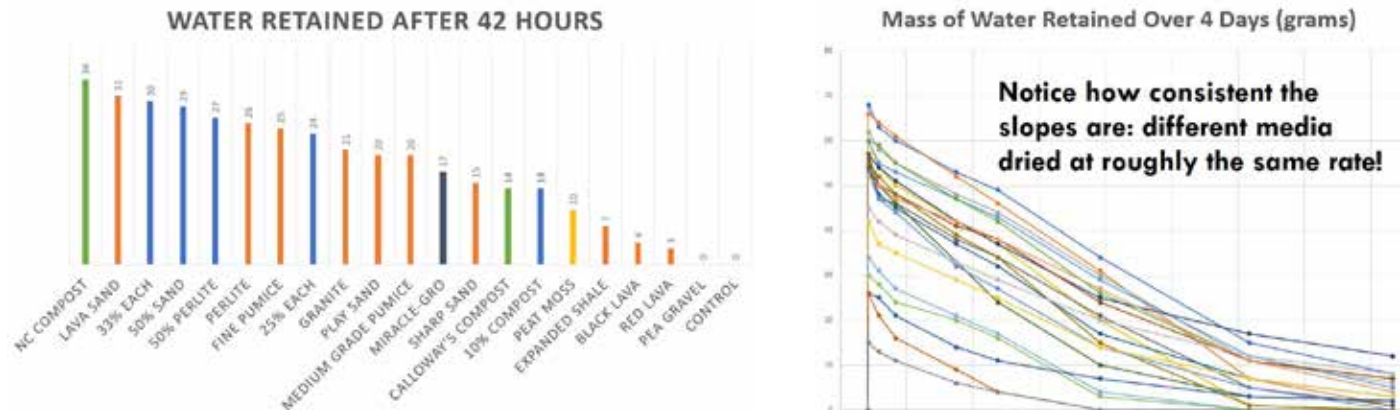
Procedure

The first thing I had to do was limit my focus: ignore everything else that soils do for plants and focus exclusively on water retention. I decided to test 15 different materials, all of which are available from



suppliers in Houston. I also made 5 mixes to try to represent common recipes that people might be using.

To summarize my procedure: after oven-drying all my materials, I filled small planters with 1/2 cup of each, weighing everything as I went along. I used equally-sized pieces of paper towel to make sure I didn't lose any material out of the bottom of each planter. Then I saturated each planter with as much water as possible. Recording the difference between dry and wet weights of each planter allowed me to discover the amount of



water each material was able to absorb. Finally, I weighed each planter repeatedly over the next four days and graphed how much water each material retained over the course of that time.

What I discovered, to my surprise, was that almost all my planters were drying at a relatively consistent rate. What did differ dramatically was the amount of water they initially absorbed. The largest particles (the empty control planter, the lava rocks, the pea gravel, and the expanded shale) absorbed the least water initially, so after 42 hours they were driest. The wettest materials after that time were the higher-quality compost, the lava sand, and – disappointingly – three common mixes.

Analysis

I didn't understand this, so I went online and started reading university websites and papers about soil drainage. What I learned is that in any planter, capillary action works to counteract gravity. This creates what's called a "perched water table" at the bottom of any pot, which can be a large proportion of the volume of small planters like the ones I used. The smaller the spaces between the particles of your mix (the smaller the "capillaries" are), the more moisture this perched water table can hold. This water will never drain due to gravity; if it ever dries out, it will be due to evaporation, which is limited by ambient humidity. Mixes that have small particles or a mix of particle sizes end up with lots of small capillaries that absorb and retain large amounts of moisture. "Wide-open" mixes that contain a lot of air gaps seem to retain the least moisture.



Image Credit: Oregon State University North Willamette Research and Extension Center: "Physical Properties of Container Media"

The implications of this are important: instead of focusing on how fast soils drain (and trying to build “well-draining mixes”), I’d argue we should be focusing on how much water they absorb. Drainage happens immediately: it’s the water that flows out the bottom of the pot as you water. The retained moisture that can lead to root rot is what didn’t drain. If I could suggest one takeaway from my experiment, it’d be this: if you want your potting media to dry out, focus on making them less absorbent in the first place. The best way to do this seems to be to get rid of small capillaries and get more air into your pots.

A few other takeaways I can offer:

a) There is a significant difference between composts. Cheap compost (mostly bark chips) dries quickly, while higher-quality compost with finer particles retains much more moisture.

b) Common recipes that contain a mix of organic and inorganic ingredients were among the worst-performing media I tested; only the 10% organic mix dried well.

c) The scholarly articles I read agree that adding a “drainage layer” at the bottom of a pot only moves the perched water table up in the pot; it does not improve the drainage of the media above it.

My experiment certainly has its flaws and leaves me with further questions. I was trying to limit variables so I didn’t sieve my materials prior to using them, but doing so would have removed dust and improved drainage. I don’t think the paper towels messed up my data, but it’s possible they played a role in why the drainage rates were so uniform. I bet that if I’d been able to use larger pots, I’d have been able to record more significant differences that were less affected by the perched water table. I was also surprised at how quickly the peat moss dried out, given that peat is well-known to retain moisture. My results would suggest that peat-based mixes (including the store-bought Miracle-Gro mix) actually dry quite well. When I was presenting my results to the society, someone suggested that the peat dried so quickly because it allowed a lot of air into the mix, and I suspect that’s correct. If I’d have done the experiment outdoors in high humidity, maybe the results would have been quite different.

Everyone’s growing conditions are different, but I hope this information helps you design soil mixes that suit your needs.

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