

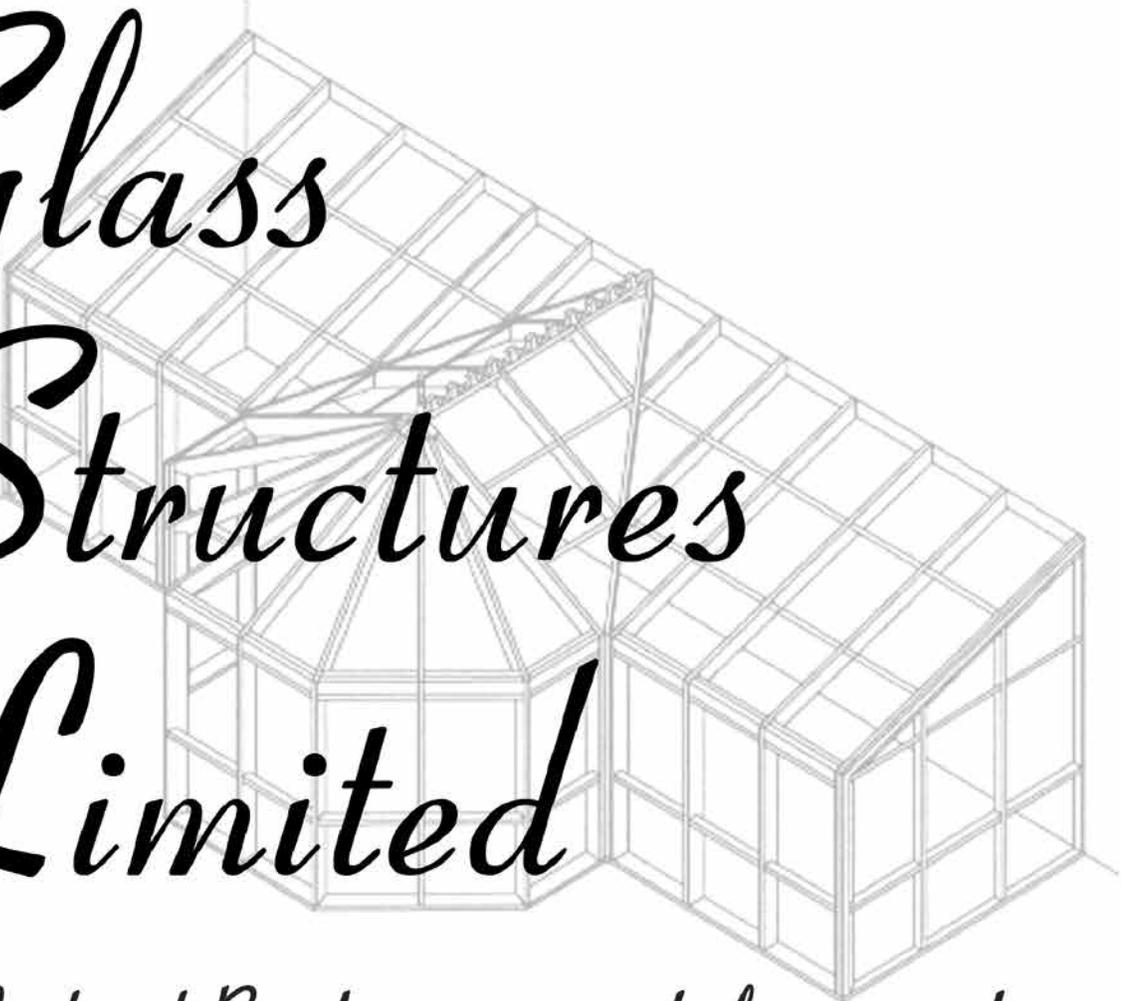
Spring 2015 - Vol 37, No.2

Home *Greenhouse*

THE MAGAZINE OF INDOOR GARDENING



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Roger Marshall*



*Back Cover
Left: Sansevieria
Right: Cymbidium 'Showgirl'
Both winners at the Philadelphia
Flower Show. Photo by Roger
Marshall*

Home Greenhouse is the official quarterly magazine of the Hobby Greenhouse Association. It is published in the Winter, Spring, Summer and Fall. The mission of Home Greenhouse is to provide a vehicle for sharing member information and for printing articles on greenhouse construction, maintenance and on indoor gardening. It carries advertising and is available to non-members as both printed and electronic versions.

Editor's Note:



At a talk I gave recently to a local garden club, a person asked "What's the best greenhouse for growing marketable vegetables year round?" After a bit of thought, I suggested buying the largest greenhouse affordable. That way, I reasoned, a large variety of vegetables could be kept growing throughout the seasons.

But now I would give a different answer. I would recommend that, instead of buying a greenhouse, the person consider buying a warehouse. That's right, a warehouse. There are several reasons for suggesting what seems at first glance to be a very unlikely place for market gardening.

First, the temperature in a warehouse can be easily controlled. Because winter heating costs are the single largest expense in greenhouse maintenance, this factor is no small consideration. In my own 300-square-foot greenhouse this winter, I've gone through 40 to 50 pounds of propane a week just to keep the temperature around 50 degrees.

Second, natural sunlight isn't essential for growing fresh produce. Scientists in England have found that plants don't need the entire spectrum of sunlight colors for optimal growth, just specific colors. The article on Heliospectra lights in the fall 2013 issue of Home Greenhouse showed how the color of light allowed one plant to grow far larger than its neighbors that were grown under different colored lights. Apparently, larger, more productive plants can be achieved using specific purple and red LEDs that are "tuned" to the plants' needs for rapid, healthy growth. The newest LED lights are reasonably inexpensive to run and can be "tuned" to suit a crop in this way.

Finally, just as in a greenhouse, plants in a warehouse can be easily fed and watered using an organic, hydroponic system. By employing such a system inside a warehouse, a large variety of marketable crops can be grown right near to shopping centers. Proximity to the point of sale has the advantage of eliminating cross-country shipping entirely and providing consumers with truly ultra-fresh fruits and vegetables year round.

For the home greenhouse gardener, not only can a hydroponic system be very useful, but so can LED lights, with their ability to help extend the growing season without huge cost. This winter, two LED lights over my tomatoes helped the plants keep producing until late February when they finally succumbed to the extreme New England cold, even inside my heated greenhouse.

The good news is that new tomato plants are already four inches tall and growing fast in my germination chamber. I expect to harvest Early Girl tomatoes in my greenhouse around mid-May. These plants will produce fruit all summer long, supplementing the crop in my outdoor garden. So I expect to be picking a lot of tomatoes for sauces and salads this year.

Roger



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OUR CONTRIBUTORS

Without them, there would be no magazine



Donna Bocox has a lovely Julianna greenhouse in Iowa where she grows almost 500 cactus acquired from all over the country. Donna loves flowering plants and her cactus collection has many beautiful plants as you will see in these pages. Donna is the secretary of HGA.



Richard Schreiber lives in Norwalk, Iowa with a Lord and Burnham greenhouse rebuilt in 1992. He is a Master Gardener and is also involved in the Cactus and Succulent Society of America as a director. Obviously cactus and succulents are his favorite plants. He and wife Cynde have been retired for several years.



Steve Aegerter is a Colorado State University Master Gardener in Denver, Colorado. He started gardening in 1957 when he joined 4-H. Although semi-retired, he is a highly successful landscape designer. He enjoys vegetable gardening, tending to his extensive home landscape and writing short stories. He grows all his plants from seed using his Sunshine greenhouse, hot house, cold frame and heated mini-hoops.



Keith Schindler's "Greasy Thumb" compliments his wife Selena's, "Green Thumb." Keith uses his fabricating abilities to design and build what Selena needs to support her gardening, bird watching and wildlife management practices. Keith and Selena live on The SnK Wildlife Reserve, one of his Grandfather Schindler's former cattle ranches, located outside of Cuero, Texas.

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MY GREENHOUSE

By Robin Socha



As a young girl I remember sitting under plant benches in my grandmother's greenhouse watching in awe at the profusion of greenery she tended. It was at this magical time that the seed was planted in my mind. With my grandmother's generosity I was able to buy an 8' x 16' Elite glass and aluminum framed greenhouse kit about 15 years ago.

The construction was quite an effort. We had a cement footing poured below the frost line and on top of that the mason added five courses of concrete block. Inside the concrete block walls we poured about a foot of $\frac{3}{4}$ " bluestone as a base. The high kneewall was needed because our property is on an incline and to put the greenhouse door at ground level at the top of the slope meant that we have to step down three stairs into it. This is fine, because with an 8' high greenhouse, plus the 3' knee wall we have an 11' height inside. This allows me to overwinter several potted but large citrus trees that are up to 10' tall.

The outside of the greenhouse wall was finished by my son who used the fieldstone left over from the excavation to create an attractive stone faced outer wall. Inside, my husband installed used brick to make the steps and a center walkway.

Inside the greenhouse, my husband built shelves along the north side from front to back. They are made from $\frac{7}{8}$ " Unistrut and $\frac{3}{4}$ " conduit anchored to the block wall. He then used 16-gauge galvanized rabbit fence for the shelves. The bottom shelf is 3' deep and the top two shelves are tapered toward the roof top to make it easy to reach plants. This arrangement gives plenty of storage space for pots, potting soil and other materials under the bottom shelf.

I start loading up the greenhouse in mid-October, being careful to trim the plants and to spray for bugs. Here in mid-eastern Pennsylvania we have very cold winters and we use a 45,000 BTU Dynavent propane heater mounted on the back wall. With the installed thermostat we keep the temperature above 45 degrees F. About late-February to early March I feed the plants organic fish fertilizer and raise the night time temperature a bit.

To help cut heating costs we line the greenhouse with a 6 mill polyethylene plastic sheet to create an interior envelope about 2" to 6" away from the glass. This creates an air space which helps to keep the space inside warm. (This was a tip I picked up from a Hobby Greenhouse article in the Winter 2003 edition.) The liner saves a lot on heating costs. For example, on a sunny day it might be

32 degrees outside, but inside the greenhouse it could be 89 degrees, making it the perfect place to sit and enjoy a glass of homemade wine!

I enjoy growing a variety of plants. Right now there are 200 plus plants in my small space. My cactus seems to like the cool nights and I expect many to flower this winter.

There are also lots of herbs such as ginger, turmeric, oregano, bay laurel and a variety of mints that I use in the kitchen. I also have two large tea plants that I can brew a cup of white or green tea from.

Eight citrus trees, some six foot tall did a great deal this year. This is the first year that I have both lemons and limes. I used plant probiotics from fullcirclesoil.com last year on my citrus and I really believe that this made a difference along with a diligent bug patrol and a 14" fan used to keep air moving. I use a spray of Neem oil, orange oil and water on most plant problems. This has been especially helpful with sooty mold, aphids, and scale that seems to like the greenhouse as much as the plants do.

For winter flowers I have bird-of paradise, bougainvillea, passionflower vine as well as geraniums. Later in the winter I try to start many annuals for the patio such as begonias, petunias, and coleus and they add even more color. I also start vegetable seedlings for the outside garden using heirloom and organic seeds for all my tomatoes, peppers, cucumbers, and squash.

By the time spring comes and my seedlings are ready to set outside during the day, I'll be taking down the inside plastic and save it for another year. I find that I get two or three years out of it if I'm careful.

At this time, when it gets around 78 degrees inside the greenhouse the roof vents will open automatically to let hot air out and bring fresh air inside. They close as the temperatures drop. When this happens regularly, I take my greenhouse plants outside and set them on the patio for the summer. Orchids that I keep in the house also go out in a protected area to get summer rain and fresh air. They seem to benefit from the change usually set buds soon after.

But for now, I think I'll head out to the greenhouse with a the seed catalogs and a freshly squeezed lemonade made from the fruit that I grew this summer.





WHAT IS THAT SMELL?...

OH, IT'S THE STAPELIA!

By Donna Bocox

I have had several Stapelia plants in my greenhouse over the past 10 years, and have managed to get most of them to bloom. My first plant that produced a flower in 2005 was an exciting experience. On a warm summer day, I opened the greenhouse door and a stinky rotten smell rolled out that was overpowering. I thought that possibly a large animal had crawled into the greenhouse and died and now is decaying. My greenhouse is only 10x15, so it did not take long to inspect to find no animal. But what was that stink?? I look around and do not see anything out of the ordinary, and then I notice WOW....the Stapelia bud has finally opened. I walk closer to it and realize.... That Stapelia flower really stinks!

The Stapelia, from the Apocynaceae family, is a low growing succulent, predominately from South Africa. The name, Stapelia, was introduced by Linnaeus in 1737. It is named after Johannes van Stapel, a 17th century physician and botanist. The stems are almost always erect and are

usually green to reddish, depending on the amount of sunlight. It is also known as an African starfish flower or carrion flower, characterized by their foul smelling flowers similar to rotting meat. The flowers are visibly hairy and often flies are fooled by its' appearance and lay eggs around the fleshy corona of the Stapelia flower, convinced that they will be a food source for their hatching larvae. The Stapelia flower starts out as a "flower pod" that takes about 3 weeks from the start until the pod opens to a spectacular flower. The day before the pod opens on the *S. gigantea*, the pod measures approximately 2" wide and 4-5" tall. (see picture) Surprisingly, there are a couple of species that have sweet smelling flowers: *S. electiflora* and *S. flavopurpurea*.

The plant does very well inside a warm greenhouse where it gets lots of bright light. The soil must have good drainage, with pH 6.5-7.5. Most species will do good in well drained soil of equal parts of potting soil, river



Opposite page: Donna's *Stapelia Gigantea* in full bloom. The flower, sometimes known as the starflower, is about nine inches across,

left: The *Stapelia gigantea* flower pod ready to open. *Stapelia* are native to South Africa. It is recommended that the plant be placed outside when in flower to dilute the odor.

Middle picture: A smaller *Stapelia gettlii* bloom. Flies are attracted to the hairs and to the odor of rotting meat, hence their common name, carrion flowers

Lower picture: *Stapelia variegeta* n full bloom.

sand and chicken grit (crushed granite). They can go long periods without water, but must be watered when they begin to shrivel. Mealy bugs love *Stapelia* stems so the plant must be inspected weekly for them. A strong jet spray of a 50/50 mix of methylated spirits and water can be used to eradicate these pests.

The flowers of some species, most notably the *Stapelia Gigantea*, can get up to 14" across. See picture opposite, which was the latest bloom on my *Stapelia Gigantea*. The flower measured approximately 9" wide. Once the flower opened, it lasted open for more than 4 weeks.

Stapelias are easily propagated by stem cuttings. Leave the cutting to callus over and dry out in the shade for at least two weeks before planting, and do not water until either roots appear or you notice new growth.

Although I have read that the *Stapelia* is somewhat difficult to grow, I have found it fairly easy to grow in a greenhouse if you remember 2 rules: 1) Make sure you plant them in a well drained soil mixture, and 2) Don't overwater. When in doubt, skip the watering for another week. So, go out and find your own *Stapelia* plant and enjoy the flower display.



FOR THE LOVE OF GERANIUMS

Tom Eckert



Consider geranium one of the most beautiful plants to grow in hanging baskets and in the floral gardens. Zonal geraniums are by far the best geranium varieties. Seed geranium normally cannot compare to zonal geranium for growth, vigor and bloom size. Plus the zonal do not shatter and have the petals fall like seed geranium. The petals stay attached to the flower stem when dying until you deadhead the plants.

Geranium require a reasonably good soil to root out and a supply of a balanced fertilizer given to them on a weekly basis. Geraniums like a well drained soil to ensure that the roots do not sit in mud. Like most plants, if the soil cannot drain off after a good rain, the plants may develop root rot which will stunt its growth or eventually kill the plant. You should use a good quality potting soil when planting geranium in pots and hanging baskets. Cheap does not equal quality growing media!

When planting geraniums in individual growing pots use 1 plant per a 4 inch pot. For hanging baskets I put

three plants in a 10" diameter basket and 4 plants in a 12" diameter basket. That number makes for a good show with proper care and will last until the first hard frost in the fall.

When purchasing geraniums by the pot, do not be hesitant to turn the pot over, tap the bottom several times to loosen the plant, remove it from the pot. A quick inspection should show a whitish root system spread throughout the medium.

Which brings us to bringing the geranium inside for the winter growing season. Many older growers remove the plant from their pots or baskets, knock off the soil and hang them upside down in a cool dry place to go dormant to overwinter them. This does give some success, but you will not have the beauty of winter geranium in the greenhouse or winter growing areas. However, if you overwinter them in your greenhouse, you may need to provide additional light or the plants may get leggy.

As with most plants in an inside growing area, pot water only. Overhead watering will destroy flower buds



*Opposite page: Dutch Country Classics
“Sunrise Salmon”*

*Left: Dutch Country Classics “Sunrise,
Bright Red”*

*Middle: Dutch Country Classics Sunrise
Pink*

*Bottom: Dutch Country Classics “ XL
Brilliant White”*

and can lead to burn spots on the leaves. On a sunny day, water globules on the leaves act as a magnifying glass when the sun is beating down and create burn spots, but this is a minor problem.

As for disease and insects, I have found that zonal geranium tends to be disease free, at least those I purchase as plugs for transplanting.

Indoors give your geranium a light feeding of a balanced fertilizer like Miracle Grow Flower Fertilizer. One tablespoon per gallon or just



enough to color the water a very light blue. And, of course, always provide some type of light air movement in the greenhouse or inside growing areas, it will eliminate dead air spots and help to provide an even temperature for your plants to thrive and grow.

The pictures for this article were taken on December 20th in the greenhouse. These are in 10-inch baskets with three plants per basket, brought inside before the first frost.

As the blooms fade, they are deadheaded, and new buds take over producing wonderful winter color.



BUILD IT BETTER YOURSELF

by Keith Schindler (The SnK Wildlife Reserve)

My wife, Selena (and I guess me too), have been involved in greenhouse growing since, hmm, uh, about, well, were not sure, but we think, about 1996, or a bit before. We don't remember the exact time frame, but in the early/mid '90's we put up a glass glazed greenhouse, in the back yard of our Denton, Texas house. I don't remember who we ordered the kit from (Selena says it was from the Elite Greenhouse Company), but it was very complete and served us well, and still does our son and daughter in law, who live in our old house.

The first winter we, quickly, learned that single-paned glass greenhouses do not hold heat well during the winter. We realized that for winter use we had to insulate the greenhouse and we did so by lining it with a poly sheet liner which we wrote up in an article for the Texas Master Gardeners, back in the day. Fast forward from the '90's to now, and we no longer live in Denton, Texas, but instead in South Central Texas, outside the towns of Cuero, Yorktown and Goliad.

I was lucky to inherit some family ranch land, and even luckier in that Selena wanted to move from her childhood home of Denton, down to the 408 acres of cattle land that my grandfather passed to me. (We call our place, The SnK Wildlife Reserve, but that's another story.) After building a house, and moving, in 2006, Selena and I knew that we had

to set up a greenhouse as she had 200+ orchids that needed a new home. Well, we didn't build just one house, but two; one for Orchids and the other for Cactus and Succulents.

Knowing that glass greenhouses don't hold heat well, we decided on twin-wall plastic for the glazing. That narrowed the search down, some. We finally found what we were looking for, or so we thought, in 10' by 12' greenhouses, from Harbor Freight. The price was reasonable, so we bought two.

As I mentioned earlier, we moved to the 408 acres that my grandfather left me, building on the "Front 40," which put the house and "yard" exposed to winds from the North. Turned out, those Harbor Freight greenhouses were more designed for residential locations than the rural location that we were going to put them up in. We did though, and shortly had to "Engineer" them to handle the wind loads. The first greenhouse was almost taken down by the wind before we even got it completed.

We had the first greenhouse partially framed when the winds kicked up, and started to wreak havoc. I had to move the tractor over to the



construction site and park it with the front end loader against the framework, so the wind didn't buckle it. The tractor held the frame through the night, and we were able to continue the construction, completing the greenhouse in time for the first cold

Above: Basic framing, made from 2 3/8" pipe at each corner and at the middle of each side. Balance of framing is made from 1 1/2" angle iron. Foundation is 1/2 cinder blocks, set, and filled, with concrete. The foundation is set in a trench, allowing the blocks to be set level.

Right: Roof framing almost complete.

Bottom: Framing complete and sides going up.



season. The second greenhouse remained in the garage for a year, or two.

It turned out a good thing, in that the second greenhouse didn't get built with the first. Through the time that the first greenhouse was up we learned that it wasn't suited for the "Prairie" location that it was built on. I had to do quite a bit of work on the first greenhouse, as the winds tried to push in the sides and shift the structure. Both of the north and south walls required bracing, as the winds would flex the structure in and out. We had installed wire



we did with the hangar.

Since the wind had taken down the last greenhouse, we wanted this one to stand up to our South Central Texas Northerners. With that, I decided to set six 2 3/8" well pipe columns into the ground, each about 18" deep. The "foundation" of the greenhouse is 1/2 size cinder blocks, set in concrete (and filled with concrete), in a level trench around the perimeter of the greenhouse. (As we weren't limited to a kit size, we decided to make the new greenhouse larger and went from the 10' by 12', of the original, to 10' by 16')

To finish up the structure, I purchased 1 1/2" angle iron (from Metal Mart, outside of Victoria, Texas), from which I built the roof trusses and filled in the remaining wall framing. The entire structure

shelving on the walls, which helped some, structurally, but it wasn't enough. I had to add diagonal bracing in the corners and a heavy aluminum "L" member above the doorway. We had all the tricks worked out when we put up the second greenhouse, and they both performed well over the years. We used small electric heaters to heat them, but sometimes we'd have to supplement the electric heat with propane heaters.

All was good for years, until we had a frightful storm in December about three years ago. The winds almost blew the orchid house away. It was the oldest and the metal base had rusted pretty badly, allowing the wind to pull the orchid house from its foundation, or at least half way. We surveyed the damage the next morning, dismayed at the loss, but amazed that it wasn't worse than it was. We packed the surviving orchids into the cactus house, the garage, the kitchen, and any where they'd fit. When the weather improved, we finished tearing down the Orchid House and hauled it off.

After the loss, Selena and I tossed ideas around, searching the internet for options. We knew that the Harbor Freight houses would require considerable modification so we looked elsewhere. In the long run, we decided that we'd design and build our own and in doing so we'd build the next one larger.

After moving to our new place we had a number of buildings to erect, one of which was the hangar, to house a small airplane that I'd built. To do so, I'd bought enough 2 3/8" well pipe to build it and a shop. We got the hangar done in 2008, and after finishing it we decided that we'd build the shop from a Mueller Inc. kit, rather than fight to screw into the well pipe, as

was welded up, with the bottom framing "pinned" to the cinder block/concrete foundation, and is stouter than, you know what.

Unfortunately, during this time, I'd developed some health issues, seizures and more advanced cardiac blockage, so construction came to a halt in early 2014.

After recovery from a double bypass in June, I mended well enough to get back to work on the greenhouse. Selena and I finished it up in early November, glazing it with 6mm twin-wall plastic (PolyGal, from Regal Plastics, in San Antonio) and trimming it with green and tan metal trim, matching the house, and other buildings on the place (from Mueller, Inc.).

The PolyGal is "UV Treated" on one side and really reduces heat transfer into the greenhouse. Selena and I quickly noticed this when putting up the side and roof sheets. We may get away without shade cloth on this greenhouse, but only time will tell. Some time back Selena "summered" the orchids on the porches and hanging from several oak trees in the "back yard." The cactus and succulents also get moved out during the summer, adding to the existing landscaping.

The door is an insulated storm door (purchased at the local Lowes) and venting is provided by a 24" exhaust fan on the North side, and two 24" louvers on the South side (from Farm Tek). We've run two, independent, 20 amp circuits for lighting, venting and heating. The new house is SO much sturdier than the previous and the still-standing greenhouse,

which makes it so much quieter in the wind. Selena has also noted that the new greenhouse heater does not run as much as the one in the older greenhouse.

As the original greenhouse was 10' by 12', the gravel base was not large enough for the new 10' by 16' greenhouse, so we had to locate additional gravel. Since the source for the original crushed limestone was no longer available, I found a source for ¾" base. Turns out it had some clay in it, but it spread out nicely and has done well since the greenhouse went operational in early November.

I was worried about a yucky mess, from the clay, but no such problem. My poor ¾ ton pickup, really worked to get that gravel base to the site.

This time we didn't install wire shelves on the walls, but instead we moved in tables that I'd built a few years back. These are made from treated 4" by 4 "legs with plastic grates for tops.

The new greenhouse now houses the cactus and succulents and being 4 feet longer, provides for additional room to wader in and relax. There's a lot more room on the floor and the center of the greenhouse is open, allowing us to bring in a lawn chair, if we want to

At this time we haven't decided to replace the second greenhouse, but when we do, we'll do it so much easier, as we've worked the kinks out in building this one.

For those interested in more information on Selena's greenhouse, her container garden, or other points of interest, you're welcome to visit at our Facebook page - The SnK Wildlife Reserve. <https://www.facebook.com/pages/The-SnK-Wildlife-Reserve/145457705541353>

The web page is at: <http://snkwlr.wix.com/snk-wildlife-reserve>.



Opposite page: Front end glazed, with door and exhaust vents installed.

Top: Benches installed and ready for plants.

Bottom: Cactus and succulents, in the new greenhouse.

Did you know HGA has a website? You can find us at <http://www.hobbygreenhouse.org>.

HGA is also on Facebook. Why not post your pictures and information?

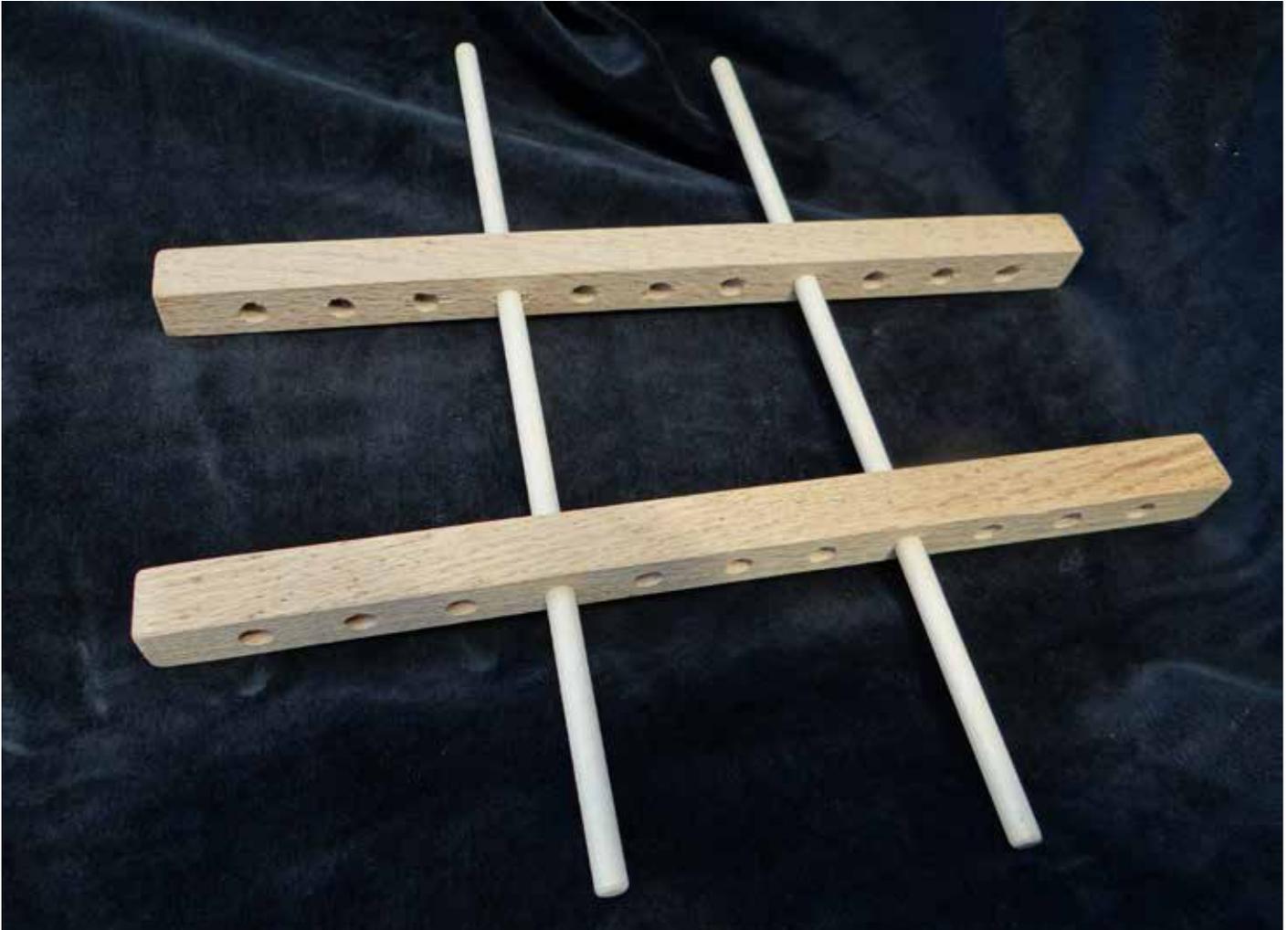


TIPS AND HINTS

Edited by Richard Schreiber

This department deals with ideas, discovered short-cuts or economical alternatives to pricey items for the plant lover. We welcome your tip or hint and if published we'll extend your membership 6 months. Hopefully everyone can find something of interest to try or improve on. Please send them to Tips & Hints, 922 Norwood Drive, Norwalk IA 50211 or MembershipDirector@hotmail.com. Pictures are always helpful to explain your tip or hint.

A SILENT ASSISTANT



One of the many challenges of growing cacti and succulents or any plant is repotting the plants, getting them centered and at the correct height in the container or pot. Who can really hold the cactus at the correct height, in the center, arrange roots, add soil mix and use a pokie stick all at the same time alone?

Well, I saw a need for making a tool to be a silent assistant. It holds the plant just right, doesn't complain about spines, and has all day for you to finish the job.

Basically it's constructed of 2 boards with drilled

holes and 2 dowels to fit the holes. In detail, each board is $\frac{3}{4}$ " by $\frac{3}{4}$ " by 12", you will need 2, along with $11 - \frac{5}{16}$ " holes drilled 1" apart in each board. The two $\frac{5}{16}$ " dowels are also 12" long. The dowels and the boards should easily slide to accommodate the size of the plant.

How it works is very easy. Just estimate the size of the base of the plant. With one dowel already in the boards, lay the frame atop the pot or container to create a level stable platform. The plant is then placed at the ideal height in the pot, while the second dowel is inserted on the other side of



the plant into both boards, providing a snug resting spot. If the plant is too high, simply move one board outward to let the plant drop a fraction of an inch.

If it's too low move one board in to raise the base of the plant. After adjusting, you have the plant in the middle of the frame, at the correct height, ready for centering, arranging roots, adding your favorite mix, tamping the soil down and even applying a top dressing. Upon completion, one dowel is removed and the frame is pulled away leaving the plant centered, erect, and happy.

This described size is a medium one; you could make it larger or smaller depending on your need. It lends itself

to be used mostly on cacti, with globular shapes; however I've used it on Pachypodiums and Adeniums as well. It depends on the plant base and it's advised that you play with this tool to see its possibilities.

This would be an easy and fun project for the cacti/succulent hobbyist to make, especially for the person who needs to keep moving the plants up into larger pots and needs an extra set of hands.

Young cactaholics could also benefit from this without the spines sticking them. Lastly remember to make the dowels easy to move and remove for the best possible alignment and overall use.

GIVE THE GIFT OF *HOME GREENHOUSE* MAGAZINE

Did you know you can sign up your friends? Help us expand HGA

Give all your friends a gift of *Home Greenhouse* magazine by signing them up for membership in HGA. Just copy this form and send it to the Membership Director, Richard Schreiber, 922 Norwood Dr., Norwalk, IA 50211-1329, or email their names with the information below to HGAmembershipdirector@hotmail.com. Send a check for \$28 for the print version or \$14 for the online version. or order through Paypal on the HGA web site. Details from the membership director.

Name: _____
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SHOWTIME!

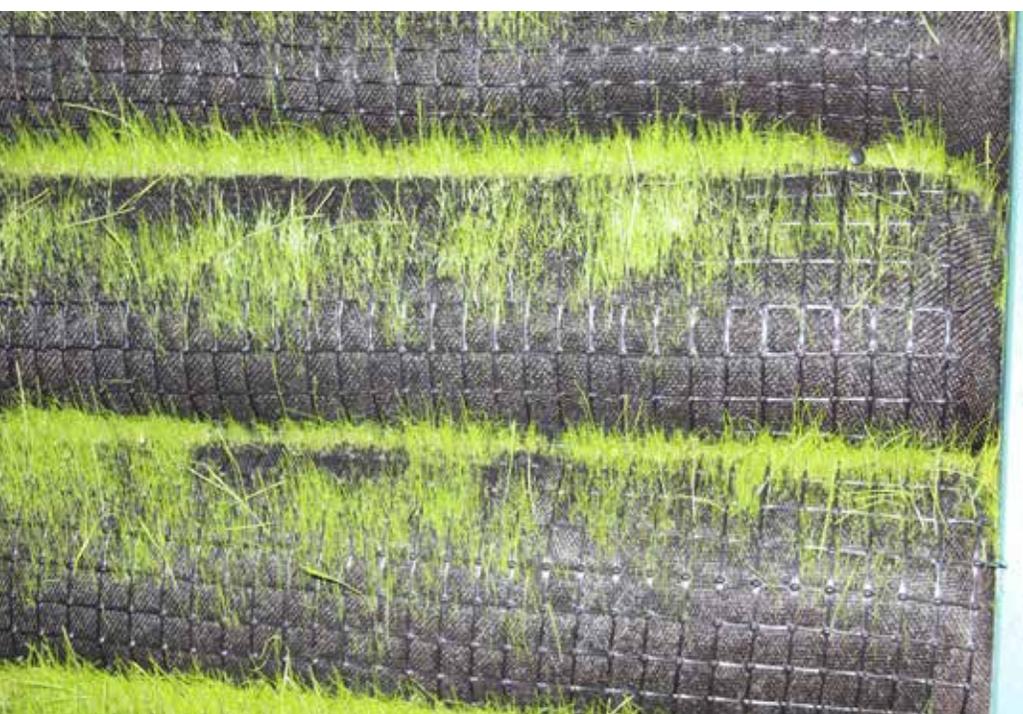
Images from some major shows



THE NEW ENGLAND GROWS SHOW



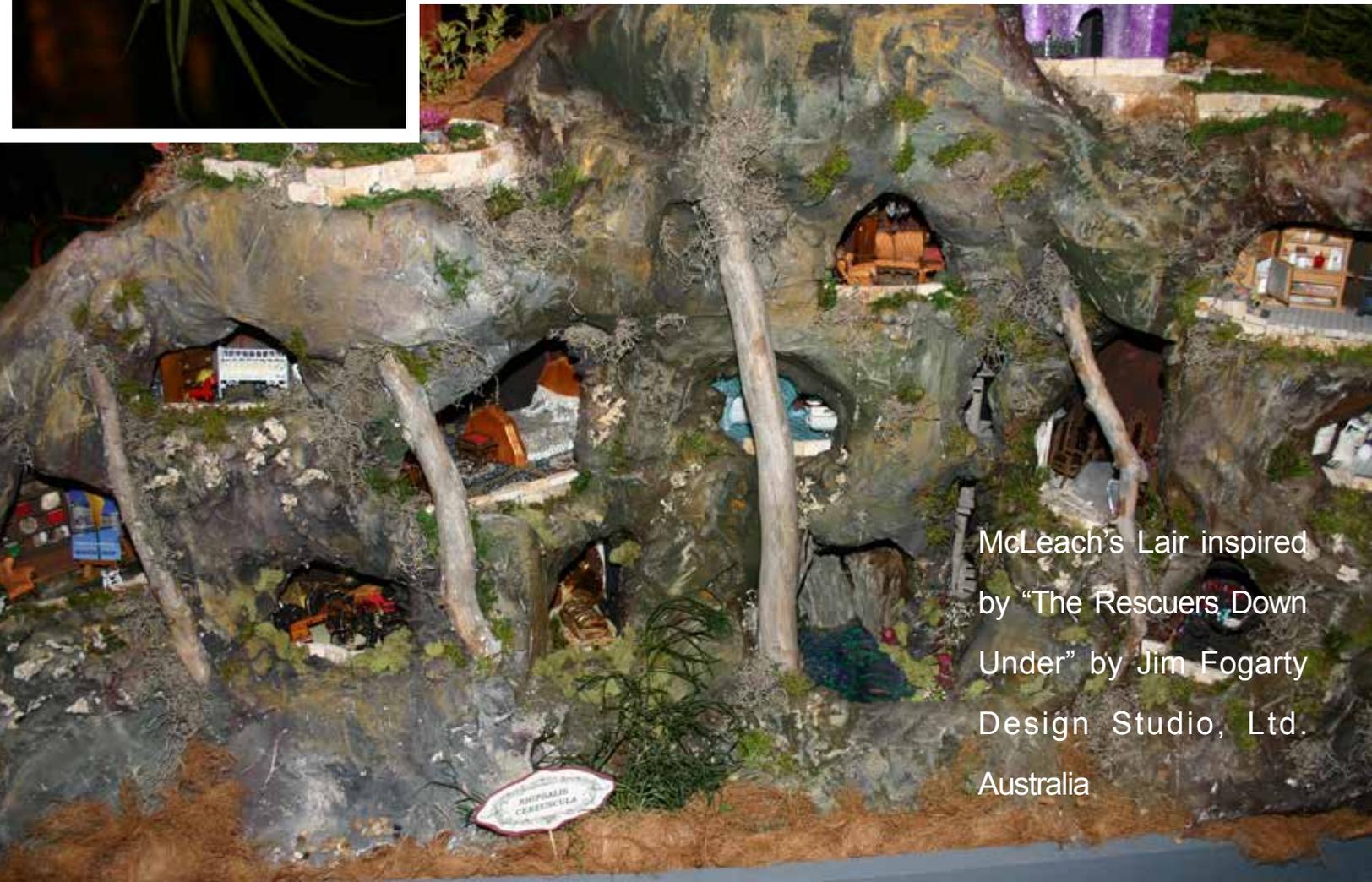
Top Left: A good use for an old pallet
Bottom left: Growing vertically. Earth filled tubes growing grass or flowers on a bank.
Top center: A stone frog
Above right: A stone lantern
Bottom right: A parliament of stone owls



PHILADELPHIA FLOWER SHOW:

The theme of this year's show was "Celebrate the Movies."

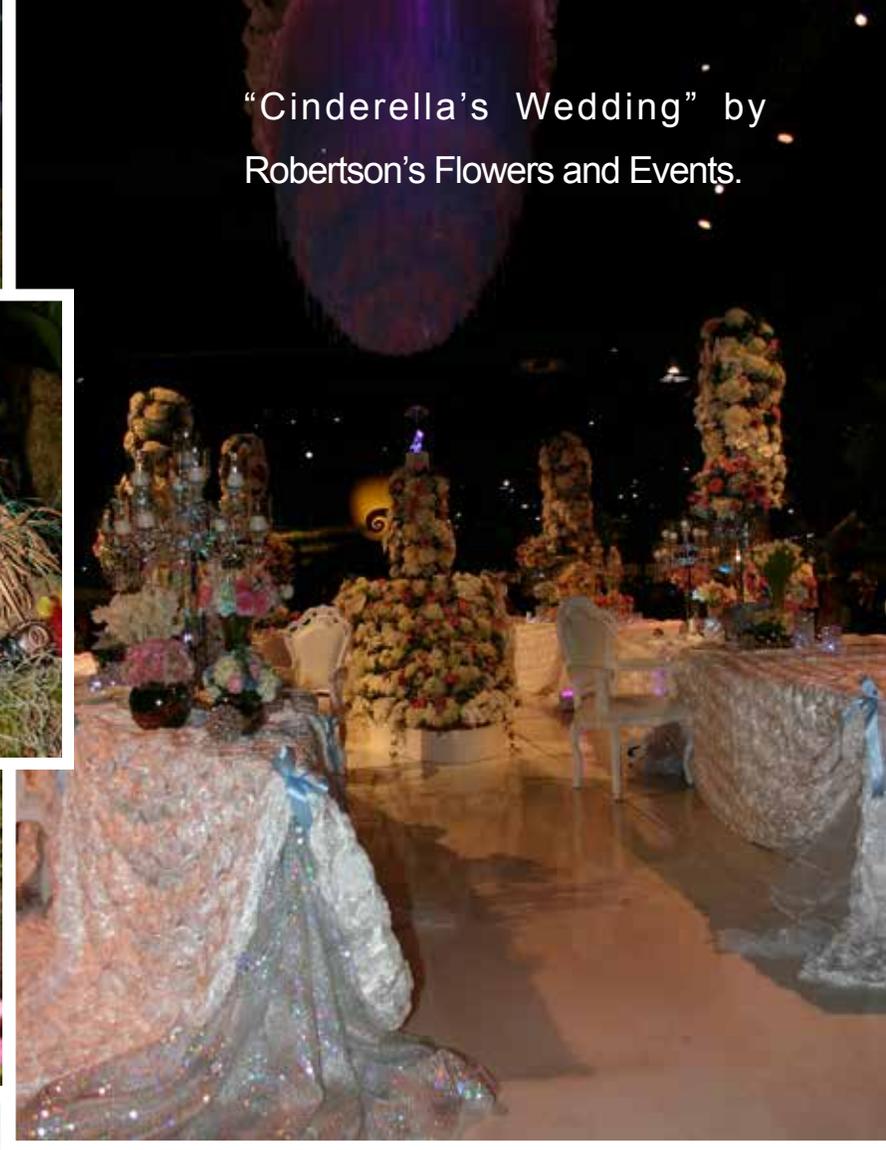
Underwater
Adventure inspired by
"Finding Nemo"
by J. Downend
Landscaping, Inc.



McLeach's Lair inspired by
"The Rescuers Down
Under" by Jim Fogarty
Design Studio, Ltd.
Australia



“The Nightmare Before Christmas” by Schaffer Designs.



“Cinderella’s Wedding” by Robertson’s Flowers and Events.



Root 66 inspired by “Cars” by Burke Brothers Landscape Design/Build



"Time for Tea" by W.B Saul High
School of Agricultural Sciences





THE MAGIC OF LANDSCAPE DESIGN

by Steve Aegerter

Over the years, I've been asked more times than I can remember "How do you come up with a design?" The answer is really quite simple, I really don't know. They just sort of happen over time, in a word – they evolve. I draw, I erase, I draw and draw some more and erase and move things and the design gradually starts morphing and like magic – there it is. It has always been a sort of pleasant enigma – even for me.

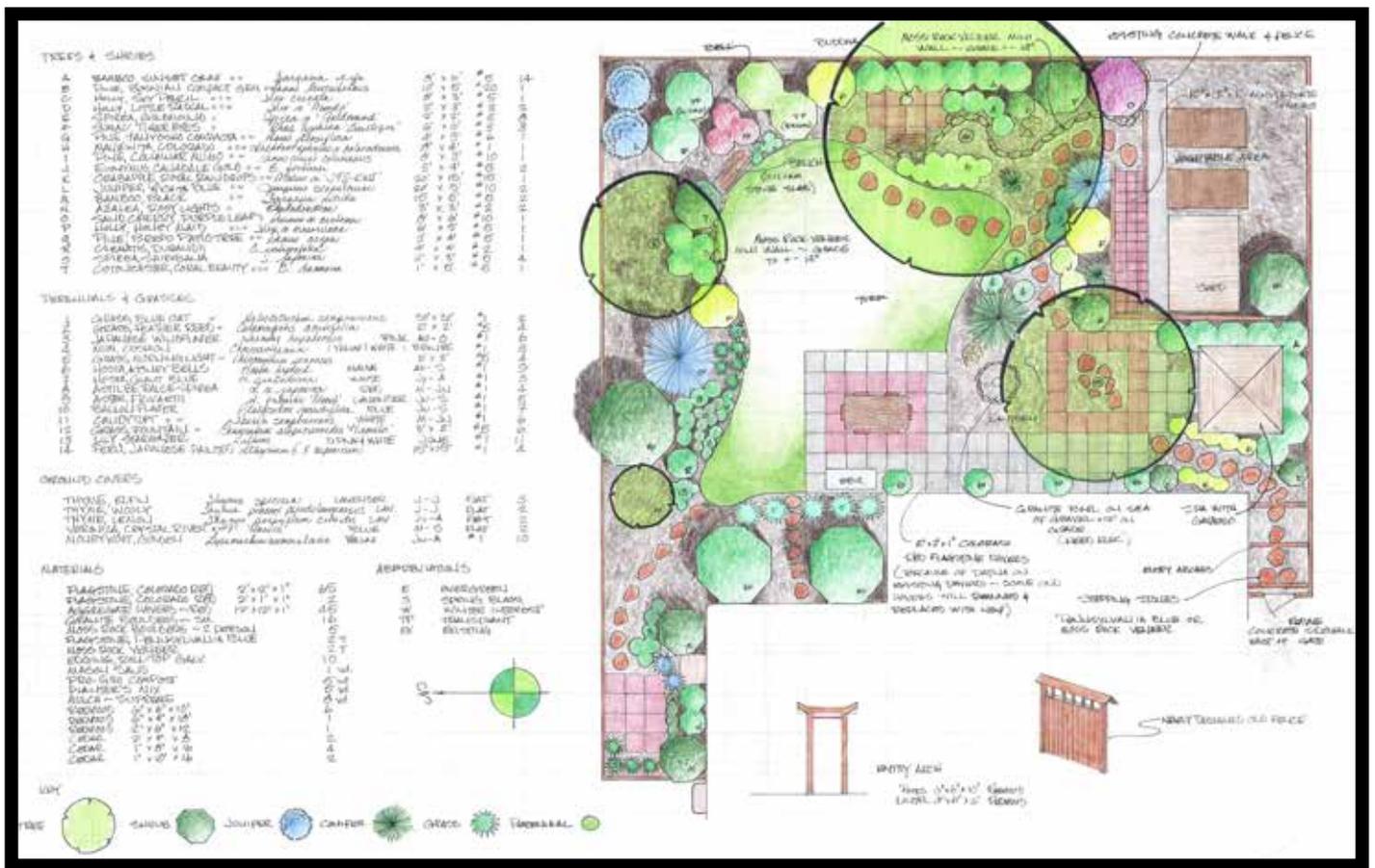
I'm confident the pure answer to this evolution, if there actually is one, begins with fact finding. There is absolutely no substitute. The more you know what you want to accomplish – the easier it is to morph into the final design. Whether you're designing for a client or simply a new patch of turf you've recently taken out, like Joe Friday used to say "I just want the facts Ma'am, just the facts."

To make sure I get all the facts every time, I use a printed 3 page consultation form which asks many important questions – a few of which follow: What are your goals and priorities? Do you need a larger deck (patio)? Would you like a garden retreat? What are your favorite plants?

Favorite colors? Is there a view you would like screened?; Are there children or pets to consider? This questionnaire, along with an all-important stroll around the property and asking additional questions regarding wants, needs and desires allows me the opportunity to gather, hopefully, all the necessary information. Then I take as many digital pictures as I can from every angle imaginable – trust me it will save you from much wasted time later.

Believe me, write everything down. No matter your age, do not put all your trust into your already over-taxed 'little gray cells' – write it down! If you're designing for yourself, be honest with your wants, needs and desires – even if they seem otherworldly.

You can only have that opportunity to create that perfect end product if you truly have all the honest information. When you are finished with the design, the design offers you a 'road map' to landscaping success. It may also become apparent that what you have painstakingly designed is more than a one year project. No problem, break it down into workable phases based on your priorities and available



budget starting with the area you'd most like to finish this year, then next year and so on.

After you've collected all the possible information, start with a large piece of paper, no smaller than 17" x 22" and set down in pencil the footprint of the property. In other words, first draw the perimeter of the property or new garden, then place in all hardscape features, such as the house, driveways, patios, sidewalk, existing plants you wish to keep, etc. This doesn't necessarily need to be in scale because we're just trying to get the creative juices flowing, but make it somewhat representative of the space. Now you have your collected data based on wants, needs and desires – such as vegetable areas, raised beds, entry garden, larger patio, garden retreat(s), storage shed, hot tub, etc. Using a pencil, start making light circles or oblongs depicting a possible layout for the design. Continue to do this until you come up with a "bubble design" you like and 'works' for you. It may take you several pieces of paper until you get one you really like. Don't fret if you don't think it is perfect, but what it offers is a wonderful starting point.

Materials you will find invaluable include a good scale, large triangle, circle template, grid paper (just easier to use), several sharp pencils and plenty of erasers. One other item which isn't absolutely necessary, but it sure makes things easier is a local wholesale or retail nursery catalogue of plants which shows mature height and spread and usually water and sun requirements. One other valuable aspect is availability – there is no reason to design an entire garden when you can't find a majority of the plants locally.

I use paper no smaller than 17" x 22" and usually 2' x 3' with 1/4 x 1/4 inch cross section paper with a non-reproducing blue grid, these faint blue lines will magically disappear when copied (design on the side with the faintest blue lines). I like to work with 1/4 inch scale because any smaller and the finished design will provide too much leeway for viewer or installer interpretation. The primary reason I use grid paper is the finished inked-in design will become (after I make copies) the perfect installation plan for my crew. This eliminates the need of a scale (ruler) at the job site and just makes it easier for my foreman, Jose, to simply count squares.

Now, we're ready to get started. In pencil, begin placing, to scale, the boundaries and all current hardscape and the plants you plan to keep and slowly begin to place the basics of the "bubble drawing" onto your paper canvas. One thing I never do is design in a particular area of lawn. The term "form follows function" is an artistic axiom that has spanned centuries and it certainly applies to landscape design. The areas left after designing the gardens will become turf areas (the form areas) after the function of the flower beds you created are finished.

After you've placed the existing hardscape, move on to a mixed perennial bed – a mixed perennial bed is simply one which contains perennials, ornamental grasses, shrubs, evergreens and possibly trees. Using a circle template to define the mature size of the plants – proceed until the area is exactly how you want it. This cannot be stressed enough; always, always – design using

the size of the mature plant. Then go on to the next area and the next and so on. It is usually best to design with odd numbers of plants, that way your eye cannot visually divide them into two equal parts.

Usually, I think of ideas in mid-design that would really make a statement and the over-all concept stronger; it may be a retreat bench or a dry stacked moss rock wall. This is simply your creative juices flowing so let them, but remember, having lots of erasers handy – my, my, do I go through a lot of erasers. So I'm constantly making revisions and changes so erasers are one of my best friends. Even after I think I'm finished, I keep going over the design and checking my plant combinations – making sure I've created enough foliar interest taking into account, foliage color, shape, flower color, bloom time and length of bloom. I really strive to make wonderful plant combinations of contrasting foliar shape and color. Being mindful of the action of the sun and the subsequent shade patterns of the overall design is also very important.

A couple of hints; one, don't be in a hurry. Creativity has a way of slowly churning and meshing the gears and finally offering an assist to arriving at a final answer. Just make sure not to rush anything – this isn't a race, so allow time for your 'creativity needs' to lead you to the answer. Another hint, if you sit before your paper and nothing good seems to happen or you just can't get this area the way you want it, it is time to get away from it and declare - "Break Time," make sure you take plenty of time away from the problem. Again, remember we're not in any hurry here. Upon returning, it is usually quite magical when you sit back down, possibly the next day and everything you were trying to accomplish yesterday but were stymied and you simply couldn't make it work - now it just seems to come

easily. Like I said, it's seems rather magical, but your 'little gray cells' were working on the problem all the time you were away from the design! All you had to do is put the solution to the problem down on paper.

Finally, if you feel you are not familiar enough with the variety of plants to make a workable design, collect all the nursery and seed catalogues at your disposal and start going over them a page at a time and make lists of perennials, shrubs, ornamental grasses and trees that you like. Make sub-lists of all bronze foliage, blue foliage, variegated foliage, red foliage, etc. for easy reference. Other possible lists include foliage shapes, color of bloom and time of bloom. The internet can be extremely useful in allowing you the freedom of discovery. Lastly, make every effort to group plants together that have similar water and sun requirements.

Clients mention that my finished designs have a certain *je ne sais quoi* and that seems to come from using the following technique. When using pencil I use hard edges to create the design, but when I ink it in, I do it freehand – which gives the design, a certain vitality.

This isn't really important unless you're designing for a client – but inking in offers a better design to look at when performing the installation. Finally, after I get my reproduction, I then render the drawing using "Prismacolor" colored pencils, a task not to be taken lightly with practice being encouraged.

Voila, another landscape design metamorphosis has somehow magically transformed from just written information and photos and now lies before me as a finished design.

Now, I wish you the best in your magical journey.

HGA Is Looking for a Few Good People

The staff behind our Hobby Greenhouse Association is made of approximately 9 volunteers and a handful of dedicated members that enjoy writing about their passion of growing plants. There is not a brick and mortar building with HGA's name in brass letters above the door, and we don't have company cars or business lunches to expense. Rather we live miles apart, scattered across the country and rarely see each other. We communicate and conduct business via email, with discussions, ideas, issues, money matters, articles, and the rewards of creating an association that provides growing valuable gardening resources for members. We each give something to the organization with a skill in; editorial, bookkeeping, guidance, balance sheets, photography, article writing and recruiting new members. Now, we would like your help.

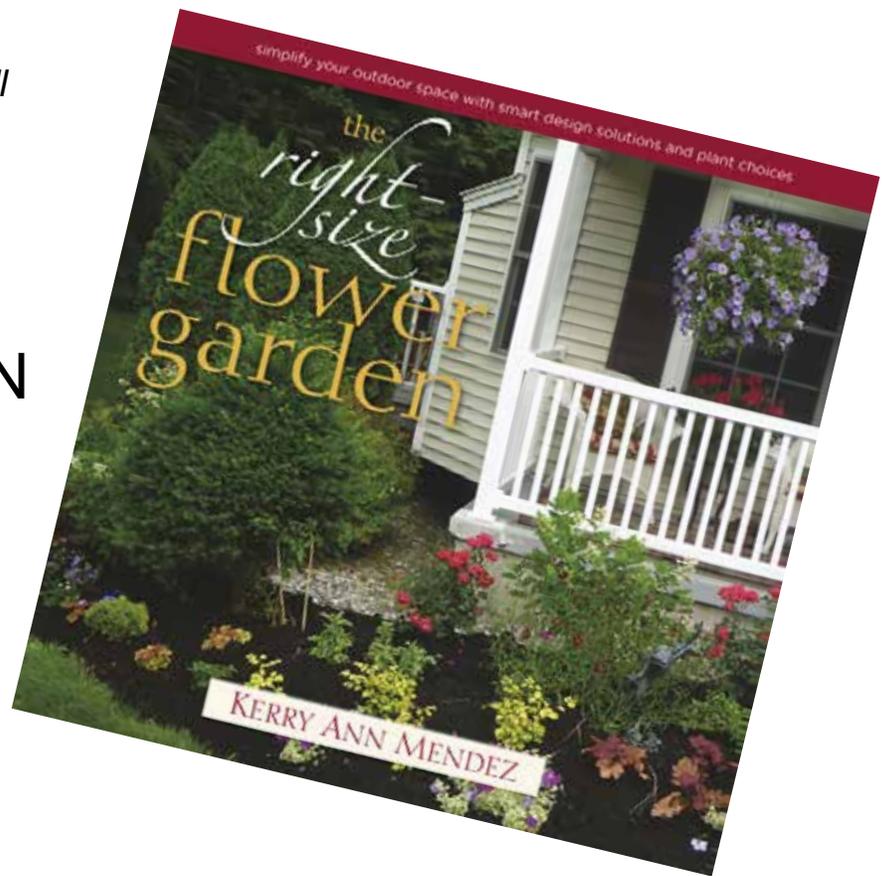
We are currently looking to fill 4 vacant positions, ranging from Vice President as an Officer, to Director of Programs and Activities, to Publicity Chair and finally Round Robin Chair. These are volunteer positions and require perhaps an hour a week to perform, answering emails, creating an email or sharing an idea. No traveling is required, take a break anytime and the working hours are terrific. If this sounds inviting and something possible for you, please contact me and I can provide the details of the positions offered.

Richard Schreiber
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Norwalk Iowa 50211-1329
(515) 981-4360

Book Review by Roger Marshall

THE RIGHT-SIZE FLOWER GARDEN

By Kerry Ann Mendez



Downsizing is tough. You've landscaped your property and over the years have added numerous flowerbeds, a vegetable garden, fruit trees, and a greenhouse. Then you grow older and can no longer keep up with your ambitious creation. This is what happened to Kerry Ann Mendez and is happening to me, so I can empathize with her motivation to write *The Right-Size Flower Garden*.

Mendez eschews vast borders of flowers that need constant weeding, deadheading, fertilizing, and manicuring to stay attractive. Instead, she opts for perennial gardens, naturalized areas, and plants that are easy to maintain. She suggests extensive use of groundcovers to smother weeds and reduce erosion. This means that instead of trucking in wheelbarrow loads of mulch to control these problems, she simply trims the edges of the groundcover with very little effort. In spring, perennial bulbs planted under the groundcover pop up to provide splashes of brilliant color.

Mendez is also all about having garden beds of sensible size. She tells her readers to look at their gardens with an unemotional eye. Plants, she reminds them, are not pets or children. Current beds should be assessed with her three R's in mind: Remain, Revamp, or Remove. The many color photos of her revamped beds are an inspiration to those who mistakenly believe that beautiful gardens are always large and labor-

intensive. Mendez manages to obtain an impressive amount of interest, texture, and color in flower beds much smaller than the ones she initially planted.

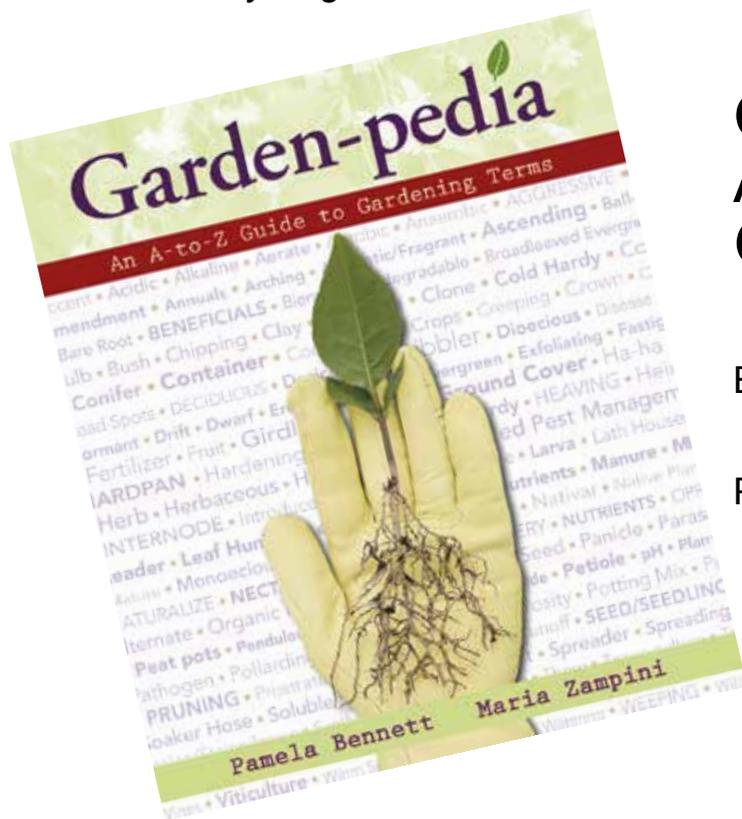
The author provides several garden layouts for sunny to shady areas, and tells which plants will do best in them, meaning which plants will give a maximum of beauty with a minimum of work. Mendez is also a great proponent of container growing, not only for annual flowers but also for vegetables and shrubs. She sees container growing as so easy to do and so adaptable to any spot, that she considers it as the golden parachute for gardeners who want to downsize and reduce their workload. For this reason, the last chapter of her book is devoted entirely to gardening in containers.

If you've reached the point in your gardening life when you think that your outdoor space might benefit from simplified design and smarter plant choices, *The Right-Size Flower Garden* is worth reading. Follow its prescriptions and you may actually find that you achieve a more beautiful garden with much less labor.

The Right-Size Flower Garden by Kerry Ann Mendez. St. Lynn's Press, 2015. Hardcover, 178 pages, 8" x 8", full color throughout. \$18.95

ISBN 978-0-9892688-7-5

The Hobby Greenhouse Association does not endorse or promote products. Our reviews are intended solely to provide information to our members.



GARDEN-PEDIA: AN A TO Z GUIDE TO GARDENING TERMS

By

Pamela Bennet and Maria Zampini

Garden-pedia is an ideal book for the beginning gardener. In a simple, straight forward manner, it discusses over 300 everyday gardening terms, often providing a color photo to illustrate the concept. From “aerate” and “alkaline” to “xeriscaping” and “xylem,” it’s all here in easy-to-find alphabetical order. And bear in mind that these entries include more than just definitions, although a clear definition is always provided right below each term. The authors also take care to explain the significance of all the terms they’ve included. So a simple term like “drainage,” which virtually everyone knows the meaning of, is dealt with by telling the reason why it’s so important to plants as well as the various ways that gardeners can test for good drainage in their soil.

If that’s not enough, there are some terms in this book that even more experienced gardeners may not be familiar with. Can you correctly define geotropism, panicle, or nidus? If not, consult *Garden-pedia*. I also

learned from this book that my definition of sod was not completely accurate. I assumed that sod referred to an entire area planted with turfgrass as in the auld sod in reference to Ireland, not to the strips of turfgrass held together by soil that a sod grower cuts from his fields to sell. Maybe that’s the difference between my “English English” and American English. Or maybe it’s because I am just a “lazy sod” (another Englishism) when it comes to the finer points of language!

This handy book is small in trim size (7” tall by 6” wide), so it can easily fit in a garden cart or apron pocket to provide instant reference while pottering around the garden.

Garden-pedia by Pamela Bennett and Maria Zampini. St. Lynn’s Press, 2015. Softcover, 202 pages, with many color illustrations. \$16.95 US; \$17.95 Canada.

ISBN 978-0-989-26884-4

SEND US YOUR PICTURES

I know many of you take pictures of your plants especially when they are in flower. If you have high-resolution pictures of your flowers, your greenhouse (inside preferably), your plants, with or without you in the picture, send them in to us. We are always looking for really nice images. Who knows, you may end up on the cover of HG. In addition, it will give you a chance to show others how nice your greenhouse is, what you grow, and maybe you’ll make new friends.

HOLLAND FLOWERING: HOW THE DUTCH FLOWER INDUSTRY CONQUERED THE WORLD

By Andrew Gebhardt



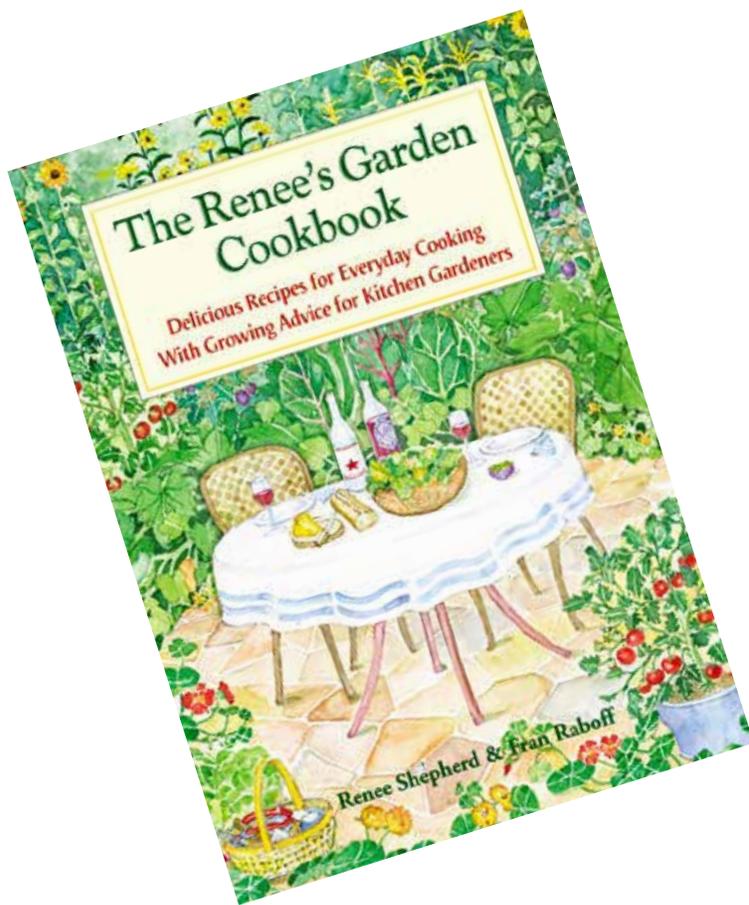
If you've ever bought Dutch tulip bulbs and wondered how these beautiful flowers were developed and sold worldwide, *Holland Flowering* will give you all the insight you could want into the Dutch flower industry, from earliest times to the present. Extensively researched, this book provides an expansive tour through the cultivation of, investment in, and marketing of tulips and other flowers that for so long has been a central part of Holland's culture and economy. Along the way, you'll learn many fascinating facts and dispel some common fictions directly and indirectly related to this famous aspect of Dutch identity.

Author Andrew Gebhardt, an American living in Amsterdam, starts this journey with a modern-day story of tulip mania. From 2000 to 2004, two Dutch bulb speculators amassed enormous funding to buy and market new varieties of tulips that they claimed would reap large and rapid profits, only to have the entire scheme collapse in just a few years. Gebhardt uses this widely publicized event as a jumping off point to explore the highly complex world of Dutch flowers. He details how Holland's flower industry became preeminent in the horticultural world, how members of the Dutch elite (virtually all men) set up cooperatives to find, develop, and market flowers on a global scale. The extraordinary lengths to which the burgers of Amsterdam and its surrounding cities went to acquire and promote tulips resulted in the tulip mania bubble of the 17th century, when the cost of some tulip bulbs reached astronomical prices. At the time, people even changed their names to reflect the tulip's incredible popularity. For example, the Dutch surgeon Claes Pieterszoon renamed himself Nicolaes Tulp, the same person who later became the subject of Rembrandt's famous painting *The Anatomy Lesson of Dr. Nicolaes Tulp*.

A passion for tulips has also helped establish Dutch horticultural auctions, of which the FloraHolland Aalsmeer flower auction is the world's largest and most renowned. This auction has become a premier event for growers from around the globe. Even if some growers don't earn much money selling their bulbs and plants at FloraHolland, just being there is a sign that they have "arrived" at the pinnacle of the flower-marketing world. Dutch tulips remain so popular today that there has even been talk of building a tulip-shaped island off the coast of Holland, and more fanciful still designing experiments to grow tulips on the moon.

I found this book to be a fascinating read, despite its somewhat academic nature, being published as it is by Amsterdam University Press. In keeping with this more academic style, the book has no illustrations, even though the subject matter seems to beg for some full-color pictures. In trips to Holland I vividly remember passing acres and acres of tulip fields in beautifully colorful bloom. Just a few such images would nicely add to the reader's understanding of the scope of this vast Dutch industry.

Holland Flowering by Andrew Gebhardt. Amsterdam University Press, 2014 (distributed in America by the University of Chicago Press). Softcover, 5 1/4" x 8 1/4", 263 pages. \$19.95.



THE RENEE'S GARDEN COOKBOOK

By Renee Shepherd and Fran Raboff

in the kitchen. From artichokes braised in Asian ginger sauce, to a creamy wasabi topping for artichokes and grilled shrimp or salmon, to a delicious artichoke appetizer in the form of a pâté, to a Greek-inspired dish of baby artichokes and chicken in zesty lemon sauce, these are not your ordinary, ho-hum suggestions for enjoying a garden's harvest. They are recipes that make you eager to try them, one after the other.

Following the vegetable section, salads and herbs are also covered in interesting ways. The salad recipes contain a nice variety of greens, including kale, arugula, butterhead and romaine lettuce, radicchio, and others. I especially like the combination of Portobello mushrooms and baby greens, and the way that fruits, such as oranges and pears, are often included in a salad.

This is a fascinating cookbook whether you garden extensively or not. And it's especially well worth owning if you're on the lookout for something different to do with your fresh garden produce. What's more, many of the recipes you try because they offer meals with a new twist may well become your "go to" favorites because they're so flavorful and nutritious. Combine this interesting recipe content with the many gardening tips that Renee Shepherd provides, and it may be hard to say no to putting a copy of *The Renee's Garden Cookbook* on your shelf.

The Renee's Garden Cookbook by Renee Shepherd and Fran Raboff. Shepherd Publishing, 2014. Softcover, 7" x 10", 158 pages, color drawings throughout. \$17.95. Available from book sellers as well as from reneesgarden.com.

ISBN 978-0-9618856-4-9

This is a cookbook, but one with a difference. Not only does it include about 300 recipes for great-tasting, healthful dishes; it also provides useful information on the plants included in those recipes, as well as tips on growing these plants. This interesting combination of information makes sense when you consider the author duo that wrote this book. Fran Raboff, the cooking instructor and celebrated hostess, is paired with Renee Shepherd, the garden guru and seed entrepreneur. Shepherd's company, Renee's Garden, offers vegetable, salad green, and herb seeds from around the world, the varieties of which have all been carefully selected for their great performance in the garden and the very flavorful harvests they provide.

The Renee's Garden Cookbook is divided into three sections: vegetables, salads, and herbs. The vegetable section is by far the longest, making up more than two-thirds of the book. It is organized alphabetically by vegetable type, starting with artichokes and ending with tomatoes. The recipes included under artichokes alone will give you a sense of these authors' innovative inclinations

Did You Forget?

The HGA Newsletter and magazine are available by email. Please make sure that HGA has your email address on file, otherwise you may miss out on lots of terrific free information. If you have **NOT** received an electronic copy and want one, email the membership director at HGAmembershipdirector@hotmail.com. He will email a copy of either the newsletter or the magazine PDF to you and your email address will be added to the database. You will receive the magazine and the newsletter four times a year.

Your Questions Answered by Paul Holzwarth

I plant my seeds in Jiffy pots in my greenhouse and for the last 2 years I have been getting fungus gnats. I broke up a mosquito dunk and used it to water, but it did not do much to help. Then I bought the pellets and sprinkled them over the jiffy pots and didn't get anything to grow in those pots. I am caught between keeping the pots damp enough for the seeds to grow and not so damp that the fungus gnats grow. HELP Aileen Goldman

Bottom water only until seedlings are a few inches high or more. Tom Karasek

I have them in my greenhouse every winter. I've also seen them in commercial greenhouses. They're annoying but don't damage the plants. Occasionally I've sprayed the soil with plain isopropyl alcohol in a plastic sprayer from the Dollar Store. That helps with control but not eradication. Carol Mirabella Finch

Check the HGA web site blog under the members only site for the fungus gnat problem. The pots or growing medium is still too wet. Gnats lay their eggs in damp soil, when hatched the larvae eat the plant root system until they mature in flying gnats. Once the soil is infected the real only control is to get rid of it and the plants. A systemic insect spray by Bonide seems to work well for me. Actually I also use the systemic granules when potting plants. There are a lot of sprays used and home remedies tried to combat these pests. Keeping the greenhouse clean, especially algae growth will greatly help prevent breeding grounds for the fungus gnats. Perhaps that is your problem area. Since gnats fly they may be invading your new plants, which are young and tender, from other areas in your greenhouse. Worth stepping back and taking a good look at all of your plants and the greenhouse in general. Tom Eckert

Potting soil often contains fungus gnat eggs, and this is likely also true for jiffy pots. If you heat up the jiffy pots in the oven to 130 degrees F before you moisten them, and hold that temperature for 30 minutes, that should kill the eggs in the jiffy pots. The same works for soil. Just be sure to give it time for the pots or soil to warm to 130 degrees throughout, and then let it sit for 30 minutes. You'll have to use your own judgement on that. Carie Nixon,

What kind of potting soil are you using? I've found that Miracle Grow is just full of fungus gnats (lots of chatter on the web about that). I had a bad infestation of fungus gnats a few years back after using Miracle Grow and will not use it again. I also use Jiffy Pots and I've never had the problem if I use a high quality seed starting mixture. Alice Dionne

Greenhouse Heating

This has been a bad winter for greenhouse hobbyists. I keep checking the temperatures in the my 9X19 freestanding greenhouse where I have two gas no vent heaters. Sometime I feel that the greenhouse should be shut down for the winter to save the high cost of running it. My 40 year old greenhouse had two incidents where I had frozen plants but I still like the smell and appearance of begonias flowering in February. Hope to hear suggestion how to keep my utilities bill low. Bernie Wiener

Two suggestions, Bernie. 1) Put your most valuable plants into a greenhouse within a greenhouse that you can afford to heat and 2) only heat your greenhouse, or in extreme weather the interior greenhouse, to just above freezing. Your plants won't bring you the joy when they are at their best, but you won't lose them. Tom Karasek

Bernie, Obviously, not a problem here in Tampa Bay. But, when I lived in NJ, we built my greenhouse near my house, and then pumped in the heat because it was situated right near where the cellar's boiler was. My GH was kept toasty with no issues, and was not expensive. It was also on the south side of the house, where a large tree dropped leaves for winter and put on a nice canopy for summer. Greg (who has a FREEZE warning tonight for 30-32F) Greg Sytch

I have a small milk house type electric heater at each end. They supplement the large propane heater. I keep the thermostat at 55. Carol Finch

Owning a hobby greenhouse is like having the hobby of hunting, fishing and sports. For the hobby greenhouse person, winter heating is the great expense. But we enjoy the hobby so we put out the money for it. I would like to know where the people who are running around yelling about "global warming" have been this past several months. I guess they will come out of their closets in mid summer. Enjoy our hobby and be glad we can afford it. Tom Eckert

Global warming predicts more extreme weather events of which this winter is a typical symptom. Expect more winters like this in future and hotter summers with more violent storms. As for keeping the greenhouse warm, here in Rhode Island I cover my 300

(continued on page 33)

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(Your Questions Answered from page 31)

square foot double-pane glass-glazed lean-to greenhouse with clear Shrinkwrap (TM), a marine product that when heated shrinks tightly over the frame. It is suspended on 2"x4"s over the glass. I find that this helps cut heat losses by about 20%. I use a propane fired heater from Southern Burner that in the worst weather uses about 40 pounds of propane every eight to nine days to keep the greenhouse around 50 to 55 degrees.

For the tenderest plants such as begonias and orchids, I put them in my basement germination chamber under fluorescent lights. They may not get all the light they need, but they are in the warm for the worst of the winter months. I just moved them back into the greenhouse on March 1st. This winter my tomato plant succumbed to the cold on February 22nd, so something seems to be working. I picked the last tomato on that day and scrapped the plant. The new tomatoes are already 4" high in the germination chamber and will go into the heated greenhouse around March 15th.

Roger Marshall

Our small hobby greenhouse, about 6' x 18' is the center section of the terminal end of our south facing salt box roofed house. The slider doors open up to the dining area. When the house was built, knowing the space would eventually be a greenhouse, a hot air duct discharge was installed near floor level to heat the space. But given the price of home heating oil here in Connecticut, we switched to primarily to wood heat, first as a furnace which distributed heat through the hot air ducts, but then to a convection (jacketed) wood stove in the living room fireplace. Heat didn't much reach into the greenhouse on really cold days/nights. One thing we did is replace the standard screening in the sliding screen door to bird netting. The much larger mesh facilitates the transfer of heat to the greenhouse (and vice versa into the house). But since we installed a ductless mini-split system, the oil fired hot air furnace hardly ever goes on. Although that circulates heat very well, the greenhouse is sort of off to the side of the warm air's direction. Ultimately we solved our problem very nicely with a Vornado thermostatically controlled heater-fan. Shhhhhh! Don't tell Vornado as I don't think this is an approved use. But Vornados are incredibly sturdy and reliable and ours have run 24/7 for years! Just don't let water drip into them! As far as the cost of running them...it's the price we pay for our hobby. But in the dead of winter, with snow and ice pellets clicking on the triple wall Lexan roof, there's nothing quite like that warm, humid earthy smell of happy plants Sue Hamilton,

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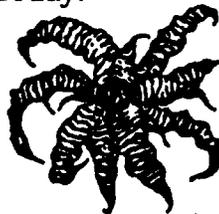
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