

Herbs Make Scents



THE HERB SOCIETY OF AMERICA
VOLUME XLIII, NUMBER 6

SOUTH TEXAS UNIT
JUNE 2020

Co-Editors Linda Alderman (ewalderman@comcast.net) & Janice Freeman (jkfreemanHouStu@outlook.com)

June 2020 Calendar

June 8, Tue. at 10 a.m.

Day Meeting has been cancelled in accordance with the Coronavirus Guidelines issued March 15, 2020.

June 10, Wed. at 6:30 p.m.

Members Annual Business Meeting, all information including the agenda and supporting documents, has been previously distributed through Mailchimp. Another email will arrive with directions on how to attend the ZOOM meeting.

June 14, Sun. at 2:00 p.m.

Herb Fair Chair's Meeting is at the home of Donna Wheeler. See Herb Fair Update for further details.

June 17, Wed. at 6:30 p.m.

Socially Distanced but Face-to-Face Get Together/Plant Swap and Herbal Sharing is at the Cherie Flores Garden Pavilion in Hermann Park (1500 Hermann Drive, Houston, TX 77004). **HSA-STU Members Only!** Bring your own chair, and any personal snack and/or beverage. Wear a mask and gloves. Bring any plants to share/swap.

July 2020 Calendar

Summer Break: There are no meetings scheduled for July

Newsletter deadline: the 25th of every month
(July editor Linda Alderman)



Happy Birthday

6/11 Sara Diaz

6/22 Tamara Gruber

6/26 Mary Sacilowski



Chairman's Corner



We are still dealing with the Covid-19 virus, and the time spent sheltering in place has and will continue to force us all to learn new things. I have already learned much about my garden and its inhabitants that I was unaware of these past few months; but I have also learned new ways of communicating with people. I am still missing the “old ways” that I had to be with people, and forcing myself to embrace the “new ways” of communication like ZOOM.

Annual Members Business Meeting

We are having our Annual Members Business Meeting via ZOOM on Wednesday, June 10 at 6:30 pm. You should have received a Mailchimp email. Inside the email you will find the Agenda, previous Minutes, Financial , Proposed Budget, Slate of Officers, and information on Proposed Donations. Members without an email address should have already received a packet containing these same materials.

These attachments/documents represent what has already been prepared by the Board to discuss. Of course, **any member** may bring forward a topic for discussion and action to the meeting. If you would like to propose a topic, please put the details in writing (email) and send them to me before 3 pm the day of the meeting so they can be added to the agenda.

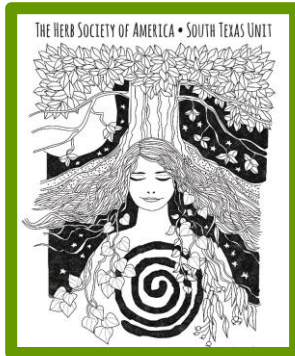
I hope that you will all make every effort to participate in this meeting despite this new and possibly difficult process. Bottom line, we cannot conduct any business without a quorum, and more importantly, we need every voice heard. With that in consideration, if you can't get to our meeting, please call me your're your questions or concerns.

We would like to try an appropriately **socially distanced, face-to-face get together for members only on June 17 at 6:30 pm at the Cherie Flores Pavilion**. The back patio will be reserved for us as will the first row in the parking lot. There are restrooms available. I have talked with the management at Cherie Flores and I feel confident that we can meet the guidelines for preventing spread of the virus.

Bring your own chair, and any beverage or snack you want for yourself. We will not be sharing food. Wear a mask and gloves. Bring any plants you want to share/swap.

Although we would love to see each other, we all have different comfort levels with following the recommended precautions, and in addition we do not know how things might look on June 17. **Please do what is best for you when you decide whether or not to attend.** There is no rain date.

Stay safe,
Julie Fordes
Unit Chair



Back to Our Roots Dena Yanowski

What's Growing in the Garden? Check out the Herb Society Garden Spreadsheet

As part of the "Back to Our Roots" campaign, I created a Google Docs Garden Spreadsheet to be an ongoing inventory of our herbs. This is an Excel style online document that can be viewed and edited by anyone it is shared with, in this case all HAS- STU members. Click on the link to access.

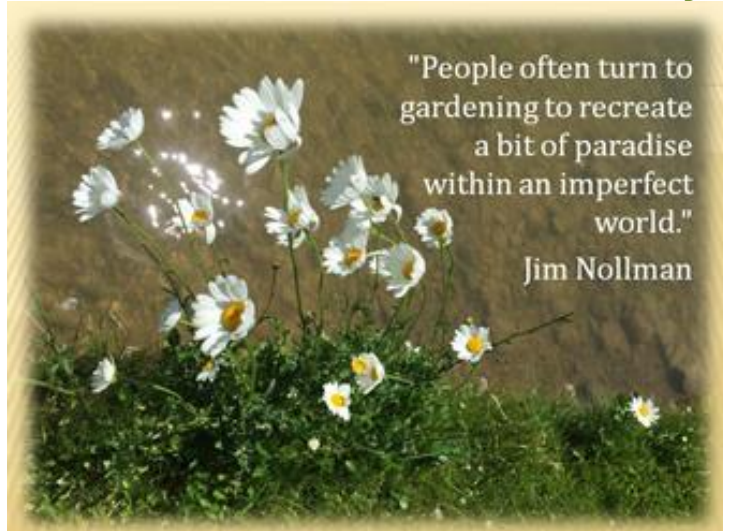
<https://docs.google.com/spreadsheets/d/15fFEnf113vrJ0DIZE5I--jipLwi2rXGMz0vrLthlq0g/edit?usp=sharing>

Along the vertical Y axis we have all the members' names. If you do not see your name, please email me (denayanowski@gmail.com) and I will add it. Along the horizontal X axis I have listed all the plants we are asking members to grow/dry/donate to use for Herb Fair and Herb Day products. (Please let me or Julie know if you there are other plants we should add.)

From there, you can scroll to your name and add an "X" under the plants you are growing. Know that by growing these plants, you are also responsible for drying them appropriately and storing them until they are needed for making products to sell.

This spreadsheet will act as a workable document that can be edited at any time and will help hold each of us accountable as we work our way "Back to our Roots".

Slow Down and Savor the Day



Catherine O'Brien has kindly shared this inspiring thought from her collection of quotes and photos.

Every Garden Needs a Protector Who's Keeping Watch in Yours?

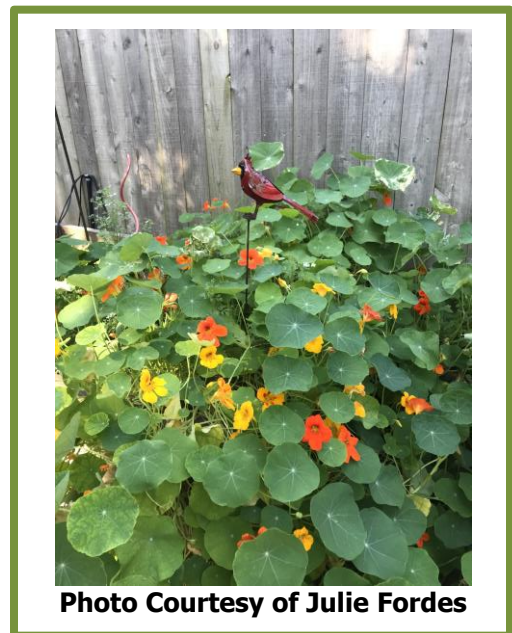


Photo Courtesy of Julie Fordes

Let's showcase a picture of who is keeping watch over your herb garden. Send your picture on or before the monthly newsletter deadline of the 25th to **Janice Freeman** at janicehfreeman@comcast.net



The following opportunities to serve are available:

Day Group Chair

Helps develop and facilitate programming for the Day Meeting. This could be a shared job; we just need a name for the Directory.

Education/Speaker's Bureau

The education chair would work hand-in-hand with our program chair on educational programming. This person could also work on education of our members via Back to Our Roots. S(he) would also help coordinate the Speaker's Bureau, which provides Herb Society members to speak to other interested groups.

Archives Chair

Collects and maintains Unit history, including correspondence, minutes, and Annual Reports. Displays and scrapbooks may be collected and sent to the National Herb Society Archivist.

If you have interest or talent in any one of these areas, please speak up!!! Even if you can do a portion of one of these jobs, it would be appreciated. Contact any Board Member to get more information or to sign up!

**STU
Membership
Renewals**

Janice Stuff



The Deadline for submitting your Membership Dues is August 1, 2020.

Starting in early May you may pay your membership dues to the Treasurer.

For online Payment, Click this Link:
<https://squareup.com/store/hsa-south-texas-unit/>

Under the word, "Dues", click on the Basil leaves picture and you will be directed to checkout.

There is a drop-down menu for the various membership categories.

OR

Mail a check to:
South Texas Unit, HSA
PO Box 6515,
Houston Tx 77265

Regular Member \$67.50

Sustaining Member \$80.00

Joint Membership \$98.75

Affiliate or Life Member \$12.50



Coming In July!



SPECIAL EDITION



Special Summer Edition of Herbs Make Scents

Julie Fordes

This year we are taking a break in July, no meetings! Everything seems different this year, so let's make it really different! **This July, I would like to have an All Herbal Recipe Issue.** During the quarantine, I think we need to continue to reach out to the more than 1,000 people who subscribe to our newsletter but in a different, fun, but still educational way. We will have had our Business Meeting, Herb Fair is months away and keeping everybody interested in herbs and their uses seems important.

I hope that members will renew their passion for and share their love of herbs by **sending me a great recipe or two using herbs that are growing now.** (fordes.julie@gmail.com) Having sampled more than a few outstanding dishes featuring herbs at our potluck dinners, I know that this group has a lot of great cooks in it. I bet that many of our subscribers are doing more home cooking during the quarantine and would really appreciate some tried and true uses for herbs from the experts!

I volunteered to help organize the recipes for Linda Alderman while she works on creating some graphics. This will be the July issue of the newsletter but **start sending the recipes whenever you can.** The earlier the better so we can take stock of what we have and put out a call for what we might need. **The last day to send in recipes is June 25.** If we don't get enough recipes, we won't put out the newsletter and take a break just like last year.

I got down my copy of Herbal Harvest Collection, our Unit's 1995 cookbook. What a great resource! We won't even come close to putting together anything as comprehensive as this, but just a little sampling of some herbal recipes would be wonderful to share. It would be great to have a wide variety of recipes -Teas and Beverages, Appetizers, Salads, Main Courses, Breads, Desserts...you name it! It would also be important to feature a variety of herbs that are plentiful now, if we can. If the recipe you submit is from a cookbook or other source, please cite the source. It would be helpful if you can send along a picture to go with your recipe.

I hope that this idea of a **Special Edition of Herbs Make Scents** will excite both the members who are supplying the recipes, and the herbal 'newbies' who receive them. I can't wait to share my favorite use for that pretty little Globe Basil I just got in the ground!



Proposals for HSA-STU Local Garden Donations



Urban Harvest Garden Education Program

I would like to nominate the Urban Harvest Gardening Education program for the Herb Society of America – South Texas Unit support funds. The Urban Harvest Education Program does amazing work to establish and support Houston school gardens, especially those in low socio-economic programs. The Urban Harvest Education Program currently has three early childhood partners, Lorenzo Early Childhood Center, Gabriela Mistral Center for Early Childhood and Fonwood Early Childhood Center, all part of the H.I.S.D system, that would benefit from these funds. Each program has an outdoor garden program yet all are currently struggling with funding.

Carol Burton, the director of Urban Harvest Gardening Education Program suggests that the funds could be split three ways to enhance and plant herb sensory gardens at each program. In addition, Carol recommends that some of the funds could be used to purchase herbs to give away during parent outreach promoting culinary herb containers.

Through my own personal experiences supporting gardening in early childhood programs and now as an Urban Harvest Board and education committee member I clearly recognize the benefits of working with our younger gardeners and their families. What better way to promote the Herb Society's vision, by helping fund gardens in our own Houston community, reaching our youngest gardeners who are just beginning to understand their natural world, including the world of plants and where their food comes from. Urban Harvest supports these H.I.S.D early childhood programs, young children/students and their families, by hands-on learning and knowledge.

Submitted by Donna Wheeler



Houston Botanic Garden

It is finally coming! The **Houston Botanic Garden!** Please consider this important project for a garden donation from the South Texas Unit for 2020. This promises to be a world class garden whose mission is to provide enjoyment, serenity, education, discovery, research and conservation. Go to www.hbg.org for details including garden layout, future developments, Board of Directors, Advisory Council and major contributors. HBG plans a fall opening.

In 2002 the idea was incorporated by visionary horticulture leaders in Houston, Nancy Thomas and Kay Crooker. Grow Houston's Garden campaign was started in 2015 after Mayor Parker and Houston City Council granted the long-term lease of 132 acres along Sims Bayou near Hobby Airport, formally known as Glenbrook Golf Course. Now Phase 1 of the Capital Campaign to raise \$35M is nearing completion and we can help put it over the top.

Brenda Beust Smith (aka the lazy gardener whose emailed weekly newsletter is a must read) replied as follows to my questions about the importance of this new garden. "I highly recommend you work with Houston Botanic Garden. If even half the plans they hope to achieve succeed, it will become one of the world's major botanic gardens. There is no doubt in my mind about that. The prime movers behind this garden are in Houston's inner circle of dynamic achievers, with the international connections to make this garden into a global wonder. Getting in on the ground floor will be a lot easier now than it will be in days to come."

I will move at our virtual Annual Meeting on June 10th that **"The South Texas Unit of The Herb Society of America donates our budgeted garden donation for 2020-21 to Houston Botanic Garden."** We can be a part of this exciting new garden to serve and educate the people of Houston and beyond about the profound benefits and pleasures of nature and gardens.

Submitted by Susan Wood



Herb Fair Update

Donna Wheeler - Herb Fair Chair

Meeting of Herb Fair Committee Chairs

Our first meeting is scheduled for **Sunday, June 14th** from 2-3 p.m. at my home. If you are uncomfortable meeting in person at this time, we can consider a later date in mid-July. I am unavailable the month of August through mid-September. Please **email or call me** with your thoughts regarding the meeting date. I will send you an email reminder and agenda once I've heard back from everyone.

Herb Fair Committee Chairs Donna Wheeler

- Candles - Linda Alderman
- Café - Donna Yanowski
- Craft/Market Place - Pam Harris & Lois Jean Howard
- Dry Blends - Dena Yanowski
- Education - Karen Cottingham
- Fragrance - Yvette Darnell
- Jam & Jelly - Benée Curtis
- Kitchen - Mary Sacilowski
- Live Herbs - Janis Teas
- Publicity/Social Media - Cynthia Card & Virginia Camerlo
- Pottery - Janet Ruffin
- Tea Blends- Julie Fordes
- Treasurer - Maria Treviño

Think about which committee best fits you - crafts, fragrance, dry culinary blends, jellies, baking, education, plants... maybe even something special that has never been done before!

Contact me with questions or ideas to share.
Donna Wheeler ddwheeler16@hotmail.com



Lemon Balm
Peppermint and Spearmint
Lemon Verbena
Mexican Mint Marigold
Orange Peel
Lemongrass
Holy Basil
Rose Petals
Oregano
Rosemary
Roselle (Hibiscus)

**Red-Stemmed Apple Mint
Calendula petals**

Janice Stuff harvested and dried calendula petals, flower heads and stem bases to be used in herbal products made by members. She also created quilt appliqué from vintage fabric to embellish our South Texas Herb Society "Back to Our Roots" Tote bag. *(Photos courtesy of Janice Stuff)*

Dried Calendula Petals



**Appliqued
Tote Bag**



Introducing..... Zainab Pashaei

Immediate past 2019 National Herb Garden Intern

The Herb Society of America Blog Growing Green in Turkey <https://herbsocietyblog.wordpress.com/>

Zainab Pashaei is the 2019 National Herb Garden Intern. She is a Washington, D.C., native and a proud at-home grower of flowers, herbs, and vegetables. Zainab obtained her Bachelor's of Science in Community Health at George Mason University. After graduating, she returned to school for graduate studies in Landscape Design at George Washington University. Zainab also worked with a floral design company in Fairfax, VA. In her free time, she continues to grow plants for food, health, and aesthetics.

During the past year, Zainab has been involved with a number of projects at the National Herb Garden (NHG): helping with volunteers and colleagues to prepare the NHG for the American Public Gardens Conference. Some of the things she learned included: pruning, propagating, planting, re-potting, watering, using a leaf blower, driving a manual transmission vehicle, and transplanting tender plants and shrubs. She started a project to document educational labels in the Theme Garden and a few other areas. A list of the plant species that were present this year, has been documented and is close to a thousand species. In addition to documenting educational labels, you may see her writings in ***The Herbarist*** or ***The HSA Blog***.



Zainab authored the wonderful article, “**Growing Green in Turkey**” (cited above) for ***The Herb Society of America Blog***. Highlights of her article include information about Turkey's reforestation project to replant and to restore the nation's forest. Next Zainab tells about the herbally-relevant [Zeytinburnu Medicinal Plant Garden](#) and Farm, a serene place for people to learn more about herbs. As part of an urban regeneration project, this was Turkey's first medicinal plant garden, which opened to the public in 2005 on 14 acres of land in the Zeytinburnu district. The Health and Environment School associated with this Garden conducts health classes, such as, phytotherapy, aromatherapy, first-aid plants, Ottoman traditional medicine, and medicinal plant chemistry.

Zainab explains that outside of Zeytinburnu Medicinal Plant Garden, she strolled through the bazaar with its colorful displays of herbs and spices. Seeing the wonderful array of plant material, and realized that, in addition to their well-established spice markets, Turkey has a quietly growing green movement.

The South Texas Unit, HSA has made and is making donations to the National Herb Garden Intern Fund. We have helped sponsor the education and training of outstanding graduates such as Zainab. The National Herb Garden is located within the National Arboretum in Washington, D.C.



Submitted by **Janice Stuff**



BOOK

C O R N E R

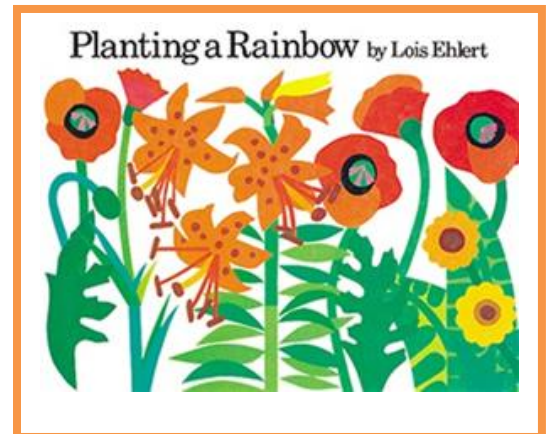
If you have suggestions for books or other media members might like, submit your suggestions to Julie Fordes at fordes.julie@gmail.com



**Donna Wheeler
Recommends:**

**Planting a Rainbow
By Lois Ehlert**

And other gardening
books perfect for children



Do you have young children or grandchildren? Young neighbors or need a baby gift? Here are few of my favorite young children's books related to gardening...

- *A Seed is Sleepy* – Aston, Dianna Hutts (introduction of seeds, ages 5-8)
- *Flower Garden* - Bunting, Eve (a child's love for her mother is shown through a garden in a city window box, ages 3-6)
- *From Seed to Plant* - Gibbons, Gail (relationship between seed and plant, 5+ years)
- *Planting a Rainbow* - Ehlert, Lois (the process of bulbs and seeds growing into colorful flowers, preschool)
- *Lola Plants a Garden* - McQuinn, Anna (a poem inspires a garden, ages 2-5)
- *The Gardener* - Stewart, Sarah (Caldecott Honor, a young girl brings a smile to her grumpy uncle through gardening, ages 4-7)
- *The Curious Garden* - Brown, Peter (creating a garden in an unlikely place, ages 3-5)
- *Tops and Bottoms* - Stevens, Janet (Caldecott Honor, explains vegetables that grow below and above ground, ages 4-7)

And my favorite, 😊

- *Miss Rumphius* - Cooney, Barbara (American Book Award, Alice longs to travel the world, live by the sea and most importantly do something that makes the world a more beautiful place, for children young and old, ages 5-8)



MOTHER OF THOUSANDS - A SCIENCE FICTION MONSTER IN MY FRONT YARD

Karen Cottingham

How easy it was to be totally captivated by a plant. The lovely chandelier of bell-shaped coral flowers was undoubtedly part of its charm; but really, who could resist a plant that had dainty miniature versions of itself marching along its leaves?



Flowers and leaf-margin plantlets of *Kalanchoe daigremontiana* syn. *Bryophyllum daigremontianum*, commonly called Mother of Thousands, Devil's Backbone, and Mexican Hat Plant

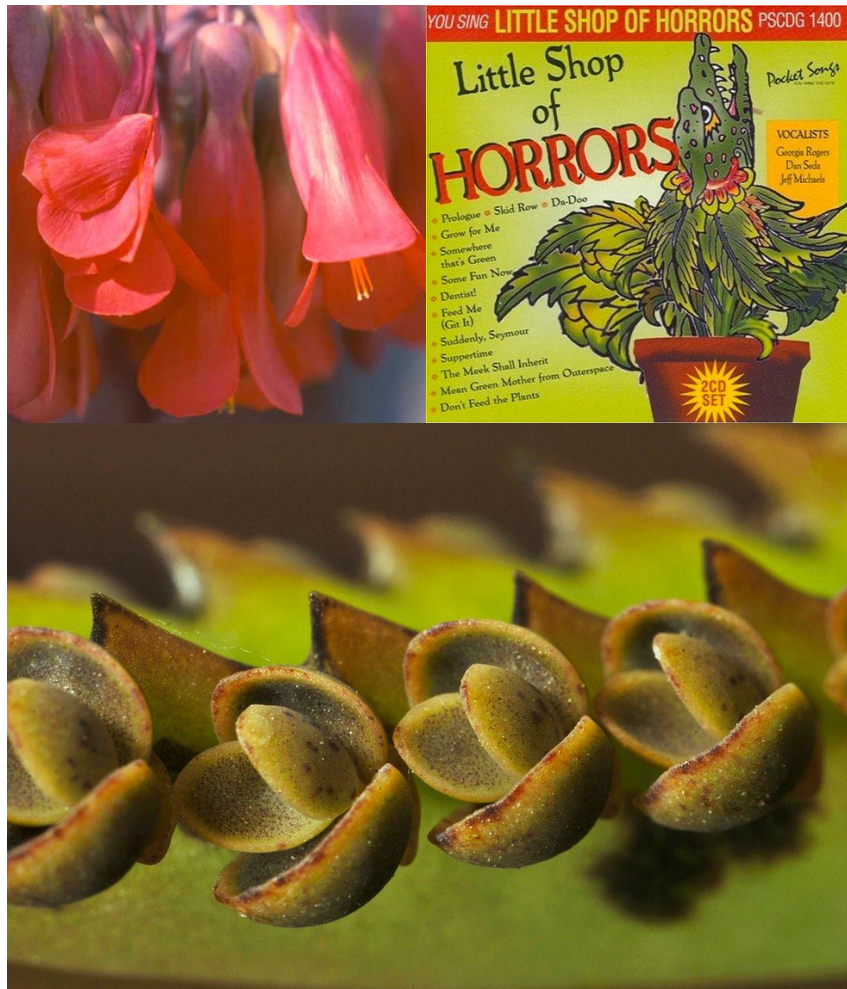
For me, it was the name “Mother of Thousands” that made me love this plant and add it to my garden. Walking by, I had a daily reminder that our everyday “maternal” actions touch countless others, sometimes in life-changing ways.

This idea that each of us, in our own way, can be a “Mother of Thousands” was the inspiration for my contribution to last month’s newsletter, “Mothering Sunday”. I had initially planned to use this particular plant as the centerpiece of that article. It has the perfect name, wears its fecundity on its sleeve (well, actually on its leaf), and to top it off, it’s even an herb! To my surprise, Mother of Thousands is a valued herb in the traditional medicine practices of Asia, Africa, South America, Mexico, and even Europe. It seemed the perfect choice for my Mother’s Day article.

The more I read, though, the more I learned about its disturbing shadow side. There’s no doubt that Mother of Thousands is a world-class procreator. The sophisticated tactics she employs to protect her progeny are second to none in the plant world. But, to me, her maternal instincts lean uncomfortably toward the militaristic. What was bothersome was how she uses these “protective” capabilities to systematically destroy the offspring of others.

Her method of propagation is so freakishly efficient that masses of her offspring overtake other nearby plants and crowd them out. Just in case that doesn’t work, she’s devised a murderous “insurance policy”.

The toxic chemical compounds released by her roots will suppress any plants that haven’t already been smothered out. And if that’s not bad enough, all parts of this plant - leaves, stems, flowers, and roots - are poisonous and can be fatal if ingested. There was no way I could write about this plant for Mother’s Day.



"Mother of Thousands" is a monster with a maniacal drive to reproduce

This is not just hearsay - I'm witnessing first-hand some of "Mother's" dirty tricks.

Under my own neglectful nose, wall-to-wall replicas of the original Mother have completely overrun my front garden. And like mother, like daughter. The leaves of the progeny are already loaded with their own offspring just waiting to drop off. Whoa, Nellie - there's a limit to how many Mother of Thousands plants I actually want. There has to be an "off switch" somewhere. But, where?

I'm starting to feel like Seymour in "Little Shop of Horrors" when he realized that his foul-mouthed, R&B-singing carnivorous plant named "Audrey II" was intent on global domination. My equally cold-hearted "Audrey III" is just as steadily taking over what used to be *my* garden. I've even started to find Audrey's babies in the backyard, and can testify that something noxious seems to be inhibiting the plants around them.

It's not surprising that *Kalanchoe daigremontianum* is known as the Kudzu vine of the succulent world. I've even seen it referred to as the "Evil Genius". This plant will surely survive long after civilization ends.

The idea of aggressive plants taking over the world is not a new one. In *The Day of the Triffids*, a post-apocalyptic classic published in 1951, British author **John Wyndam** introduces us to the malevolent but fictional *triffid*. I love Wyndam's description of this "monstrous stinging plant, mobile and rapidly multiplying, of invasive habit and malign intent". The "invasive habit and malign intent" part sounds just like another plant I know.



An experimentally mutated plant threatens the survival of humanity in *The Day of the Triffids*. In **Simon Clark's** sequel, *The Night of the Triffids*, set 25 years later, the triffid evolves into an even more aggressive form.

While Wyndam's rampaging homicidal plant is purely imaginary, the word *triffid* has become a popular colloquial term for especially large plants, those that are invasive, and those that just look menacing. It can be used to describe luxuriant, healthy growth, as in "the dill has gone *triffid* in my garden" but usually indicates undesirable or even dangerously aggressive tendencies. In South Africa the alien invasive *Chromolaena odorata*, one of the world's worst weeds, is known as the triffid weed.

Mother of Thousands is already listed as invasive in seven countries and is threatening many others, particularly those with dry and arid environments. Where conditions are especially favorable, such as southern Florida and coastal southern Texas, this species can produce vast stands of genetically identical clones that take over. You would think they were triffids.

Why is Mother of Thousands such a monster? It's a simple matter of survival. In its native habitat of southwestern Madagascar, extreme adaptations were necessary to withstand foraging goats, other plant competitors, and severe drought. Removed from its natural surroundings, though, *Kalanchoe daigremontianum* quickly becomes invasive. This is particularly problematic since the plant is toxic to foraging animals and degrades the soil so that other plants cannot survive.



Kalanchoe daigremontiana, a Madagascar native introduced as an ornamental and as a house plant, has escaped into the wilds of South Florida. This stand has taken hold in the Highlands Scrub Natural Area in Deerfield Beach.

Collections of *K. daigremontiana*, such as the one pictured above and the one in my yard consist of large numbers of genetically identical individuals. Many plants have this capacity to reproduce vegetatively, typically by throwing out elongated shoots, runners, or roots that can grow into complete, independent plants. We take advantage of this unique capability of plants when we propagate “new” plants from “cuttings” of those with desirable characteristics.

In nature, clonal reproduction is usually of secondary importance compared to the more beneficial process of cross-pollination, genetic exchange, and seed production. Under extreme conditions, however, as in arid environments undergoing unusual drought, successful germination of seeds becomes unlikely. Some method of vegetative reproduction becomes essential for survival. Mother of Thousands is just one of the many desert succulents that can quickly create an abundance of perfect replicas capable of independent life. What the process lacks in genetic diversity, it more than makes up for in reliability and efficiency.

To underscore the elegance of this natural process, I paired a photograph of “Mother of Thousands” actively cloning itself with a lovely example of clone photography by **Daisuke Takakura**. If you’re not familiar with clone photography, it’s the application of theatrical staging, traditional photography, and post-production editing to create a provocative composite image. One subject, photographed in various poses, appears as many identical selves in the same fabricated scene. In other words, the subject is “replicated” into sometimes dozens of “clones” that are gathered together into a single illusory image.



The photograph above (left) is by Japanese photographer [Daisuke Takakura](#), from his clone photography project [“Monodramatic”](#). Notice how the shape of the cloned *K. daigremontiana* plantlets mirrors the twirling skirts of the “cloned” model



The *real* process of cloning is even more marvelous than the *surreal* version. This is how it works in Mother of Thousands:

Specialized cells deep in the “crevices” of the leaf margin zig-zags have the capacity to spontaneously turn into miniature replicas of the mother plant. These genetically identical progeny, called plantlets, are able to produce all of their own vascular systems, organs, organelles, and even roots. Photosynthesis begins while they are still attached, and, as seen in the photograph above, they can even start to replicate themselves before being released.

This exponential rate of self-reproduction rushes along at an extravagant speed. It’s kind of like a wide-open Ponzi scheme of the plant world - or a self-absorbed teenager taking endless selfies.

With this highly efficient vegetative process in place, how do the beautiful flowers participate in reproduction? Actually, they don’t. They can’t.

Somewhere along the evolutionary timeline, Mother of Thousands lost the ability to produce seeds that could survive desiccation. The few seeds that are produced are completely worthless.

Without the capacity to produce viable seeds, these beautiful flowers are utterly useless relics of the past.



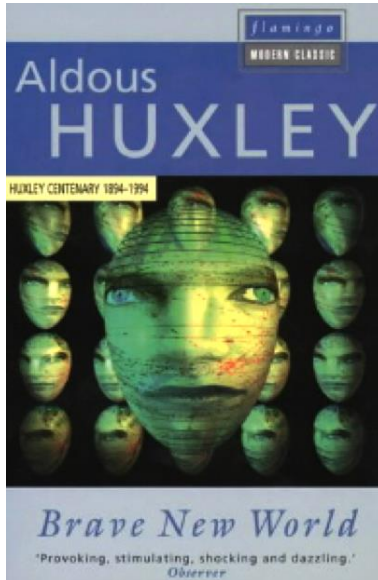
The attractive, but reproductively irrelevant flowers of *Kalanchoe daigremontiana* are paired with more of **Daisuke Takakura’s** futuristic cloned models

At one time, of course, *Kalanchoe daigremontiana* reproduced sexually as well as asexually. Asexual reproduction, essentially cloning, only became activated under conditions of extreme stress. But when the gene essential for the production of viable seeds mutated, reproduction in Mother of Thousands by necessity became exclusively vegetative.

Another interesting thing happened along the way. The defective Mother of Thousands gene, while useless for seed-making, began to recruit the plant’s leaves for much of the embryo-making process which had formerly occurred in the ovary. The production of “plantlets”, which had previously occurred only under stress, now occurred spontaneously and incessantly. The switch was permanently in the “on” position.



And with this abnormal takeover of the reproductive process, we're back to science fiction. *Brave New World*, by **Aldous Huxley**, is a famous dystopian satire set in a grim futuristic World State. The society was built upon the principles of assembly line mass production, homogeneity, predictability, and quality control. Mother of Thousands would have fit right in.



Aldous Huxley was among the first to express the idea of cloning in his 1932 novel *Brave New World*. The first mammal was cloned sixty years later. Today, photographers such as **Daisuke Takakura** are still exploring the concepts of cloning, multiple selves, and identity.

The reproductive policies for Huxley's World State followed principles of supply and demand and were specifically designed to maintain the social hierarchy. With the exception of the elite, people were created through systematic cloning at the Central London Hatchery. Sexual reproduction was taboo, except in the lab. And to make sure this didn't happen outside of strict supervision, most of the females - called "freemartins" - were deliberately made infertile.

Here's how the cloning process worked at the Central London Hatchery:

The fertilized ova designated to become lower caste people were subjected to the ingenious "Bokanovsky's Process". As the Director of the Hatchery explains,



a bokanovskified egg will bud, will proliferate, will divide. From eight to ninety-six buds, and every bud will grow into a perfectly normal formed embryo, and every embryo into a full-sized adult. Making ninety-six human beings grow where only one grew before. Progress.” (*Brave New World*, Aldous Huxley; p.17; HarperPerennial, 2005)

He goes on to describe these people as “standard men and women; in uniform batches”. (Huxley, p.19)

When “Bokanovsky's Process” was combined with “Podsnap's Technique” for speeding up the maturation of unfertilized eggs, the results are even more impressive. “Fertilize and bokanovskify ... and you get an average of nearly eleven thousand brothers and sisters in a hundred and fifty batches of identical twins, all within two years of the same age.” (*Ibid*, p.19)

OMG - each human egg processed at the Hatchery was a “Mother of Thousands” too!

In terms of sheer output, though, the botanical Mother of Thousands is the hands-down winner. I wonder what Huxley would have thought of a plant that out-bokanovskifies the expert technicians in the Hatchery.

Mother of Thousands has even more nasty surprises in her bag of dirty tricks. As I mentioned earlier, *Kalanchoe daigremontiana* is extremely poisonous. This plant and its relatives are well known to Australian ranchers for causing illness and death among their grazing cattle. It can also kill pets and small children who accidentally ingest the leaves or flowers. The toxins responsible are bufadienolide cardiac glycosides, which can cause kidney damage, cardiac arrhythmias, and cardiac arrest.



There's a fine line between toxic and therapeutic doses of cardiac glycosides. Plant sources pictured here are *Digitalis lanata* and *Kalanchoe daigremontiana*. The flowers of *K. daigremontiana* are the most toxic part of the plant.

Another more famous cardiac glycoside is digoxin, derived from *Digitalis lanata* and *Digitalis purpurea* (woolly and purple foxglove). Small amounts of digoxin provide much needed stimulation for a diseased heart, whereas “just a little more” is toxic and may even cause death. Likewise, the cardiac glycoside produced by Mother of Thousands has many beneficial applications but is also extremely dangerous. Its toxic effects are similar to those of digitalis intoxication.

Nature has an interesting way of re-shuffling similar compounds into a vast array of both plants and animals. Cardiac glycosides, for example, are found in beetles, fireflies, snakes, and toads as well as in dozens of plants. The



bufadienolides that are present in Mother of Thousands are named for the most famous source of this substance, the venom and skin of various toads of the genus *Bufo*.

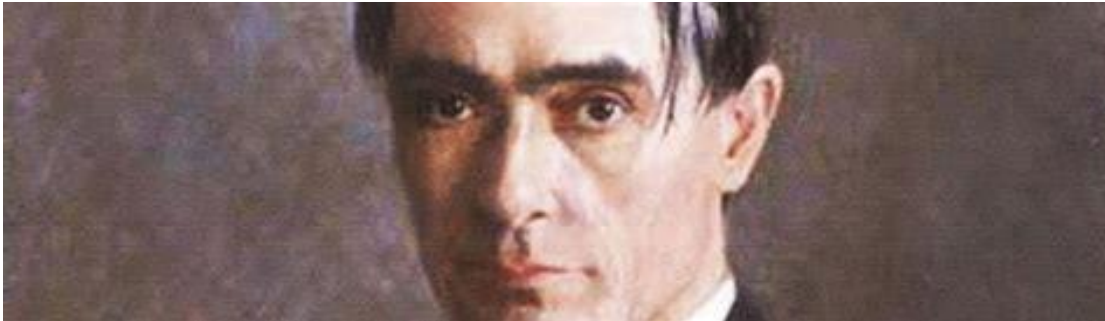
Bufadienolides derived from the skin secretions of toads are the principal bioactive ingredients of a traditional Chinese preparation called *Ch'an Su*. Sold illegally as an aphrodisiac in the United States, *Ch'an Su* has caused accidental poisonings and death. The widespread use of bufadienolide-rich toad venom as arrow-tip poison gives an indication of its extreme toxicity.

Despite the risk of its ingestion, the therapeutic effects of bufadienolide-containing preparations have been known for thousands of years. Ancient Egyptians, for example, used carefully prepared extracts from a bufadienolide-rich plant *Scilla maritima* (now *Drimia maritima*) to treat heart disease.

Mother of Thousands, also rich in bufadienolides, has many traditional uses in the folk medicines of Asia and Africa. It's a pain reliever and a sedative, but its primary use is in healing wounds and skin inflammation. Scientific studies are ongoing, but many have confirmed the cardiostimulatory, anti-inflammatory, anti-oxidant, anti-neoplastic, and anti-viral properties of bufadienolides derived from *K. daigremontiana*. These compounds are considered to be promising for future drug development.

Practitioners of Anthroposophic Medicine are also very interested in the potential medicinal applications of *K. daigremontiana*. They already prescribe extracts of its close relative *Bryophyllum pinnatum* for a variety of conditions.

Anthroposophic Medicine, based on the teachings of **Rudolph Steiner**, is a form of complementary medicine which "adds spiritual insight to diagnosis and healing".



Rudolph Steiner (1861-1925), known for developing a spiritual-scientific approach to knowledge called "anthroposophy."

Steiner was an Austrian philosopher, social reformer, architect, esotericist, and claimed clairvoyant. Among other accomplishments, he conceived of biodynamic farming, founded an esoteric spiritual movement, and established the first Waldorf School.

He was also fascinated by a plant called *Bryophyllum pinnatum*, especially its exuberant mode of reproduction. The taxonomy is confusing, since *Bryophyllum pinnatum* is sometimes classified as *Kalanchoe pinnatum* and *Kalanchoe daigremontiana* is sometimes classified as *Bryophyllum daigremontiana*, but the point is that the two are closely related.



In 1923 Steiner recommended *Bryophyllum* as a medicinal plant to alleviate psychic agitation, restlessness and anxiety.



Bryophyllum pinnatum, also known as "The Miracle Leaf", is one of the main herbs prescribed by Anthroposophic practitioners.

While I don't have Steiner's original writings on the topic, his idea seems to have been that certain characteristics of plants indicate the corresponding therapeutic benefits they might have for humans.

Here's how it's explained on a website for Dr. Hauschka Skin Care products, a company founded by a disciple of Rudolph Steiner:

Bryophyllum appears to be arrested at the stage of the embryonic and unformed. The small leaf buds shoot up everywhere without restraint, overgrow even the flowers. The plant appears to pour forth its entire energy into vegetative multiplication, it does not restrain itself for more organized forms such as flowers and seeds. This picture finds its parallel in the mental state which manifests as hysterical disorders. The individual breaks away early, his powers of will and fantasy take on a life of their own, are not controlled or refined. Because of this correspondence *Bryophyllum* is used in anthroposophical medicine as internal medication for hysterical conditions (Retrieved from <https://www.drhauschka.co.uk/medicinal-plant-glossary/bryophyllum/>)

Uriel Pharmacy, in East Troy, Wisconsin, is a pharmacy that prepares herbal products according to anthroposophical principles. The belief in a connection between a plant's idiosyncrasies and its perceived benefits is clear in this article from *Isthmus*:

Inside Uriel's greenhouse is *Bryophyllum crenatodaigremontianum*, a pretty succulent sometimes known as "Mother of Thousands," which generates offspring all along the leaf. It's used to make a tincture to combat insomnia - it's seen as a counterbalance to the thinking-too-much that may exacerbate sleeplessness. (*When like cures like, naturally*, August 24, 2007)

And nearly 100 years after Rudolph Steiner's initial observations, **Karin Fürer**, a clinical researcher in the Department of Obstetrics, University Hospital Zurich, in Zurich, Switzerland provides a rather extraordinary explanation of the perceived benefits of Bryophyllums:

Bryophyllum plants have the unique ability to let new plantlets grow from their leaves, thereby suggesting, according to anthroposophic concepts, a strong vegetative force and great vitality.

...From the perspective of AM (Anthroposophic Medicine), *B. pinnatum* is therapeutically indicated if the so-called astral and etheric bodies separate too much from each other. This means that the processes linked to psychic qualities, such as emotions, and the physiological processes are not well-



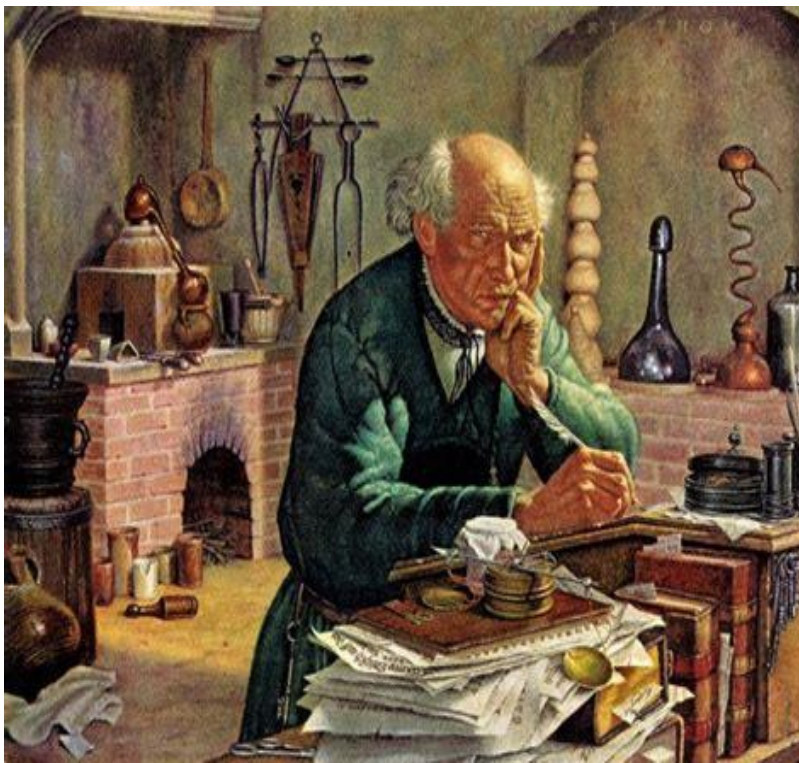
balanced, which disturbs the basis for the healthy state of a patient. *B. pinnatum* is supposed to reunite these two parts of the human organization, thereby restoring holistic balance.

Based on this principle, *B. pinnatum* has historically been used to treat inner restlessness and anxiety, and, therefore, was also called “herbal valium” due to its sedative properties. (Karin Furer, *Bryophyllum pinnatum and Related Species Used in Anthroposophic Medicine; Pharmacological Activities, and Clinical Efficacy*, *Planta Med* 2016)

According to these Anthroposophic writers, Mother of Thousands has great vitality and usefulness, but is uncontrolled, disorganized, and “arrested at the stage of the embryonic”.

The tendency for its leaf buds “to shoot up everywhere without restraint” corresponds to a “hysterical” person whose “powers of will and fantasy take on a life of their own”. And the plant that mirrors this human condition is the plant most suitable for its remedy.

This sounds exactly like a psychic Signature of Doctrines!



Philippus Aureolus Theophrastus Bombastus von Hohenheim (1493–1541), known to history as **Paracelsus**, was a Swiss German philosopher, physician, botanist, alchemist, astrologer, and general occultist. “Nature,” he said, “marks each growth ... according to its curative benefit”.

It’s as though **Paracelsus** himself were speaking today: “I have oft-times declared, how by outward shapes and qualities of things we may know their inward virtues, which God has put in them for the good of man.”

Who knew that *The Doctrine of Signatures* lives on?

Now, I’m prepared for anything. In case my “astral and etheric bodies separate” and I veer into fantasy, or I just need a counterbalance to “thinking-too-much”, I have the remedy right here in my garden! It’s called Mother of Thousands. I just hope it doesn’t kill me first.

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