

CACTUS COURIER

Newsletter of the Palomar Cactus and Succulent Society
The North San Diego County Cactus and Succulent Society

Volume 62, Number 7

July 2016

NEXT MEETING

Saturday, July 23rd

**Park Ave. Community Center
210 Park Ave., Escondido**

Brag plants, Exchange Table, Benefit Drawing

11:30am - 3:00pm

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REFRESHMENTS

- 1 – Susan LaFreniere
- 2 – Tina Cord
- 3 – Mary Hansen
- 4 – Julie Slater
- 5 – Lorie Johansen
- 6 – Paula Deubig
- 7 – Brenda Deubig
- 8 – Kevin Smith
- 9 – May Fong Ho
- 10 – Deborah Pearson
- 11 – Patti Nelson
- 12 – Neila Rybicki
- 13 – Charlyne Barad

Click here to visit our webpage:

www.palomarcactus.org

We're on Facebook!

This Month's Presentation:

The Needs of Succulents Above & Below Ground and in & out of Containers

By Ernesto Sandoval

While the basics apply to plants generally, Ernesto's talk will emphasize our particular growing region. He will discuss the needs above ground as well as below ground, including topics such as the sunlight/temperature combination, the soil pH, as well as a comparison of requirements for potted and in-ground plants.

Ernesto will also be bringing an assortment of rare and less common primarily succulent plants for sale. These plants will include the Socotran pachycauls *Dendrosicyos socotrana*, *Dorstenia gigas*, as well as *D. foetida* 'Taba Gorge', an assortment of cold hardy Aloe species and some hybrids, plus some Hoyas, and much more to benefit your collection and the UC Davis Botanical Conservatory as part of what Ernesto calls their "Green for Green Program"!





Ernesto Sandoval is director of the UC Davis Botanical Conservancy. He has been wondering and seeking questions to why plants grow and look the way that they do for a long time. Now he explains and interprets the world of plants to a variety of ages and experiences from K-12 to professionals and Master Gardeners. He regularly lectures to a variety of western Garden Clubs throughout the year and particularly to Succulent Clubs throughout the State and elsewhere since that group of plants is his particular passion within his general passion for plants. He describes himself as a "Jose of All Plants, Master of None."

Ernesto thoroughly enjoys helping others, and gardeners in particular, to understand why and how plants do what they do. When he was about 13 he asked his dad why one tree was pruned a particular way and another tree another way. His dad answered bluntly "because that's the way you do it." Since then he's been learning and teaching himself the answers to those and many other questions by getting a degree at UC Davis in Botany and working from student weeder/waterer to Director over the last 25 years at the UC Davis Botanical Conservatory. He's long left the "mow, blow and go" monoculture landscape gardening world and has immersed himself in the world of polyculture and biodiversity by growing several thousand types of plants at the UC Davis Botanical Conservatory, many of them succulents.

Several of his favorite garden projects involved converting lawns and or water loving landscapes to drought tolerant and diversity filled gardens! He likes to promote plant liberation by encouraging gardeners of all sorts to grow more plants in the ground when possible. He loves the technical language of Botany but prefers to relate information in more understandable methods of communication! By helping people to understand the workings of plants he hopes to help us better understand how to and why our plants do what they do and how we can maximize their



BOARD BRIEFS – By Annie Morgan

First we want to thank Gunner Eisel for his excellent presentation on succulent collections at our June meeting. Did you find your style of collection somewhere in his photos? It was amazing to see the lengths that collectors will go to in order to house and display their plants. We would love for you to share photos of sections of your garden or collections for the Brag Photo Page, so send them on in.

VOLUNTEERS - What a fantastic group of people we have in our club that so many are willing to volunteer to just keeping making us better. Thanks to May Fong Ho for volunteering to take over the website completely, and to Jim Anderson for offering to help Lorie Johansen coordinate our August Picnic. We also want to thank Kathie Hoxie who has volunteered to send out notices about our monthly meetings to our local newspaper.

Don't miss page 5, which has a listing our monthly meeting volunteers. We just can't do it all without you and very much appreciate all of our enthusiastic and energetic helpers!

PICNIC & AUCTION – This great event is just around the corner on August 27th at San Diego Botanic Gardens in Encinitas. We are making some changes in how the auction will run, and it is time to start thinking of which plants you might want to donate/sell at the auction now so that you can have them looking their best. See the article with the details on page 9.

ERIK GRONBORG RETROSPECTIVE – Don't miss the information on page 7 about Eric's showing at the Mingei Museum in Balboa Park. Print the bottom half of the page for free entrance on August 8th.

CACTUS AND SUCCULENT SOCIETY OF AMERICA SUCCULENT SYMPOSIUM - Each year the Cactus and Succulent Society of America holds a Succulent Symposium at The Huntington Garden. This year it is on Saturday, September 3rd and this is your chance to get a free ticket to one of the most fun events for succulent lovers all year as our club will be sponsoring three people. See the article on page 9.

PLANT OF THE MONTH - ECHEVERIA

Echeverias are considered by some to be the most attractive of all succulents. They are highly valued for their amazing colors, great variation in size, leaf texture, and beautiful flower spikes in warmer months with colors ranging from white to orange to pink to red. Many consider them one of the best and easiest plants to grow in our climate and they are popular as ornamental garden plants and in collections.

Echeveria is a large genus of in the Crassulaceae family native to semi-desert areas of Central America, Mexico and northwestern South America, with one being native to Texas. The genus is named after the 18th century Mexican botanical artist Atanasio Echeverria y Godoy.

Most Echeveria are summer growers. Once established, they can tolerate extended dry periods without watering, but will grow stronger if they receive adequate water. They prefer free draining soil to prevent root rot, but they are shallow rooted plants and therefore benefit from good levels of organic matter in their soil. Their rosettes range in size from ¾" to almost 2' in diameter. Echeveria species are polycarpic, meaning that they may flower and set seed many times over the course of their lifetimes.

Generally, the more sun they get the better they will display their colors and shape, but protect them from excessive sun during hot weather, particularly in inland locations. Most will tolerate filtered shade and some frost, although hybrids tend to be less tolerant. Some lose their lower leaves in winter and as a result, after a few years, the plants lose their attractive, compact appearance and need to be re-rooted or propagated. They can be propagated easily by separating offsets, but also by leaf cuttings, and by seed if they are not hybrids. When they become leggy from leaf loss they can be cut off 2-3" below the rosette, dipped in cinnamon as an anti-fungal, and then planted in a new pot. Roots will develop in a few months and the plant will return to its former beauty.



Good ventilation is also important for minimizing pest and disease risks. Mealy bug and aphids can find them irresistible so be watchful and treat at the first signs of infestation. Treating with sprays of alcohol vs. pesticides is preferred as hummingbirds are popular visitors to their flowers. Often numerous offsets are produced and they can be removed and planted on their own, or left to form a plant with multiple rosettes.

KIENAN PARR, one of our members and a vendor at our October Sale, will be sharing a Power Point presentation on Echeverias this month and will be covering a wide range of topics about these beautiful plants. There will be a questions and answer session afterwards.



1. Echeveria 'Marjorie Pogue', 2. E. runyoni - 'Topsy Turvey' 3. E. 'Neon Breakers', 4. E. Lenore Dean, 5. E. chroma,
6. E. Agavoides 'Lipstick', 7. E. Agavoides 'Ebony' (note the turquoise/green color which indicates a true Ebony), 8. E. 'Cubic Frost'

Photos 1 – 8 are used courtesy of Tina Zucker, a member and coordinator of vendors for our October Sale. She has a wonderful website, www.succulents.us, showing her plants for sale, and she is having a sale at her home greenhouse Fri., July 22nd. Email her at succulentsus@gmail.com and ask for an invitation will all the needed information.



Photos 9 -11 are courtesy of Geoff Stein from Dave's Garden website.

Brag Plant Winners

Novice Cactus

- 1st Deborah Pearson Mammillaria mystax
- 2nd David Buffington Mammillaria blossfeldiana
- 3rd Mike Regan Echinopsis

Intermediate Cactus

- 1st Jerry Kahn Matucana
- 2nd Victor Zonana Hildewintera colademononis
- 3rd Lorie Johansen Mammillaria elongata

Novice Succulent

- 1st Tina Cord Aloe aristata
- 2nd Tina Cord Echeveria

Intermediate Succulent

- 1st Lorie Johansen Tylecodon paniculatus
- 2nd Lorie Johansen Crassula Ivory Pagoda
- 3rd Victor Zonana Gasteria

Novice Plant of the Month

- 1st Tina Cord Haworthia
- 2nd Tina Cord Haworthia retusus
- 3rd Tina Cord Haworthia fasciata

Intermediate Plant of the Month - Small

- 1st Jeanine Zonana Haworthia pumila
- 2nd Annie Morgan Haworthia chloracantha
var. denticulifera

- 3rd Lorie Johansen Haworthia attenuata

Intermediate Plant of the Month - Large

- 1st Lorie Johansen Haworthia coarctata
- 2nd Lorie Johansen Haworthia retusa
- 3rd Lorie Johansen Haworthia

Advanced Plant of the Month

- 1st Mitch Bahr Haworthia fasciata var. concolor
- 2nd Mitch Bahr Haworthia reinwardtii
- 3rd Mitch Bahr Haworthia fasciata

Novice Dish Garden

- 1st Nell McChesney
- 2nd Tina Cord

Intermediate Dish Garden

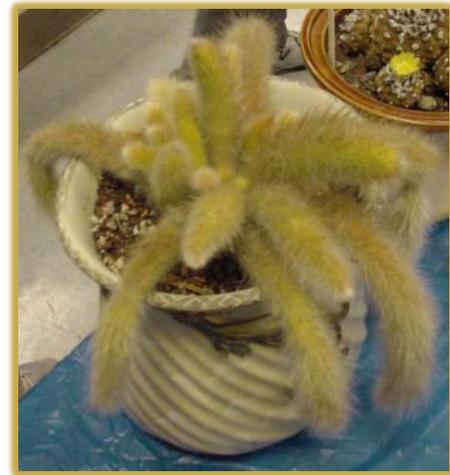
- 1st Victor Zonana

Advanced Dish Garden

- 1st Mitch Bahr



Echinopsis



Hildewintera colademononis



Mammillaria mystax



Matucana



Mammillaria blossfeldiana



Haworthia chloracantha
var. denticulifera



Left - Mitch Bahr
Top - Nell McChesney



Right - Haworthia coarctata
Top Right - Haworthia Pumila



Monthly Meeting Volunteer Team - By Brita Miller

We've been asking you for help with misc. jobs and you have certainly have come through. We now have most jobs filled and want to share the team that sets up and runs various aspects of our meetings so that it all runs smoothly. Also, don't miss the other volunteers listed in the green box on page 10. Thank you to everyone - we couldn't do it without you!

Guest/New Member Ambassadors - Francis Granger and Lorie Johansen

Set-up - Tina Cord, and Jean & Bill O'Daniel (unofficially)

Kitchen - Sandy Wetzel-Smith and Bruce Barry

Brag Table Organization - Annie Morgan

Brag Table Photographer - Chet Reed

Brag Table Points - Mike Nelson

Exchange Table - Brian Magone

Cashier & Benefit Drawing Table - Dennis Miller

Membership - Leon LaFreniere

Co - Librarians - Vicki Martin, Brita Miller, Assistant - Carol McAllister

Nametag Drawing Plants - Nell McChesney

Floater / Gophers - Tina Cord and Carol McAllister

Speaker Liaison - Annie Morgan

Cleanup - Everyone (Please!)

Volunteer Coordinator & All Around Backup - Brita Miller



I personally want to thank all of you for all your commitment and hard work each month - Brita

MEALY BUGS - By Annie Morgan

In June's Haworthia Plant of the Month presentation I discussed mealy bugs, their main pest. I subsequently found new infestations on two of mine, and then a houseplant developed one seemingly overnight. I decided to research and share information that I hope will be helpful. I will focus on the female, as they are the ones that do the damage.

There are 275 species of mealy bugs in the US from 1/10" - 1/4" long. They are soft bodied, unarmored scale insects that live in warm climates. Females do not have wings, but often retain their legs and can move around quite rapidly as I observed.

Depending on the species, adults lay 50-600 very small eggs in crevices and the base of stems, often in a cottony appearing mass. Eggs hatch 1 - 3 weeks later and the flat, oval, yellowish nymphs crawl out looking for feeding places to attach. Older nymphs and adults are typically covered with a fluffy, white wax that they excrete.

Once attached, they insert threadlike mouthparts into the tissue and draw out sap. They feed in crevices, on larger leaves and stems, and on roots, and excrete a sticky honeydew which encourages the growth of black sooty mold which causes plants to turn black. It can also attract ants, often a sure sign of an infestation. After the first batch of eggs hatch, the infestation becomes very noticeable. As numbers increase bugs of all sizes can soon be found crawling around or feeding on all plant surfaces. Treatment should begin immediately to prevent the plant's death, and better air circulation provided.

There are many treatment recipes available and a basic one is 2 tablespoons dish soap and 1/2 cup rubbing alcohol added to a quart of water. The alcohol dissolves the outer waxy covering while the soap attacks the mealy bugs. Many people also just use straight alcohol or a 50/50 mix with water. Spray where mealies are present making sure to get into tight areas. For larger leaves spray, then dip a cotton ball and wipe them away. If the infestation is significant lift the plant out of the pot and check the soil and roots for mealies, looking extra carefully if there is perlite in you soil mix, which may look like a mealy bug. If you have a root infestation soak the whole plant, pot and all, in the mix for a 5-10 minutes. Continue observing.



Note the yellowish color and lack of coating on the bottom two mealy nymphs which recently hatched.

News From the Safari Park Gardens - By Susan LaFreniere

The Zoonooz article on the Baja Garden was published June 27, 2016. Following is the link to the on-line article filled with more beautiful photos: <http://zoonooz.sandiegozoo.org/zoonooz/changes-in-latitudes/>

Come join us. You too can enjoy this beautiful view as you help out in the gardens!

Plant donations are welcomed, too. Contact us at info@palomarcactus.org.

“Photos by Susan LaFreniere used with permission of the San Diego Zoo Safari Park”



Our own Erik Gronborg is being featured in an exhibition at the Mingei Museum in Balboa Park. He has invited PCSS members to the "Member Monday" preview on August 8th, 1:00 - 4:00 pm. If you wish to attend, please print the bottom half of this page with the note from Erik.



"This is the first major retrospective devoted to Erik Gronborg, this **exhibition** will present a full picture of this Danish-born American artist's creative life over fifty-five years. Guest-curated by Dave Hampton, this project brings together examples of Gronborg's sculpture in cast bronze, carved wood, and other media, as well as studio furniture and a comprehensive survey of his ceramics. Images of the remarkable house and garden that Erik and his wife Irina have carefully modified over the years in Solana Beach will add environmental context for the objects in the exhibition. Gronborg's writing, another aspect of his rich creative life, will also be featured."



THE ERIK GRONBORG EXPERIENCE

AUGUST 6, 2016 - MARCH 12, 2017

MINGEI INTERNATIONAL MUSEUM

THE ERIK GRONBORG EXPERIENCE

The first major retrospective devoted to Gronborg, this exhibition will present a full picture of this Danish-born American artist's creative life over fifty-five years. Guest-curated by Dave Hampton, this project brings together examples of Gronborg's sculpture in cast bronze, carved wood, and other media, as well as studio furniture and a comprehensive survey of his ceramics. Images of the remarkable house and garden that Erik and his wife Irina have carefully modified over the years in Solana Beach will add environmental context to the objects in the exhibition. Gronborg's writing, another aspect of his rich creative life, will also be featured.



MEMBER MONDAY

Preview **THE ERIK GRONBORG EXPERIENCE** while the Museum is closed to the public. No RSVP is required, simply show your membership card at the door.

MONDAY, AUGUST 8, 2016
1:00-4:00PM

For more information call (619) 704-7517 or send an email to membership@mingei.org.

Above, Erik Gronborg, *Plata*, c. 1989, stoneware with low-fired lead glaze. Collection of the artist.

MINGEI
INTERNATIONAL MUSEUM
BALBOA PARK 1439 EL PRADO
SAN DIEGO CA 92101-1617

I hope you can join us for this event. Bring this invitation to the Members Preview, it will admit you. I will be there. Erik

Print this for admission

MEMBERS' BRAG GARDEN OR PLANT PHOTOS

Share a section of your garden, a plant that bloomed in-between meetings, or one that's too large or heavy to bring to the Brag Table. Published photo receives 3 Brag Points; those who email in photos receive 1 point. Email photos with plant names to Annie at: info@palomarcactus.org.

BRAG PLANT PHOTO MUST BE IN THE SUBJECT LINE



Lorie Johansen - first flower in 14 years on a *Pachycerus pringlei*



Vicky Martin - Aeonium 'Sunburst'



Astrophytum capricorne

We were short of photos this month, so I filled in with this fascinating plant. Please remember to send in your photos, we love to see everyone's special plants, etc.!

I ran across this *Pachypodium lamerei* with some very interesting seed pots. The plant is 4' tall and the pods are about 8-10" long. This plant was found at Rancho Soledad Nursery in Rancho Santa Fe.



CACTUS AND SUCCULENT SOCIETY OF AMERICA

SUCCULENT SYMPOSIUM ~ SEPTEMBER 3RD

By Peter Walkowiak

Each year the **Cactus and Succulent Society of America** holds a **Succulent Symposium** at The Huntington Garden. This year is on Sat., September 3rd and you can get a free ticket to one of the most fun events for succulent lovers as our club will be sponsoring three people. Unfortunately the topics won't be known until August, and we'll let you know ASAP what they are, either in the August newsletter or an eblast. However, we want to let you know now as once again our club is sponsoring tickets, this year for three members, at \$120 each, which includes dinner.

To qualify for our drawing you must have volunteered for a club event or meeting in the last year. See Annie or Peter at our July meeting to get your drawing ticket, or if you won't be in attendance contact Annie and she will fill one in for you. We will hold the drawing at our August Picnic and will contact winners not in attendance to let them know.

The approx. schedule is coffee, pastries, etc. starting at 8:30 am, and the first talk will then start at 9:00am. Lunch is at noon with a talk following. In the afternoon you can shop at their nursery (always a treat), as well as enjoy some chips and beer. Then dinner will be served and the final talk will be afterwards. In between there is much time to socialize, meet new succulent friends, and bid on plants that will be sold at the silent auction. I have been there for the last ten years and would not miss it myself.

For those who don't win or haven't volunteered you can still attend, and we will provide the information about purchasing tickets as soon as we have it. Please contact Peter for any questions.



2015 Symposium



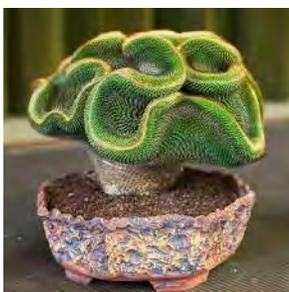
PICNIC & AUCTION - Sat. August 23rd

Our annual picnic potluck and auction is just around the corner so it's time to explain some changes. The event will still be at the San Diego Botanic Gardens (Quail), but we are moving to the Ecker Building where we have our October Show and Sale. That means there's lots of room for more people, plus no lugging your food and plants up the hill.

PICNIC - Thanks to everyone who has already signed up to bring a potluck item; we still need more sign-ups at the July meeting and will publish the list in August. Lorie Johansen and Jim Anderson will be coordinating the potluck so contact them for offers of help or questions.

AUCTION - As you may know, each year we hold an auction to raise money to donate to the SD Botanic Garden and this year it will be a bit different in the hopes that we will have more people bring in plants or garden related items. An auction is a great way to add to your collection - you bring a plant to be auctioned (donating part or all of the proceeds to the garden), then you bid and take home a nice plant for yourself.

- You may donate the entire proceeds, or do a 70/30% split with 70% going to you and 30% to the garden. Bidding will start at \$10 and up.
- We still want those beautiful show-type plants in nicer pots; they are an excellent way to enhance one's collection.
- Or perhaps you make beautiful dish gardens and would like to create and donate one. They should be of a quality to be given as a gift.
- Plus, this year we are also accepting quality plants that may be in a plastic pot and thus not so fancy looking. They must be clean, bug free, manicured, and in clean pots with debris removed, etc. They should be labeled, and be something desirable that you might buy at a nice nursery and be willing to spend say \$15 and above. Think of these as VERY NICE Raffle Table plant, maybe something unusual.



Palomar Cactus & Succulent Society

The North San Diego County C & S Club!

Membership Application

Membership: Please ✓ a category:

New Member _____

Renewal _____

_____ Annual dues w/color email newsletter \$20

_____ Additional Household Members + \$ 5

_____ Engraved PCSS Name Badge + \$ 6

Total _____

PLEASE PRINT! We must be able to read it!

Name(s) _____

Address _____

City/State _____ Zip _____

Phone # _____

Email _____

Bring form & check or cash to a meeting, or mail it in.
Make checks payable to:

Palomar Cactus & Succulent Society or PCSS
P.O. Box 840, Escondido, CA 92033

Palomar Cactus & Succulent Society

BOARD OF DIRECTORS

Peter Walkowiak – President & Co-Program Chair

• hciservices@gmail.com

Brita Miller – Vice-President, Show Chair, Event Coordinator

• eventcoordinator@palomarcactus.org

Leon LaFreniere – Treasurer, Membership

• info@palomarcactus.org

Annie Morgan – Secretary, Co-Program Chair, Publicity,

Newsletter Editor info@palomarcactus.org

Francis Granger – Board Member

Mike Nelson – Board Member, Brag Table Points

Carol McAllister – Board Member

• • • • •

OTHER VOLUNTEERS

Vicki Martin – Co-Librarian

Chet Reed – Brag Plant Photographer

Bruce Barry & Sandy Wetzel-Smith – Refreshments

Dennis Miller – Plant Sales & Benefit Drawing

May Fong Ho – Website

Brian Magone – Exchange Table

Kathie Hoxsie – Monthly Meeting Publicity

2016 So. California Event Calendar

July 22-23 Orange County C & S Society Summer Show & Sale

Thurs. 21st 6-8pm, Fri. July 22nd 9am-7pm, Sat. 23rd 9am-5pm
1000 S. State College Bl., (Anaheim United Methodist Church)
Anaheim, CA Info. Call 949-212-8417

Aug. 13-14 31st Annual Intercity Show & Sale at the LA County

Arboretum, 9am-5pm daily - 301 No. Baldwin Ave., Arcadia, CA.
Info. Tom Glavich 626-798-2430 or Artie Chavez 818-482-8795

Sept. 3 Huntington Botanical Gardens Succulent Symposium

All day at The Huntington, Info. 626-405-3504

Sept. 10 Long Beach Cactus Club Annual Plant Auction

12-5pm, Rancho Los Alamitos, 6400 Bixby Hill Road, Long Beach,
CA 90615, Info. 562-631-5876

Oct. 8-9 Bakersfield Cactus and Succulent Society Show & Sale

Sat. 10-5, Sun. 11-4, East Hills Mall, Center Court, 3100 Mall View
Road, Bakersfield, CA 93306 Info. 661-831-8488

Nov. 5-6 San Gabriel Cactus and Succulent Society Show & Sale

9am-4pm, LA County Arboretum, 310 N. Baldwin, Arcadia, CA,
Info. Manny Rivera 626-780-6957 or John Matthews 661-714-1052



Peter Walkowiak – *Coryphantha macromeris*

2016 PCSS MEETING SCHEDULE

DATE	SPEAKER	TOPIC	PLANT OF THE MONTH
27 August	---	PICNIC & AUCTION at San Diego Botanic (Quail) Garden in Encinitas	Auction
24 September	Woody Minnich	TBA	Staging Workshop
22, 23 October	---	ANNUAL SHOW & SALE AT SAN DIEGO BOTANIC (QUAIL) GARDEN IN ENCINITAS	YOUR SHOW PLANTS!!!
19 November	Brian Kimball	Gasterias	Gasteria
17 December	---	Holiday Party!	GIFT PLANTS FOR ALL

HAWORTHIAS – by Annie Morgan

Haworthias are popular succulent plants, frequently compared to Aloes, and both are members of the Asphodeloideae family. They come from Southern Africa and the first written references go back as far as the early 1600s when European colonists were discovering the botanical riches of the area. Early explorers took Haworthias back to Europe and they have probably been in cultivation for over 400 years.

There are more than 70 species of these small and very slow growing plants. They are generally grown for their great diversity in decorative leaf markings, form, shape and color, and make an easy care collection.

Haworthias have attractively patterned leaves that are generally firm, tough, and fleshy, although some are soft and rubbery and a few fuzzy. Most form rosettes from 1.2 to 12 inches in diameter, and the plants can grow solitary or can be clump-forming. They are usually stemless but in some stems reach up to 20 inches. Individual leaves may have pointed, blunt or rounded tips, although there is considerable variation of form between different species and subspecies. Many are green, but others display a range of brown or reddish-brown pigments, especially in direct sunlight. The leaves of some species have translucent “windows” on their upper surface sunlight can reach internal photosynthetic tissues.



Haworthia retusa in habitat



Haworthias produce spikes of simple small white tubular flowers.

Their two-lipped flowers appear in spring and early summer on the end of a long flower spike that may exceed 16 inches in height, and may be simple or branched. Flowers are very similar between species, although the differences are used to group individual species into sub-genera.



CULTIVATION

In habitat these Haworthias often benefit from the shade of shrubby plants or rocks, which also afford protection from predators. A few can be found in full, bright sun, but most live in more protected spots. In cultivation they are an excellent choice for small space collection, and tolerate partial to full shade, but should have neither direct hot sun nor deep shade. They need enough light to develop their full color.

Haworthias are spring and autumn growers. They will get by with watering just once a month, however for a thriving plant it should to be watered every 1-2 weeks depending on your climate, and the soil should be allowed to dry out between watering's. They are tolerant of under watering, but will succumb quickly to rot if overwatered, particularly during their summer dormancy. During this time they renew their roots and prolonged moisture can lead to rotting.

Established plants do best in deep pots that accommodate their thick fleshy roots. Their soil mix should be well drained to prevent wet roots. Some Haworthias are so slow growing and can stay in the same pot for years, that there may be a tendency to forget to repot into fresh soil, a practice that should be done every 2-3 years.

Some Haworthias can survive a few degrees of light frost for a short period, but it is best not to take chances. They do best in the temperature range of 75-90°F. But they can tolerate temperatures to the low 40s, and they will survive high temperatures into the low 100s.

Although it is possible to kill a Haworthia, they are generally forgiving of occasional lapses in care.

PROPAGATION

Many Haworthias readily offset, and therefore are easily passed along to friends or handed down from generation to generation.

Vegetative propagation, especially by taking cuttings, is the quickest and most common method of propagating Haworthias. The majority of species cluster from the base; the new young plants are often referred to as offsets or “pups”. In many cases, as soon as the parent plant forms the new young plants, they develop roots.



Top - Haworthia pumila 'Donut'
Middle - Haworthia truncata
Bottom - Haworthia arachnoidea

In some species, as soon as the new plant becomes well established, the original contact with the parent plant is broken and when the clump is unpotted, the individual plants fall away from each other.

In other species, the attachment to the parent plant may remain; this can easily be broken or cut to separate the plants. If you create a subsoil wound during the separation process the plants should be allowed to heal for a few days before repotting to avoid the possibility of pathogenic organisms moving from the soil into the fresh wound.

Leaf cuttings are reportedly not too hard to do. Be sure to cut off the leaf with at least some stem (root is not necessary). Put in a warm area on slightly moist soil (in summer is best) and keep out of sun. Eventually it should root into the soil.

PESTS AND DISEASE

Mealy bugs are their main pest, and while rare, they can kill a plant quickly if left unchecked. For light infestations spray the plant thoroughly with alcohol. Repeat weekly until you see no more signs of the pest.

The most significant disease problem is root rot caused by poor soil or too much moisture. Occasionally such root rot can move into the plant stem resulting in the death of the plant.



Haworthia limifolia



Leaf propagation – website listed below

Following are links to misc. articles on Haworthias:

GENERAL INFORMATION: <http://davesgarden.com/guides/articles/view/471#b>

EXCELLENT DETAILED INFORMATION: <http://wimastergardener.org/article/haworthias-super-succulents-for-small-spaces/>

PHOTOS: <http://public.fotki.com/Grootscholten/plant-collections/haworthia-limifolia/> - Thank you to Cok for permission to use his photos.

SEED & LEAF PROPAGATION: <http://www.gerhardmarx.com/p/succulent-cultivation.html>



Haworthia magnifica variegated



Haworthia bayeri



Haworthia tessellada



**Haworthia truncata
var. maughanii variegated**



Haworthia wimmi hyb 'Yiki usagi'



Haworthia turgida



Haworthia scabra



Haworthia limifolia variegated