



Creating a Natural Community Garden

By Patrick D. McMillan

What do you do when you've inherited the management of a 295-acre garden with a tiny staff, largely neglected landscape, no core plan for growth or fiscal sustainability and almost no budget? You freak out, and then you implement a strategy of growth that is unique among public gardens, adaptable to home landscapes, grows the collections, supports life, and generates massive public interest and support. You take what you have, your knowledge, talents, and convictions, and you implement them on the ground. I coined the phrase "natural community garden" to encompass the management and design philosophy that I was able to implement at the South Carolina Botanical Garden (SCBG). Natural community gardens apply concepts of habitat restoration, horticulture and I design them with particular site-specific management goals. This system of planting and design was entirely experimental when applied on a grand scale at the SCBG in 2010 and has become the central feature of this 295-acre public garden.

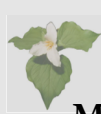
A natural community is a reoccurring, interactive assemblage of organisms, their physical environment, and the ecological processes that affect them (my definition). Ecologists attempt to classify them and provide names to such similar and apparently reoccurring assemblages. Terms such as Long-leaf Pine-Turkey Oak sandhill are used in popular use to express a particular natural community or group of natural communities. Much more complex classification schemes are used to define fine-level communities. Natural communities are infinitely variable and these constructs are really artificial groups that allow us to place the world into categories that we can understand. I want to stress that a



A tall grass prairie natural community garden at the Loki Schmidt Garren in Hamburg, Germany. The curators have worked for over a decade in partnership with McMillan to build similar style gardens in Germany and South Carolina.

natural community garden can be tailored to fit nearly every aesthetic taste, and does not have to duplicate existing natural communities that occur in our backyard landscapes. The key concept is that natural community gardens are designed to mimic the interactions that occur in natural communities and maximize productivity of native insects, birds and wildlife. These are landscapes that can be designed and managed or designed to arrange themselves and simply edited for specific design elements.

To fully embrace your landscape being part of a solution to the loss of biodiversity the following elements are important across your landscape.



Minimize turf

Monoculture lawn has its uses but supporting biodiversity is not one of them. The less lawn you have the more space for diversity production you have.

Fill the landscape with plants that work for a living

Maximizing diversity at higher trophic levels, such as insects and birds, depends on maximizing the diversity in your landscape. Filling space with plants that produce nectar, useful pollen and ample vegetation to serve as host plants for developing larvae (e.g., caterpillars). If your goal is to maximize the buzz of insects and the melody of songbirds then making sure you provide at least a portion of your garden with bright light/sunny habitats is important. Minimizing the space occupied by conifers and ferns also increases the productivity of your garden space. Ferns and conifers don't flower and don't support as many insects because their foliage is much less palatable to most organisms.

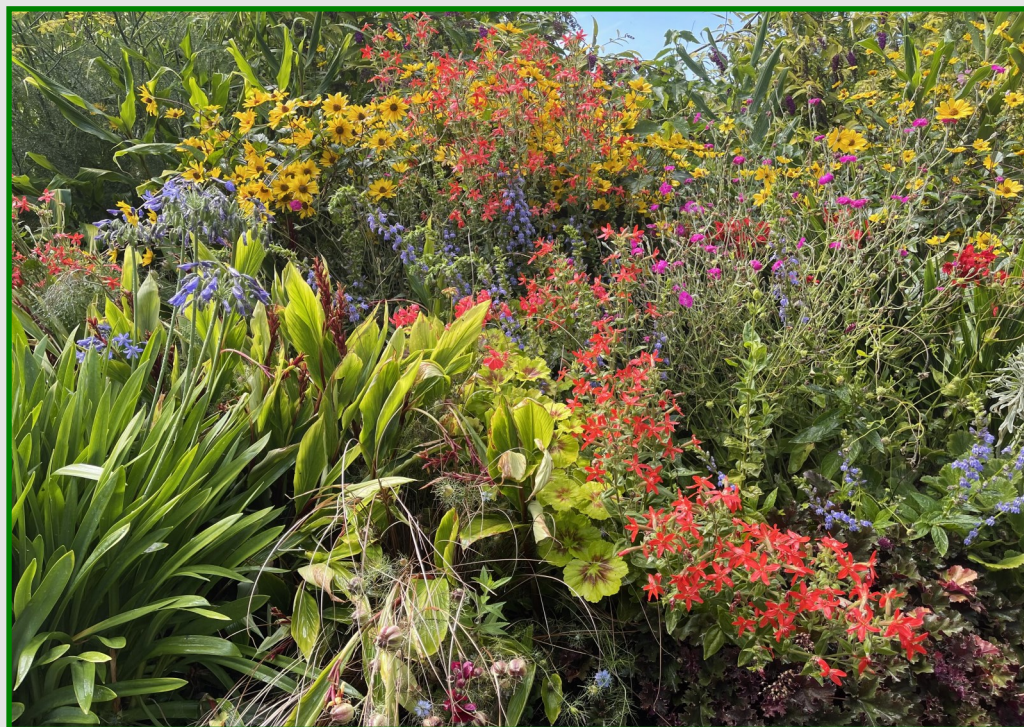
Include as much natural diversity as possible

If you are creating a natural community garden that simulates an actual natural community try to introduce as much of the structure and composition of that habitat as possible. This means painting the canvas with a diverse mixture of grasses in a Piedmont prairie natural



Aphrodite Fritillaries on Butterfly Weed.

community garden and introducing ephemeral annuals, spiny shrubs and grasses into a Chihuahuan desert natural community garden. These plants have ecological webs that often impact each other and help to shelter the insect predators that keep the issues we have with pests in more managed landscapes in check. Additionally, when you introduce all the elements of a particular natural community into your landscape it provides a



An example of a non-native landscape design utilizing many of the concepts of natural community gardening at Heronswood Garden in Kingston, WA.



much more immersive experience that transports you to the experience of being there and elicits the love you have for such places.

Allow structural and seasonal interest elements to overlap

This is one of the most difficult concepts for those with control issues. We have been indoctrinated to produce landscapes in alignment with gardening's roots in colonialism. We think that arranging our landscapes into little unnatural round blobs separated by a sea of mulch and never touching is the horticultural best practice. This expectation about our home landscapes is highly entrenched in the Southeast. The places we love in nature, the aesthetic that brings us joy, never obeys this rule. Traveling to other regions and observing the gardens of the Pacific Northwest, the most progressive of the gardens in the Northeast or even the pilgrimage destinations such as Great Dixter in Europe can greatly expand our understanding of just how much diversity is possible when we allow plants to embrace each other. Allowing a natural tapestry to be developed with your designs is critical to maximizing diversity and maximizing the biological significance of your landscape.

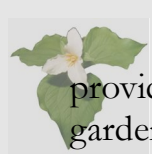


A wetland savanna in the SC Lowcountry. Such landscapes are able to be replicated in the home landscape in the Piedmont of the Carolinas.

Allow plants to complete their life cycle

This is another concept that control freaks have an issue with. Why in the world would I allow an *Echinacea* to go to seed in the garden? There will be seedlings everywhere! When we deadhead everything in the garden, we are removing a massive amount of the impact our gardens have on native insects and birds. There are many insects that rely on the developing fruits and dead stems of our plants to complete their life cycle. Many birds, such as the beloved American Goldfinch utilize the seed of *Echinacea* and *Gaillardia* and can be attracted in great numbers to your landscape by simply not deadheading everything. If we are not concerned about maintaining particular cultivars, allowing seedlings to persist and move across the landscape where we deem them to fit is a great thing. Choosing a natural community garden does not mean you have no maintenance. It means that you'll be spending time editing your landscape by removing plants you've introduced rather than removing an endless sea of weeds that you didn't introduce intentionally.

Fallen leaves and dead wood is equally important in supporting a vibrant natural community garden. Many moths, beetles and other insects depend on leaves and dead wood for overwintering habitat. When we remove all the leaves in the autumn, we end that life cycle and any time we make an unnatural perturbation to the ecosystem we send things out of balance. Leaves can be moved from fragile plants or partially removed but removal as they fall is not a great management strategy for



providing a garden that supports life. Dead wood can be included in artistic and pleasing ways in the garden—you need not leave every branch that falls!

Embracing a ruderal component

Unkempt places where grasses are allowed to grow tall, and yes, even weedy species are allowed to persist are important. This can be done to look intentional, imagine how intentional a simple split rail fence makes a weedy roadside meadow look. I'm not talking about packaging your annual weeds (like spurge and shotweed) but rather perennial plants such as Frost Aster, Goldenrods and even English Plantain. These “weedy” corners of your landscape can be packaged to look intentional and are incredibly important in harboring plants that are hosts for beautiful butterflies



Natural community gardening allows plants to embrace each other to create a tapestry of life.

(Buckeyes eat plantains) and even more importantly, harboring predatory insects that will work to help keep all of your favorite plants free from devastating pests. Plants that support native diversity that you may not want in your natural community garden itself can find a home in the “ruderal corners” of your landscape.

Creating a Southeastern Natural Community Garden

Geology/soils/hydrology

It isn't impossible to create a vibrant Longleaf Pine Savanna or Maritime Forest in the Piedmont; in fact, it is quite feasible. Regardless of the natural community you are installing, you will need to either limit your choice of landscapes to those that tolerate the geology and soils you have on site or you will need to engineer these conditions. If you have acidic soils and wish to install a rich cove forest, you will need to enrich the soils with organics, magnesium and calcium. If you want a habitat that occurs on sandy soils, then sands will need to be imported. If you want to establish a large wetland savanna, you will need to modify not just the soils but also the hydrology by installing an impervious liner below the imported soils.

Community composition

Learn as much as you can about the plants that grow in the natural community you are establishing. This should be done by reading as much as you can about the habitat, learning the major plants present in the habitat and most importantly—by visiting examples of that habitat to observe how the different plants arrange themselves within the natural community. What are the most abundant “structural” species, what seasonal interest elements are present? Design your landscape with this in



mind and be open to your landscape rearranging itself within the context of that natural community over time.


Ecosystem process

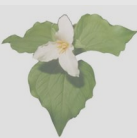
Many ecosystems that are most beautiful and productive in supporting our native biodiversity are termed “early successional.” This means they are maintained by natural processes that prevent them from becoming full-fledged forests. Piedmont prairie, savannas, sandhills, flatwoods, glades—many gardeners would lump these into “meadows.” These natural communities are maintained by a specific ecosystem process—fire. The best way to manage such habitats is by burning them in your landscape. For many of us that is impossible. If so, we can “mow” these habitats at appropriate times to partially mimic the fire that would naturally maintain them.

Again, learning as much as you can about the ecosystem processes that impact our natural communities is key in understanding how to best manage your landscape.

The Impacts of Installing a Natural Community Garden

The results of managing the entire 295-acre landscape at the SCBG with the prescription outlined above and the installation of approximately 64 acres in natural community gardens has returned dramatic results.

- A massive increase in the abundance and diversity of native insects.
- An increase in bird diversity from 122 species to 209 species within 9 years of implementation. The SCBG has more density of songbirds than any other single place I’ve ever visited on the planet.
- Small mammal populations nearly non-existent prior to the installation. Abundant now.
- Predatory bird population moved into the garden including several that hadn’t been seen in many years in the area.
- Dramatic reduction in insect pests on horticultural plants and desired species in the natural community gardens.
- A large, internationally-recognized horticultural exhibit that requires dramatically less staff to manage than a traditional landscape and generated tremendous financial support from the community, University and academic community. 



Piedmont NARGS Speakers Fall 2022 – Spring 2023

October 15, 2022

Patrick McMillan

Juniper Level Botanic Garden
Apex, N.C.

Topic: “Creating a Natural Community Garden
with Southeastern Native Plants”

Saturday, October 22, 2022

10 a.m. to 2:00 p.m.

Open Garden: **Jeremy Schmidt &
Meghan Fidler**

1109 New Castle Ct., Raleigh, N.C. 27603

November 5, 2022

Linda Cochran

Via Zoom Only

But meeting will be held at JCRA also.

NARGS Traveling Speaker

Port Ludlow, Wash.

Topic: “Inspired by Nature: Photography and
Digital Painting”

Late November or Early December 2022

Date to be announced

Garden Visit: Fall Snowdrops Woodland Walk

Nancy Goodwin’s Montrose

Hillsborough, N.C.

Details to be announced

January 21, 2023

(mini talks—15 minutes each)

David White: Adirondacks NARGS Pre-
Conference Tour

Tim Alderton: Voice of America Field Trip

Amelia Lane: NARGS Swiss Trip

Scott Zona: “A Gardener’s Guide to Botany”
And book signing by Scott

February 11, 2023

Hsuan Chen

NCSU Horticultural Science
Raleigh, N.C.

Topic: “What’s the Fun about Plant Tissue
Culture?”

March 18, 2023

Todd Boland

Memorial Univ. of NF Bot. Garden
NARGS Traveling Speaker
St. John’s, Newfoundland

Topic: “Spring Alpines of the Spanish Argonian
Pyrenees”

March or April

Date to be determined

Spring Botanizing Trip to White Pines

Nature Preserve, Chatham County, N.C.

Details to be announced

April 15, 2023

Jay Sifford

Landscape Designer
Davidson, N.C.

Topic: “Making Garden Magic: Designing
Gardening Spaces”

Saturday, May 6, 2023

Spring Picnic

Rain date May 7

Kyle and Mary Sonnenberg garden
“Sunny Mount”

Southern Pines, N.C.

Details to be announced



Mark Your Calendar

NARGS Webinars

November 19, 2022

Geophytes (Bulbs, species peonies,
and more)

January 14, 2023

Small Woodies (Ericaceous plants,
conifers, and more)

February 25, 2023

What's New in Rock Gardening
(Build a crevice garden in a
container, propagation techniques,
and more)

Membership Form

Piedmont Chapter—NARGS

Membership year is from July 1 to June 30

Membership Options: Individual: \$15
Circle one. Household: \$20

Name: _____

Second person name: _____

Street _____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Email:** _____

Make Check payable to: **Piedmont Chapter, NARGS**

Mail to : **David White, 3 Ontario Court, Durham, NC 27713**

Visit <https://www.piedmontnargs.org/> to learn more about
the Piedmont Chapter

Saturday, October 22, 2022 10 am—2 pm

Lasting Impressions' big Garage Gallery and Plant Sale!!

4904 Hermitage Drive, Raleigh NC 27612

All of Lasting Impressions' art; the hand-cast leaves, hypertufa troughs and birdbaths,
garden orbs and mushrooms will be **20% off** !

And our plants are looking good and ready for fall planting!

Beth and I hope you can come enjoy the fall garden.

You can find plants for your garden or a friend and a new piece of art for your garden!!

Join us, Saturday, October 22 in celebrating Fall in Piedmont NC!!

Amelia Lane and Beth Jimene - Lasting Impressions partners
lastingimpressionsleaves.com



Quick project: Make a Fern Table!

By Cyndy Cromwell

Fern tables are all the rage in the Seattle area, as I discovered during a recent visit. At Heronswood Garden in Kingston, the new Renaissance Garden boasts an enormous fern table. The table's monumental structure accommodates a wide variety of ferns and companion plants.



Close by in Indianola, Nancy Heckler, who gardens on a superbly designed quarter acre, has made a smaller scale fern table, tucked into a shady nook. Smooth, rounded stones and curving driftwood create a pleasing armature for plants.

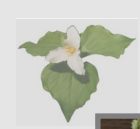


One of the highlights of visiting the Elizabeth C. Miller Garden in Shoreline was the opportunity to learn about fern table construction from Director Richie Steffens. Richie is also President of the Hardy Fern Foundation, and if you are interested in making your own fern table, this how-to video is a good place to begin:

https://www.youtube.com/watch?v=aeVBjB33Ec8&ab_channel=HardyFernFoundation

A big concern for me was how to add height to the potentially boring, horizontal plane of a table. Richie explained that he uses rocks, logs, and other hidden supports to elevate the design, both physically and stylistically. It takes a bit of trial and error when using natural materials, but the result is pleasingly dynamic.

For immediate impact, Richie installed full size plants. Ferns are packed closely together onto a sizable wood platform, and accompanied by gold miniature hostas and selaginellas to break up all the green. I



den came first; logs and rocks provided structure, with pinecones, chunks of lichen and moss filling in the gaps. For a medium, I used shredded bark mixed 3:1 with compost. Other plants on hand - *Begonia* 'Tiger Kitten', tiny leaved *Euonymus fortunei* 'Minimus' and small hostas - are nice additions while waiting for the ferns to bulk up.




Should you make a fern table? Fern table plants need to be replaced from time to time, which could be annoying - or fun - depending on your point of view. I love the idea of tearing it all apart and doing a redesign periodically, not a huge job if you keep it small.

Even in Seattle, a fern table requires consistent watering to establish and maintain, especially when it's hot and/or dry. That's a big drawback



in North Carolina, but drip irrigation on a timer could solve the problem if you aren't always around to water.

Making a fern table is a fun little project for a shady spot, and you probably have many of the elements on hand already. In addition to ferns and other shade loving plants, you could experiment with tiny bulbs, seedpods, cones, lichens, fossils and other naturalistic companion elements. Why not give it a try? 





Bobby G. Wilder

1932 – 2022

One of the Piedmont Chapter's longest members, Bobby Wilder, died September 25, 2022, age 90.



Photo by Bobby Ward

Photo taken at Montrose Gardens in 2013.

Bobby attended the organizing meeting of our chapter in the fall of 1985, when he responded to a newspaper notice of a rock garden meeting in Chapel Hill that was organized by Edith Boyer, Nancy Goodwin, and Sandra Ladendorf. Sandra was elected first chair of our chapter and would go on to become national president of NARGS in 1990. That meeting was attended by 25 people and thus, Bobby became a founding member of the Piedmont Chapter of NARGS.

Bobby became our fourth chapter chair, serving from 1990 until 1993. In 1994 he took over as treasurer serving 20 years through 2014 until David White became treasurer. But Bobby continued to handle the membership records and email *The Trillium* to our membership.

Bobby served a two-year term on the NARGS board of directors in the mid-1990s and attended many national meetings in the United States and Canada, representing our chapter.

Our Piedmont Chapter has hosted five national meetings: in 1990, 1999, 2004, 2013, and 2017. Bobby served on the planning committee for each of those five meetings—volunteering in various capacities including registration, making name tags, and treasurer.

Over the decades, until recent years, he home-hosted scores of our chapter's out-of-town speakers, who stayed overnight while visiting our chapter. Many were repeats from previous years—except one who found Bobby's liquor cabinet after dinner guests had left and Bobby had gone to bed.

Bobby grew up in Johnston County, North Carolina, in the Corinth community. He served four years in the U.S. Navy, stationed initially at San Diego, and upon discharged earned a B.S. degree in Science Education at N.C. State University. He then taught science at Daniels Junior High School in Raleigh for several years.

Bobby had a 43-year relationship with his partner, Jack Lamm, who died in 2001. Together, they co-owned a picture framing business on Dixie Trail in Raleigh, called Century Framing.

His health had been gradually declining during the Covid pandemic when he was unable to venture outside and it worsened with a collapsed lung this summer. He recovered from that and was in a rehab facility but making plans with his extended family to return home when he unexpectedly died.

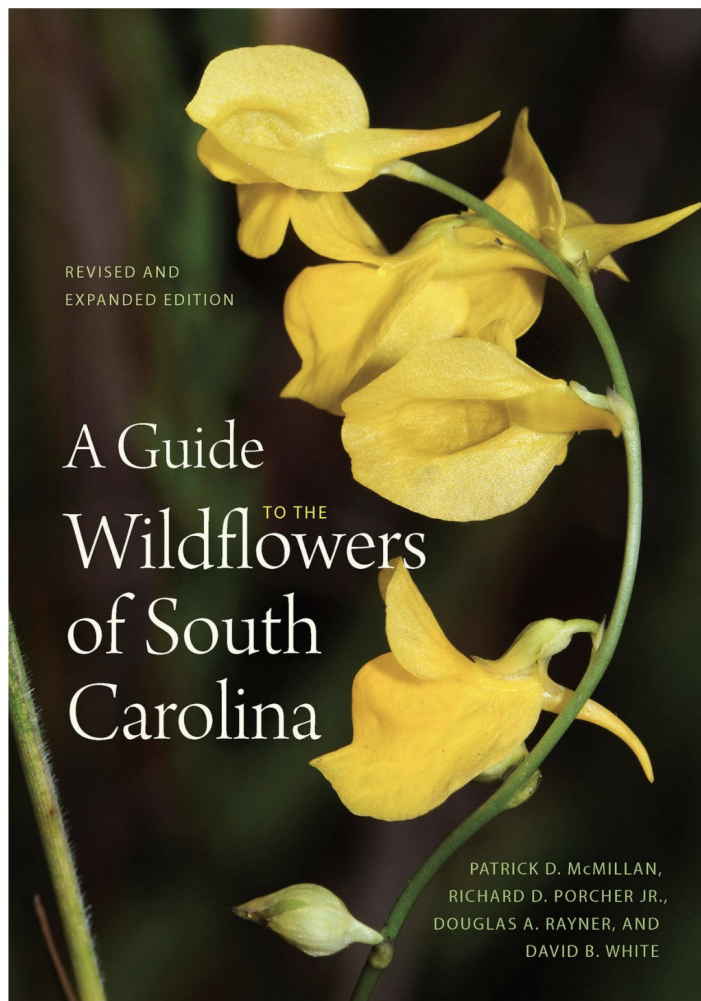
The Piedmont Chapter has made a donation in Bobby Wilder's memory to the Bobby G. Wilder and Jack R. Lamm Horticultural Scholarship Endowment at the JC Raulston Arboretum. ♪

By Bobby Ward

Book Review: A Guide to the Wildflowers of South Carolina

From its summits to its shores, South Carolina brims with life and unparalleled beauty thanks to its abundant array of native and naturalized flora, all carefully documented in this revised and expanded edition of *A Guide to the Wildflowers of South Carolina*. Dramatic advances in plant taxonomy and ecology have occurred since the guide's publication 20 years ago; new species have been discovered while others struggle to survive in the face of vanishing habitats and climate change.

The authors, all experienced botanists, offer essays on carnivorous plants, native orchids, Carolina bays, the roles and effects of fire and agriculture on the landscape, and detailed descriptions of the plant communities throughout the state's major natural regions. This expanded edition catalogs nearly 1,000 species organized by habitat, with descriptions, color photographs, range maps, and comments on pharmacological uses, suitability for garden cultivation, origin of common and scientific names, and conservation status. Softback cover \$39.95. (Amazon description).



Ordering Bulbs at 2022 Bulb Sale

Elsa Liner

As I announced at the last meeting, we will be selling fall bulbs in this year's bulb sale. Each bag will contain 3 *Lycoris sprengeri*, 5 *Sternbergia lutea*, 3 *Cyclamen coum*, 5 *Gladiolus byzantinus*, and 5 *Gladiolus callianthus*. Each bag will cost \$25 – a really good buy for these beautiful bulbs, especially as fall bulbs are typically more expensive than those that bloom in spring.

In late October Cyndy will send each member an email with an order form attached. To order, print the form and fill it out. Send it with a check to pay for your bulbs to Elsa Liner. There is a limit of two bags per person. Orders will be ready for pick up at the January chapter meeting. All of these bulbs can be planted in late winter/early spring and should bloom in 2023. 🌸



Lycoris sprengeri



Cyclamen coum



Gladiolus byzantinus



Gladiolus callianthus



Sternbergia lutea



NARGS Piedmont Chapter Meeting

**In-person meeting, but the speaker will
be zoomed from the JCRA meeting
room for attendees and members.**

Saturday, October 15, 2022
McSwain Center at the Raulston Arboretum

10:00 a.m.

Patrick McMillan

Juniper Level Botanic Garden
Apex, N.C.

**“Creating a Natural Community Garden
with Southeastern Native Plants”**

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Plant Sale Manager: Tim Alderton
Plant Sale Chair: Jim Hollister

Message from the Chair **Cyndy Cromwell**

October – November 2022

2022 is winding up quickly! For me, cooler weather means it's time to propagate special annuals for next year and move tender plants to their winter homes in the porch and garage. There's also the chance that some of the plants in pots will make it into the ground – time seems to run short as fall hurtles toward winter.

It's wonderful to see more and more of you in person at meetings! I look forward to catching up with you in person at our meetings coming up in October and November, and can't wait to see everyone at Jeremy and Meghan's Bristol Briar for their open garden day on October 22. A few weeks later, exact date to be determined, we'll meet at Nancy Goodwin's Montrose Gardens, for early blooming snowdrops.

Finally, the first week in December is reserved for our pre-holiday tradition of packaging seeds for NARGS Seedex. If all goes well, we'll be able to work together again. With several people helping, the job gets done quickly and efficiently, plus we have lots of fun! You'll be receiving an email with details soon. ❧