

# AHTA MAGAZINE

VOLUME 51 | ISSUE 2

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- HTR Profile:  
Rich Matteo



**HTR Profile**  
Rich Matteo  
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The American Horticultural Therapy Association Magazine

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Editor: Debra Edwards, HTR

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# Editor's Words

Photo Credit: Genevieve Scott



I feel like when I write these editor's words the subject is always about change. The change of seasons, changes in our bodies and health, life events... and I suppose that's accurate. Constant change is always happening around us and we experience some of the same events differently as we

go through "seasons" in our lives. We handle similar situations differently as we change, grow and formulate new opinions.

I try new things expecting to enjoy them and don't, or I stumble across something fun that I never thought would be for me. I also try things I used to enjoy and the same amusing or pleasant experience is not there anymore. Then, I felt regret that I didn't like the same experiences as I once had, but later I realized that it is ok to change and grow. Appreciate past experiences while moving on to something else, even if you don't know what your new inclination might be...

Now, I have the bittersweet task of finishing my last full issue of the AHTA magazine as I also complete the remaining months of my second board term. I know that the Board and the magazine will be in good hands. I will remain involved in the magazine work team, but ready to move on to different interests and duties. As the seasons will change, this is also a time shifting responsibilities for me.

I hope everyone is staying safe while gardening in this unprecedented summer heat. Keep yourself and your garden soil hydrated, your bodies and your vegetables properly nourished, and your mind and flowers blooming. Motivation is a hard thing to come by when it's too hot outside to think! We must find purpose and continue to create within the garden setting, and still find new ways to introduce our passion to others. Find creative ways to stay cool, fun infused waters to stay hydrated, and using our "friends in flora" to keep us shaded. Remember, change of seasons will come again soon!

Enjoy the summer everyone, and be open to what's new for you!

With a heatwave of encouragement,

Debra 🌿

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**American Horticultural Therapy Association®**

ADVANCING THE PRACTICE OF HORTICULTURE AS THERAPY

# Opening the Eyes of Youth to the Fascinating Power of Plants

By Kelly Warnick, BA, Juris Doctor,  
AAS Horticulture, and Certificate in  
Horticultural Therapy



Star Roses and Plants joined forces with Seed Your Future and two Pennsylvania area high schools to provide opportunities for students to learn about horticulture and agriculture from industry professionals. All photos provided by Seed Your Future

**P**lants are a vital life force. They support the Earth and all forms of life. They produce essential food for all living organisms. They release breathable oxygen. They absorb harmful greenhouse gas emissions, are vitally linked to numerous ecosystems, and provide shelter, renewable fuels, paper, clothing, and numerous medicines. With vegetation composing over 80% of the Earth's biomass, plants are the foundation of our existence.

As horticultural therapists know all too well, the impact of plants goes well beyond that. The healing and well-being benefits experienced by humans while observing or engaging in plant-rich settings is being increasingly proven. Plant-rich settings boost immune system response and mood, speed surgical healing, promote resilience in chronic psychosocial stress, improve cognitive function, sharpen focus, and decrease incidents of pain and anxiety. Moreover, a recent study demonstrated that with each tree planted comes a reduction in the mortality rate for cardiovascular patients.



Hands-on learning provides students with an experience in horticulture that grows their awareness of plants and how their actions can positively impact people and the planet.

## A Wide-Spread Tendency Among Youth to Overlook Plants

Despite how critical plants are for human survival and global ecology, many people overlook plants. Careful study of the phenomenon occurred in 1999 by American botanists, Elizabeth Schussler and James Wandersee, who coined the phrase "plant blindness" to describe what was occurring. This influential study cast light on an increasing inability among humans to "see" plant life - i.e., to notice plants and grasp how central plants are to our very existence. Schussler and Wandersee's work fueled a litany of more recent studies. The most notable results are as follows:

The average American can recognize:

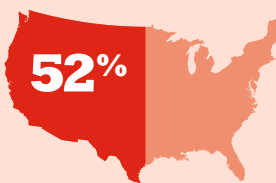


**1,000**  
brand names  
and logos

vs



**>10**  
local plants



52%  
of U.S. individuals surveyed,  
ages 18-34, were not familiar  
with the term "horticulture."



Plants tend to be underrepresented  
in biology curricula nationwide,  
particularly at the middle school  
and high school levels.



Plants generally do not entice the human eye as effectively as other organisms do. Plants live on a different timescale — their movements are too slow for humans to detect. As such, plants can be unassuming backdrops in an individual's world.



Recently, it was recommended to change the term "plant blindness" to "plant awareness disparity," but there has been no general agreement on this, and the original term is still used.

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## A Growing Disconnection with Nature

"Plant blindness" primarily stems from a disconnection with nature, particularly among today's youth. A number of factors are causing disengagement.

Many children and young adults are spending the majority of their waking hours indoors and in front of screens, not outside experiencing the wonder of the natural world. According to Statista, in 2021 teens, aged 13 to 18 years, had an average daily entertainment screen time of approximately 8.5 hours. Add to this the amount of screen time also required for school or work purposes, and it becomes probable that the majority of a younger person's day is typically happening with very little exposure to nature.

Moreover, as reported by the U.S. Census Bureau, the nation's urban population increased by 6.4% between 2010 and 2020. The increasing urban populations are faced often with insufficient green space and, thus, the disconnection from nature continues to build.

### Consequences of "Plant Blindness" Among Youth

We all need nature, but the young really need it. Plant-rich settings offer youth a restorative environment for their developing minds and bodies. Engaging with nature brings stress reduction, improves attention span, supports mental and physical health, and fosters connection. Disengagement with nature thus removes a vital, supportive, developmental cornerstone in a child's life.

Moreover, in a world needing to find sustainable solutions, "plant blindness" has no place. Experts warn that this phenomenon could actually hinder attainment of many UN sustainable development goals, if not addressed and alleviated.

The horticulture industry is equally concerned. Faced with a dramatically changing climate, horticulturists are undertaking some of the world's biggest challenges: feeding a growing population, curing plant diseases to protect food supply, growing plants to be used in medicines, and ensuring clean water. A steady number of qualified horticulturists lining up to join the industry's workforce has been lacking. Almost 58,000 jobs in horticulture are anticipated to become available annually, but only 61 percent are projected to be filled. Building the industry's future workforce is critical, as everyone depends on horticulture for their most basic needs.



*Programming events such as this showcase the power and importance of coming together to demonstrate the value of plants and the variety and importance of green careers.*

## Seed Your Future — Creating a Nationwide Pipeline of Opportunities for Youth to Realize and Work with the Power of Plants

Seed Your Future was formed in response to the global concern over "plant blindness." This organization is an innovative coalition of more than 150 nationwide partners united in their mission to educate and inspire youth about plants and horticulture careers.

Through its first major initiative — ***BLOOM!*** — Seed Your

Future offers an array of eye-catching, fact-based educational content appropriate for both inside and outside the classroom. [Seedyourfuture.org](https://seedyourfuture.org) is packed with educational resources customized to four educational levels: middle school (created according to Science and ELA standards), high school, college, and career-bound. Turnkey lesson plans, learning modules, and engaging videos are available to all who are in need of interesting, state-of-the-art plant science content.

Of particular note, [PlantFlix](#) offers vibrant, eye-catching time-lapse videos of plants evolving through bloom and other amazing processes. [Plant Mash-up Contest](#) inspires youth to imagine and illustrate their own plant hybrid that will solve a problem in their community. [Find Your Plant Power](#) is an interactive quiz that introduces surprising facts and horticulture opportunities that align with personal interests. [Horticulture Heroes](#) showcases industry professionals who are positively impacting lives and the planet. A [Where to Study Map](#) directs youth to areas across the country that offer educational programs in specialized areas of the industry.

Jazmin Albarran, Executive Director of Seed Your Future, states: "Our online resources continue to grow and we put these tools directly into the hands of educators so they do not have to reinvent the wheel." These resources are being accessed, and headway is being made.

Anna Ball, President and CEO of Ball Horticultural Company and the Co-Chair of Seed Your Future National Leadership Cabinet, has also recognized the progress. She further adds, "there is so much more work to be done. Building awareness has to happen in several areas."

### Adding the Horticultural Therapy Footprint to this Nationwide Movement

Horticultural therapists, with their keen ability to bring people and

» [continues on page 18](#)

# HTR Profile:

## Rich Matteo



Rich Matteo  
Photo from this article

Interviewed by: Debra Edwards

**Tell us about your background and education. Have you always worked in the field of horticultural therapy?**

I started my career in education, first teaching physical education, then becoming an 8th grade homeroom teacher teaching history and English. I had a strong desire to pass on knowledge

but also wanted to work outside with my hands in the earth. I attended Temple University in Ambler, PA for all of my horticultural coursework and interned with Pam Young, HTR, at Bryn Mawr Rehabilitation Hospital in Paoli, PA. I am currently in my fifth year working at the Overbrook School for the Blind in Philadelphia, PA.

**How did you get your start in horticultural therapy? When did you become a horticultural therapist?**

It took me many years for me to find horticultural therapy. My wife showed me the greenhouse at her hospital where Pam Young worked and it kindled in me a desire to learn everything I could about the subject. I enrolled in a class at Temple University's Ambler campus and under the guidance of Peg Schofield, HTR, I felt like I finally found my calling. It took me about 6 years to complete my coursework as a part time student while teaching full-time. I also worked 2 summers with Pam at Bryn Mawr Rehab Hospital to fulfill my internship requirement. Pam later informed me that a position was available at the Overbrook School for the Blind in a brand new facility that was just waiting for the right person to start their horticultural therapy program. I applied and after a lengthy interview I was offered the position and started in March 2018. My experience working with children and in a school setting was a big part of why I got the job.

**How did you combine your interests within the horticultural therapy profession?**

Each student I work with is so unique that I use my whole bag of teacher tricks every day. My love and interests in many things allow me to make these connections. So finding something you have in common with the person you are working with is what makes it all worth it in my opinion. Whether it be bugs, cars, sports or music, it's all about finding the common ground. Many of my students are non-verbal so that adds an extra dimension to it.



Isa putting ladybugs on a plant as part of an IPM.  
Photo Credit: Nick Fiorellini

**What has been your experience in developing a career in HT?**

I'm very lucky to have been able to start my own program from scratch in a brand new facility with a very supportive staff and administration. The greenhouse literally went from barren to bursting with life in 2 months. Creating programming, sourcing materials, learning the students, and maintaining a facility all had to happen very fast. The school where I work is very old and beautiful with many great trees, gardens and an orchard. Working with the grounds crew and volunteers, I am able to utilize many different resources for programming. I love the connections I have made with the school, community, and others in the field that know the value of what we do and look forward to many more opportunities to grow and learn.

**How did HT develop at your facility and what is the present status of this program?**

The school had been fundraising and crowd sourcing the funds for the construction of the greenhouse building for years and everyone in the Overbrook community had a connection to the project. Upon my hiring I learned there is a Farm to Table committee that works with the students and the community to offer experiential learning opportunities. The school population is around 200 and I work with approximately 30-40 different students throughout the school year and summer. Sessions with my students vary greatly, most are 1 on 1. Some have their OTs, PTs, or SLPs come with them and ask for activities specific to their IEP goals. In group sessions, students work on constructive projects using materials harvested from campus or our greenhouse. I have also tried to identify and work with the students who could use the vocational skills to find work after they graduate. With each student being so unique, it can take time to find out what their strengths are and how best to use the abilities they have.

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*Activity of making a pressed flower card.*  
Photo Credit: Denise Mihalik



*Three students feeling and smelling scented geraniums.*  
Photo Credit: Denise Mihalik

We grow thousands of pounds of produce every year most of which is donated to local food banks and we have a full-service flower shop where the students help create arrangements that decorate the main entrance and cafeteria as well as for sale to the staff.

### **Do you have some favorite plants and activities you use in your HT programs?**

We use herbs and scented geraniums for our sensory activities. Also we clean, dry and process all the herbs we grow. We then put them in jars and sell them at events. The students love to rip things apart more than delicately handle baby plants, so anytime I say rip all the leaves off of this basil or crush all their dried oregano leaves, they are excited to help.

### **Do you accept HT Interns? How does your internship work at your facility?**

Yes. First contact me at rich.matteo@obs.org. Then to work at our school you must obtain all of your clearances and be approved by our Human Resources Department.



*A student feeling the spiky leaves of an aloe plant.*  
Photo Credit: Denise Mihalik

### **Do you have personal perspectives to share with present or future horticultural therapists?**

Some advice I would give to aspiring therapists is to learn to be flexible with all that you do. Be willing to improvise. Sometimes as teachers and therapists, you want to do these grand projects with many steps when often it is easier to break those activities down into smaller steps and let more people get involved with the projects. Also try to grow things that are easy to propagate and maintain. You want the students or clients to feel successful in what they are doing and the easier you can instill that confidence the better. Another piece of advice I received from my friend Peg Schofield is that even if you are

moderately good at growing plants, you will always have more than you need. Give stuff away to other programs and share with everyone you can. It helps generate interest in what you are doing and enriches the lives of all who come in contact with you.

This is a very fulfilling line of work and we get to help people as well as get our hands dirty on a daily basis. It doesn't get much better than that in my opinion. 🌱



## PROGRAM SPOTLIGHT

# H.O.P.E. GARDENS OF ROBINS AIR FORCE BASE, GEORGIA

*Master Gardeners having fun on the day of the Military Child program. We had over 200 participants. All photos by Donna Hunt*

By Donna Hunt

**H.** O.P.E. Gardens, originally named Robins Air Force Base Camellia Memorial Gardens, was started in 1975 by the Camellia Society as a memorial to Base employees who died during the year. As time went on, the interest in maintaining the 2.5-acre gardens waned, and only the monument area was kept up. By 2016, it was decided to move the memorial off base for security reasons and the gardens were abandoned. In 2019 the Houston County Extension Master Gardeners decided to revive the gardens. A handful of volunteers started to clean up the gardens. It was a slow, lonely, and hot process.

The military leadership of the Base (RAFB) decided that the revived gardens would be a great addition to the Integrated Resiliency & Prevention Office (IR&PO). The IR&PO was developing the H.O.P.E. campaign to combat the extremely high suicide rate at Robins AFB, the highest in the entire Armed Service. H.O.P.E.

stands for Help is available; Opportunity exists; People Care; Expect Good Things. The IR&PO wanted the gardens to be a physical reflection of the H.O.P.E. campaign. The suicide rates have since dropped and H.O.P.E. Gardens is thriving, with a story to share about resiliency, service and volunteer commitment.

I ran by the gardens daily and decided to ask the 78th Air Base Wing Commander if the Houston County Extension Master Gardeners could rehab the gardens. It was met with a resounding "YES"! Being a former Air Force officer, this coincided with my enrollment in the horticultural therapy program at the University of Florida.



*The Entrance to H.O.P.E. Gardens at Robins AFB.*

Hope Gardens has a unique therapeutic horticultural mission which is almost the opposite of working with military veterans and other populations. With many Vets, the Veterans Administration (VA) refers them to therapeutic services including TH/HT programs if they are available.

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*Airman from the dorms put the tool shed together.*



*At 1700 Hrs (5pm) Monday through Friday, no matter what you are doing outside, you must stop for the National Anthem. If you are driving, you must pull over and wait until the conclusion of the National Anthem.*

The Vets can openly discuss PTSD and other issues. Also, there is a monetary incentive to participate (increase of VA benefits). For the active-duty military members, joining a mental health program often has a stigma that can end careers. With increasing awareness of mental health challenges, the IR&PO is trying to change this mindset and practice but it is a slow process. So how does H.O.P.E. Gardens try to engage Airmen? Honestly, it is not easy.

Through the TH program at least three-monthly events are held at the site. "Conversations in Hope" is a monthly Facebook live broadcast from the gardens. Issues pertaining to the Airmen and their families are discussed, and listeners are always invited. In addition, programs for military children are held every month. The third monthly event is special programming for the Airmen living on base in the dorms.

The biggest impact has been when different Base organizations send Airmen to the gardens for routine clean-up days such as the Airman Leadership School, 5th Combat



*We did a container class outside the Dining Hall and had good attendance.*

Communication Squadron, and the 78th Air Base Wing. This is not the traditional TH way of doing business, but it works. This is how.

The Airmen come to the gardens to get volunteer hours which is documented as part of their promotion package. After a safety briefing, they undertake various tasks in the gardens alongside Master Gardeners. During the volunteer work, conversations usually happen. And from this, usually two or three stay behind after the shift has been completed. It is usually these individuals who need help. They are usually young Airmen who are lonely and need someone to just listen to their stories. Every once in a while, it is individuals who have serious issues. We are able to get them to go into confidential counseling through the IR&PO. Almost all of the Airmen who we have referred return to volunteer or let us know how they are doing.

The biggest challenge, typical on military bases, is the constant change of upper leadership. Priorities, awareness of H.O.P.E. Gardens and its value delivering therapeutic and recreational plant-based activity is ever changing. The gardens' response has been to initiate new and innovative programs with participation in every event possible to promote the gardens' mission and programming offerings. One particularly effective platform has been the Airmen's Newcomers briefing which coordinates every public event on base - sports days and holiday events. One of the newest initiatives is horticultural programs delivered at the Base's Dining Facilities. This introduces more than 400 Airmen to these activities at each exhibition. Protocols related to Base access for non-base personnel and people from the surrounding communities make it challenging for others to see what is being delivered and available at this special site. The rigors of military life are difficult. H.O.P.E. Gardens is striving to make military and civilian workers healthier.



# Introducing the GrowTH Community

By Alexis Ashworth and  
Katie McGillivray HTR

**I**nspired by her personal passion, Alexis Ashworth founded Root in Nature in 2021, a social enterprise that strengthens human health through horticultural therapy, programs, and education. Now, Root in Nature is proud to introduce its latest initiative, the GrowTH Community, an inclusive and supportive online network specifically designed for horticultural therapists, practitioners, and professionals delivering therapeutic horticulture sessions.



Alexis Ashworth, Founder  
and CEO of Root in Nature  
Photo Credit: Brian Elliott

The field of horticultural therapy faces some challenges that hinder its ability to grow. There is a disconnection between practitioners, leading to feelings of isolation and burnout, as well as a lack of practical resources available, forcing therapists to spend precious time creating activities and forms rather than directly engaging with clients.

To address these challenges and empower horticultural therapists, Root in Nature created the GrowTH Community—an innovative online international network. The community, which launched on June 28, aims to provide practitioners with the support and resources they need to thrive in their work. By

joining the GrowTH Community, members gain access to a range of benefits designed to enhance their practice and foster their professional growth. 🌱

***“The GrowTH Community is one of the most exciting things to expand the growth of horticulture as a therapeutic tool that I have seen in recent years. Professionals from many fields working together with volunteers will bring this valuable tool to many more people.”***

**Dr. Paula Diane Relf**  
Professor Emeritus,  
Virginia Tech University

## About the authors:

### Alexis Ashworth

Alexis followed her personal passion and founded Root in Nature in 2021 following a long career as CEO of Habitat for Humanity Greater Ottawa. She holds a BComm and an MBA in International Development Management and has studied the Foundations of Horticultural Therapy. Alexis tends to her gardens with her husband and two young daughters.

### Katie McGillivray HTR

Katie is a Registered Horticultural Therapist (HTR) and the Courses & Community Lead for Root in Nature. A strong advocate of asset-based community development and reflective practice, Katie has been supporting therapeutic horticulture projects and programs for a wide variety of populations since 2014.

## Benefits for GrowTH Members include:

### 1. Activity Database:

Members can utilize an ever-expanding database of therapeutic activities, with four new additions each month. The database will be sortable in the following ways:

- Type – check-in, mindfulness, activity & check-out
- Material requirements – cost vs. no cost
- Domain of wellness – physical, cognitive, emotional, social, sensory & creative
- Season
- Indoor / Outdoor
- Physical exertion required
- Population / cognitive ability requirement
- Ability to deliver virtually

### 2. Resource Library:

The community's resource library is a treasure trove of valuable assets, including intake forms, evaluation forms, budgets, trivia and job descriptions.

### 3. Monthly Check-ins and Q&A:

GrowTH Community members can participate in monthly one-hour check-in and Q&A calls with a registered horticultural therapist. These calls provide a supportive environment where therapists can seek guidance, share experiences, and engage in ongoing professional development.

### 4. Networking Opportunities:

The community facilitates connections through personal profiles and engaging group chat forums. Whether therapists are seeking regional connections or want to delve into specific topics, there are opportunities for meaningful connections and knowledge sharing.

### 5. Online Events and Guest Speakers:

Stay inspired with online events featuring guest speakers who delve into relevant topics. A few of our guest speakers include Lynn Leach on Therapeutic Garden Design, Kristin Topping on Advanced Indoor Plant Care, and horticultural therapy pioneer Dr. Diane Relf.

### 6. Discounted Courses:

Members receive a 20% discount code to Root in Nature courses, the first of which is an Intro to Therapeutic Horticulture virtual course.

## Join The GrowTH Community

Root in Nature invites horticultural therapists, practitioners, and allied professionals to join the GrowTH Community. By embracing the power of therapeutic horticulture, connecting with peers locally and internationally, and accessing valuable resources, you can elevate your practice and contribute to the growth of this beautiful field.





# The American Horticultural Therapy Association (AHTA) is fifty years old!

By Laura Simonds-Rumpf, HTR  
AHTA Conference Co-Lead

**A**t this year's conference, *AHTA 2023: 50 Years of Cultivating Horticultural Therapy*, to be held virtually October 20th and 21st, 2023, attendees will learn about current trends in the field of Horticultural Therapy (HT) and hear ideas of where HT could take us into the future. In order to move forward effectively, a look back from where AHTA has come since its establishment in 1973 will be taken.

This conference will feature a diverse array of speakers from over 10 different countries, on many topics. AHTA is honored to feature two esteemed keynote speakers; Rebecca Haller, HTM, and Robert Zarr, MD, MPH.



Photo provided by  
Rebecca Haller, HTM

## Rebecca Haller, HTM

Rebecca is director of the Horticultural Therapy Institute in Denver, Colorado. She wrote for and co-edited two major textbooks: *Horticultural Therapy Methods: Connecting People and Plants in Health Care, Human Services, and Therapeutic Programs* and *The Profession and Practice of Horticultural Therapy* – both used extensively in the US and around the world. The title of her presentation is **Roots, Growth, and Interconnections**.



Photo provided by  
Robert Zarr, MD, MPH

## Dr. Robert Zarr, MD, MPH

Dr. Zarr is the Founder & Medical Director of Park Rx America, a non-profit organization whose mission is to decrease the burden of chronic disease, increase health and happiness, and foster environmental stewardship, by virtue of prescribing Nature during the routine delivery of healthcare by a diverse group of health care professionals. Dr. Zarr will speak on **Nature Rx: Prescribing nature to promote human and planetary health**.

**Join us as we forge the future of horticultural therapy together!**

To register for the conference, go to the AHTA website: [www.ahta.org](http://www.ahta.org). Early Bird registration rates are available through September 15, 2023. Attendees will have access to the conference recording for a limited time post-conference.

# Digital Tools to Connect With Nature

By Andrew Zeiger

**T**he horticultural therapist should consider all resources to shepherd people's connection with nature. One major tool can be technology, as it is clear that our world in 2023 is digital. We must develop healthy ways of existing in this digital world. This is especially true for young people, who know nothing else.

Society has been concerned about children's screen use for decades, especially after a landmark study in the 1980's showed that the more a child watched television, the more likely they were to have obesity.<sup>1</sup>

By the 1990's, children were spending more time watching television than any other activity except school and sleep.<sup>2</sup> Today, children may spend an average of five to nine hours per day using a screen solely for entertainment.<sup>3</sup>

Screens have a potential for harm, but benefits also exist. For example, prosocial programs such as Sesame Street can improve cognition and literacy.<sup>4</sup> Video games can function as traditional play through identity development and socialization.<sup>5,6</sup> Online support networks can be particularly valuable for those with ongoing illnesses or disabilities.<sup>7</sup>

It is unrealistic to expect people to grow up today without screens. Instead, we can aim to develop reasonable screen use habits. Using technology to connect with nature is one such application.

The horticultural therapist can play a vital role in promoting healthy screen use by providing digital tools to connect people with nature. Of course, connecting with nature using digital tools



**Join our  
new AHTA  
community  
discord server  
to connect and  
grow our digital,  
nature-loving  
community.**

is available to anyone, of any age or background, not just children!

Although certainly incomplete, the list on the next page may stimulate introspection about how you can use digital tools in your own HT practice. If you think of something that is not already available – consider creating it yourself! 🌿

## References

1. Dietz WH, Gortmaker SL. Do we fatten our children at the television set? Obesity and television viewing in children and adolescents. *Pediatrics*. 1985;75(5):807-812.
2. AC Nielsen Company (1993). 1992-1993 Report on Television. New York, NY: Nielsen Media Research.
3. Rideout, V., Peebles, A., Mann, S., & Robb, M. B. (2022). Common Sense census: Media use by tweens and teens, 2021. San Francisco, CA: Common Sense.
4. Christakis DA, Garrison MM, Herrenkohl T, et al. Modifying Media Content for Preschool Children: A Randomized Controlled Trial. *Pediatrics*. 2013;131(3):431-438. doi:10.1542/peds.2012-1493
5. Granic I, Lobel A, Engels RCME. The benefits of playing video games. *Am Psychol*. 2014;69(1):66-78. doi:10.1037/a0034857
6. Przybylski AK. Electronic gaming and psychosocial adjustment. *Pediatrics*. 2014;134(3):e716-722. doi:10.1542/peds.2013-4021
7. Naslund JA, Aschbrenner KA, Marsch LA, Bartels SJ. The future of mental health care: peer-to-peer support and social media. *Epidemiol Psychiatr Sci*. 2016;25(2):113-122. doi:10.1017/S2045796015001067

## About the author: Andrew Zeiger

Andrew (Andy) Zeiger is a medical student at Sidney Kimmel Medical College who has begun coursework at the Horticultural Therapy Institute and received multiple grants to investigate primary care provider attitudes and horticultural therapy practices with youth. Andy, whose long-term goal is to create a pediatrics clinic on a nature site that marries modern medicine with early and consistent nature exposure, has published in the AHTA Magazine, served as a member of the AHTA working group on credentialing, and will be presenting at the 2023 AHTA annual conference.



## Tool

## Examples

Finding nature – Help people explore the amazing potential that nature offers in-person, virtually, or wherever they live!	
<b>GPS-based games</b>	<a href="#">Geocaching</a> – find tokens/treasures people leave outside <a href="#">Pikmin</a> – walk around virtually grown plant-like characters that flower behind you <a href="#">Pokémon Go</a> – grow a Pokémon avatar by interacting with others outside <a href="#">Wokamon</a> – the more you walk, the more your virtual Wokamon friend grows
<b>Nature activities curated by people and websites</b>	<a href="#">AllTrails</a> – find curated trails posted online by a global community <a href="#">American Horticultural Society</a> – admissions sales at U.S. & Canadian gardens <a href="#">Americana Public Gardens Association</a> – map of free public gardens <a href="#">Discover the Forest</a> – a campaign by the U.S. Forest Service to connect families to local forests and parks <a href="#">FindYourPark</a> – tool for exploring National Parks <a href="#">Junior Master Gardener</a> – a hands-on garden curriculum for children <a href="#">Morton Register of Arboreta</a> – worldwide list of arboreta and free public gardens <a href="#">Nature and Forest Therapy</a> – register for a forest walk with a trained guide <a href="#">Nature Atlas</a> – record your hike's observations and explore others' <a href="#">Nature Sacred</a> – a network of urban nature sanctuaries <a href="#">Therapeutic Landscapes Network</a> – gardens in healthcare and related facilities
<b>Nature sounds</b>	<a href="#">Forest Bathing Life</a> – mobile app that teaches forest bathing <a href="#">Nature Relaxation On Demand</a> – high definition nature television <a href="#">Roots: Connect with Nature</a> – immersive nature soundscapes <a href="#">TreeQuility</a> – guided nature meditation
<b>Nature video games</b>	<a href="#">A Short Hike</a> – exploration game about hiking <a href="#">Beyond Blue</a> – educational underwater adventure game exploring ocean life <a href="#">Firewatch</a> – mystery game fighting wildfires in the Wyoming wilderness <a href="#">Minecraft</a> – world-building game <a href="#">Stardew Valley</a> – idyllic farming game <a href="#">Terrarium Garden Idle</a> – mobile plant-growing game
<b>Social Media</b>	<a href="#">Instagram</a> – wide variety of people with diverse nature expertise <a href="#">YouTube</a> – limitless channels of varied nature videos (e.g., <a href="#">Andrew Millison</a> , <a href="#">Asu</a> , <a href="#">Charles Dowding</a> , <a href="#">Eisei-en Bonsai</a> , <a href="#">Epic Gardening</a> , <a href="#">Floret Flower Farm</a> , <a href="#">Flow Hive</a> , <a href="#">Herons Bonsai</a> , <a href="#">Huw Richards</a> , <a href="#">Kirsten Dirksen</a> , <a href="#">MIGardener</a> , <a href="#">National Geographic</a> , <a href="#">RareSeeds</a> , <a href="#">Self Sufficient Me</a> , <a href="#">Soil Health Institute</a> , etc.)
<b>Video wildlife feeds</b>	<a href="#">Explore.org Live Wildlife Feeds</a> – collection of live camera feeds in nature around the world
<b>Virtual online tours</b>	<a href="#">Gardens Illustrated</a> – curated list of virtual garden tours <a href="#">National Open Garden Scheme</a> – films by private gardeners about their gardens <a href="#">The Nature Conservancy Virtual Field Trips</a> – world-spanning virtual field trips with video, a teaching guide, and student activities
<b>Virtual Reality</b>	<a href="#">Nature Trek VR on Oculus Quest</a> – fully immersive virtual nature experiences
Deepening connections in nature – From nature-identification tools to social communities, there are many ways to enhance our experiences while in nature!	
<b>Making your own nature observations for research and education</b>	<a href="#">GLOBE Observer</a> – submit images of the natural environment for use in NASA-sponsored research <a href="#">iNaturalist</a> – map and share observations of biodiversity <a href="#">Nature's Notebook</a> – become a registered "observer" by viewing nature in your area weekly and entering information online <a href="#">TreeSnap</a> – document trees to help scientists study tree health and diversity
<b>Nature and wildlife identification</b>	<a href="#">BirdBuddy</a> – camera bird feeder that notifies you of bird visitors <a href="#">BirdCast</a> – bird migration forecasts <a href="#">British Tree Identification</a> – guide for identifying common trees in the U.K. <a href="#">Identitree Starter Kit</a> – guide for common trees in the American Midwest <a href="#">Merlin Bird</a> – bird identification using pictures and sounds <a href="#">PictureThis</a> – plant identification using pictures
<b>Online field guides</b>	<a href="#">National Forest Explorer</a> – map of U.S. national forests <a href="#">National Wildlife Federation (NWF) Nature Guides</a> – a family of NWF apps with plant and animal specific field guides
<b>Online nature hobby communities</b>	<a href="#">Discord</a> – wide variety of online chat-boards/communities based on a hobby <a href="#">E-Bird</a> – watch birds, record observations, and share with a global community <a href="#">MakeSoil</a> – online "match-making" between composters and food scrap donors
<b>Garden/outdoor care</b>	<a href="#">Garden Journal at Territorial Seed</a> – draw out your garden plans <a href="#">Garden Plan Pro</a> – map-based garden planner with plant information <a href="#">Gardenize; Into Garden</a> – organize a history of notes about your garden <a href="#">Gardroid</a> – plant-specific information, growth requirements, and harvesting <a href="#">MySoil</a> – send your soil and receive a digital soil report <a href="#">Planta</a> – individual care schedule and reminders for plants <a href="#">Plantnote: Plant Diary</a> – watering reminder for plants <a href="#">Smart Plant &amp; Tree Care</a> – all-in-one for plant care reminders and information <a href="#">Sun Seeker</a> – compass that tracks the sun's path <a href="#">Urban Meadow</a> – help with creating an urban meadow

# Horticultural Therapy In Every Hospital

By Andrew Zeiger

**O**n my medical school rotations at Nemours Children's Hospital in Wilmington, DE, I am within steps of nature. Near the front entrance sits the 200-acre formal garden-inspired Nemours Estate. Healing and memory gardens pepper the hospital grounds. Planted vegetables line walkways and pictures of vegetables dot nutrition posters.

Surprisingly, patients, families, and hospital workers have limited—if any—engagement with these natural spaces. Why? No entity there is trained to safely and effectively marshal these resources. They have no registered horticultural therapist (HTR) on staff.

With 30-35 million hospitalizations in the U.S. every year,<sup>1</sup> an aging population with high chronic disease burden,<sup>2</sup> burnout among hospital workers at record levels,<sup>3</sup> and ever-rising hospital costs,<sup>4</sup> it is clear that hospital care is exceedingly stressful for patients, families, workers, and the health system.

Two recent indices of horticulture-related activities in healthcare settings<sup>5,6</sup> suggest that there are 148 horticulture sites or activities across the 6100+ U.S. hospitals.<sup>1</sup> However, with just 19

HTRs working in hospitals in 2022 among the 213 total credentialed, the impact horticultural therapy (HT) has on U.S. hospitals today is minimal.<sup>7</sup>

HT has the potential to help usher in a new age of hospital medicine. It is time for a focused effort from the AHTA community to better incorporate nature into hospitals.

Ideally, health systems function to provide high value care<sup>8</sup> (defined as quality of care divided by cost) by intervening in pathogenesis (disease and loss of function) and promoting salutogenesis (healing and health creation).<sup>9</sup> Guiding principles to achieve this encompass the “quadruple aim”: optimize individual patient care, population health, and healthcare team wellbeing while reducing costs.<sup>10</sup>

## Patient care

Every hospitalization is an opportunity to improve a patient's connection with nature. HTRs can maintain an interactive green ecosystem within the built environment of the hospital. The HTR can help patients and families learn about and contribute to ecosystem growth and maintenance, thus creating a hospital community

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## Strategic objectives toward a horticultural therapist in every hospital

### Research and collaboration

1. Systematically index the current nature ecosystem of all 6100+ U.S. hospitals. Publish the process and results openly online.
2. Understand successful examples of horticulture activities/HT in hospitals today.
3. Generate an economic pitch with accountants/economists on cost-saving benefits and plans for implementation.
4. Formulate individualized plans for every hospital, with particular focus on inclusion of that hospital's local neighborhood community.
5. Collaborate with research organizations to standardize HT interventions based on type, length, and frequency.
6. Establish a network of HT across all hospital sites where data on safe practices, new programming ideas, and recruitment can be shared and incorporated into hospitals.
7. Create an online database of HT interventions with research outcomes that can be tracked longitudinally by hospital HTRs.
8. Consult legal advice for HTRs practicing in hospitals.
9. Convene longitudinal goal-setting and execution meetings between the AHTA-led HT community and hospital stakeholders on HT interventions in hospitals.
10. Present HT research at national and regional medical conferences.
11. Publish HT research in medical journals.



living symbiotically with nature. By negating some of the stress of hospitals, patients and families may have increased satisfaction, wellbeing, and faster healing.

### Population health

Chronic disease is a major contributor to inpatient hospitalization, most commonly from septicemia, cardiovascular disease, osteoarthritis, pneumonia, and diabetes mellitus.<sup>11</sup> HTRs could partner closely with nutrition departments, as nutrition interventions may help manage chronic disease through improved diet quality and food security.<sup>12</sup> HTRs can augment patients' engagement with physical, occupational, and mental health services. Teaching nature concepts may help patients emotionally process their hospital experience. Additionally, the HTR could connect patients with resources to maintain their connection with nature following discharge.

### Healthcare team wellbeing

More than half of hospital workers report symptoms of burnout and other mental health challenges.<sup>3</sup> It has been shown that hospital workers taking breaks in gardens have greater improvements in exhaustion and depersonalization than when taking breaks

anywhere else.<sup>13</sup> HTRs maintaining hospital nature ecosystems could help workers greatly by providing areas of respite. HTRs could actively work with hospital workers and trainees using portable garden carts or within natural spaces. Additionally, patients engaging nature alongside hospital workers could foster the therapeutic relationship.

### Reducing per capita costs

With health care expenditures increasing nearly fourfold as a percentage of our gross domestic product since the 1960s,<sup>4</sup> efforts to decrease costs are necessary for national stability. One solution, implementing "value-based health care", involves interdisciplinary teams of caregivers who together design and deliver comprehensive solutions.<sup>14</sup> HTRs, as members of that interdisciplinary team, could advocate for horticulture-related interventions. Research shows that nature exposure can decrease length of hospitalization after surgery, yielding reduced costs.<sup>15</sup> A recently published budget impact calculator can be used by hospitals to estimate the potential economic value of investing in hospital green space to counter burnout.<sup>16</sup>

Hospital environments have changed dramatically over the past century with attention now on health promotion and value based care. The time is ripe for a focused effort from the HT community to bring nature into every hospital. 🌿

### About the author: Andrew Zeiger

Andrew (Andy) Zeiger is a medical student at Sidney Kimmel Medical College who has begun coursework at the Horticultural Therapy Institute and received multiple grants to investigate primary care provider attitudes and horticultural therapy practices with youth. Andy, whose long-term goal is to create a pediatrics clinic on a nature site that marries modern medicine with early and consistent nature exposure, has published in the AHTA Magazine, served as a member of the AHTA working group on credentialing, and will be presenting at the 2023 AHTA annual conference.

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## AHTA community

1. Begin an HT community listening campaign to ensure as many voices are included.
2. Establish minimum standard wage and work conditions for hospital-based horticultural therapists.
3. Continue to work toward higher credentialing of HTRs from registration to board certification, as this will strengthen reimbursement options. Concurrently advocate at federal level for reimbursement of HT from Medicare/Medicaid.
4. Determine how HT programming/department would be paid within hospitals and/or health systems.
5. Consider additional HTR role of working with nutrition departments to champion patient's nature and nutrition inpatient-to-outpatient continuity of care.
6. Recruit from populations with people who might find meaning being employed in HT, such as young people in college, healthcare workers, those seeking second or third careers, and retired individuals.
7. Advocate at medical schools and other allied health profession training institutions about the health impact of nature & related interventions.
8. Initiate a capital-raising campaign with particular focus on philanthropists who support hospitals and/or nature spaces.
9. Seek out public, private, or non-profit grants available.

# Planting Away Stress

## The Relaxation Benefits of Kokedama for University Students



*The students are attentively listening to the horticultural therapist as she introduces the process for creating kokedama.*

All photos by Nicolson Yat-Fan SIU, who is a Registered Horticultural Therapist at the Hong Kong Association of Therapeutic Horticulture and a Lecturer at the Division of Social Science, The Hong Kong University of Science and Technology.



**Kokedama:** a Japanese gardening technique that involves wrapping the roots of a plant in a ball of soil and moss, which is then covered with twine or string. It is a low-maintenance and space-saving way of growing plants that can be easily incorporated into any living space.

By Nicolson Yat-Fan SIU, Connie Yuen-Yee FUNG, June Kit-Ming LAU

**H**orticultural therapy has been gaining popularity as a form of therapy that uses plants and gardening to improve mental health and wellbeing. Being a horticultural therapist working in the Hong Kong University of Science and Technology, I recently conducted a kokedama workshop for undergraduate students in Hong Kong to reduce academic stress and improve their mental health.

Kokedama is a Japanese gardening technique that involves wrapping the roots of a plant in a ball of soil and moss, which is then covered with twine or string. It is a low-maintenance and space-saving way of growing plants that can be easily incorporated into any living space. The workshop was conducted in a classroom, with a range of plants and materials that I prepared for the students to choose from. The goal was to provide a calming and creative outlet for the students to unwind and relax amidst the pressures of academic life.

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*The students are carefully removing plants from the mother plant and separating them into different pots, learning the value of sharing with each other.*



*The students are using hemp rope to tie up the kokedama.*

As the workshop progressed, the students began to experience the calming effects of working with their hands. The process of creating the kokedama required concentration and attention to detail, which helped to distract the students from their worries and anxieties about upcoming assignment deadlines.

During the workshop, the students opened up about their struggles with academic stress and the pressures of university life. They shared how the workshop had provided them with a much-needed break from their studies, and how working with plants had helped them to feel more connected to nature and to themselves. One student said she had been struggling with insomnia and anxiety, but after attending the workshop, she found herself somewhat relieved. Another student shared that she had been feeling overwhelmed and burnt out, but the workshop had helped her to feel more grounded and centered.

The benefits of horticultural therapy have been well-documented in scientific research. Working with plants has a calming effect



*Behold, the final product – the kokedama!*

on the mind and body, and can help to reduce the levels of stress hormones in the body. In addition to the therapeutic benefits of interacting with green plants, the kokedama workshop also provided an opportunity for the students to connect with each other and to form a sense of community. The shared experience of creating something beautiful and meaningful helped to foster a sense of belonging and connection among the participants. Kokedama also offers students a chance to enjoy a mini garden at home, to relax and connect with nature. Caring for plants provides a fulfilling hobby and has long-lasting positive effects on mental health.

In conclusion, the kokedama workshop was a successful and fulfilling experience that provided university students with an opportunity to reduce academic stress and improve their mental health through horticultural therapy. The workshop demonstrated the therapeutic benefits of gardening and the power of community in promoting mental wellbeing. 🌱

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plants together in skilled and innovative ways, can contribute much to expanding awareness and stamping out “plant blindness.” As experts point out, when a child is repeatedly presented with opportunities to grow and care for plants alongside a knowledgeable adult mentor, those encounters become a reliable predictor of a person’s interest in and scientific understanding of plants later in life.

Horticultural therapists are already highly mobilized in delivering quality horticultural therapy (HT) programming that grows the people/plant connection. While many HT professionals already work with youth, can more programs be developed and implemented that reach additional groups of younger people? Can existing HT youth programs be enhanced with the innovative resources offered by Seed Your Future? Can HT professionals who focus on other population groups add a dimension to their work by reaching out to the youth population?

Every child deserves to experience and understand the amazing power of plants. Join the movement. 🌱

## Sources

Balding, M., & Williams, K. J. H. (2016). Plant blindness and the implications for plant conservation. *Conservation Biology*, 30(6), 1192–1199. <https://doi.org/10.1111/cobi.12738>

Bureau, U. C. (2023, March 21). Nation’s urban and rural populations shift following 2020 census. Census.gov. <https://www.census.gov/newsroom/press-releases/2022/urban-rural-populations.html>

Daniel, J., Russo, A., & Burford, B. (2023). How might we utilise the concept of Botanic Gardens’ in urban contexts to challenge plant blindness? *Biodiversity and Conservation*, 32(7), 2345–2364. <https://doi.org/10.1007/s10531-023-02607-w>

Donovan, G. H., Prestemon, J. P., Gatzolis, D., Michael, Y. L., Kaminski, A. R., & Dadvand, P. (2022). The association between Tree Planting and mortality: A natural experiment and cost-benefit analysis. *Environment International*, 170, 107609. <https://doi.org/10.1016/j.envint.2022.107609>

Guttmann, A. (2023, January 9). Children and teens’ daily screen time in the U.S. 2021. Statista. <https://www.statista.com/statistics/1312622/average-daily-entertainment-screen-time-children-teens-us-gender/>

Jose, S. B., Wu, C., & Kamoun, S. (2019). Overcoming plant blindness in science, education, and Society. *PLANTS, PEOPLE, PLANET*, 1(3), 169–172. <https://doi.org/10.1002/ppp3.51>

Seed your future. Seed Your Future. (n.d.). <https://www.seedyourfuture.org/>

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*Kelly has a multi-faceted background in greenhouse, garden center, landscape design, and floriculture settings, as well as evidence-based outcomes and legal advocacy. She is currently completing her internship for HTR credentialing with the Chicago Botanic Garden.*

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## References

1. Fast Facts on U.S. Hospitals, 2023 | AHA. Accessed July 16, 2023. <https://www.aha.org/statistics/fast-facts-us-hospitals>

2. Promoting Health for Older Adults | CDC. Published September 8, 2022. Accessed July 16, 2023. <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/promoting-health-for-older-adults.htm>

3. Murthy VH. Confronting Health Worker Burnout and Well-Being. *New England Journal of Medicine*. 2022;387(7):577-579. doi:10.1056/NEJMp2207252

4. Catlin AC, Cowan CA. History of Health Spending in the United States, 1960-2013.

5. “Gardens in Healthcare and Related Facilities.” Therapeutic Landscapes Network, 6 Mar. 2020, <https://healinglandscapes.org/gardens-overview/gardens-in-healthcare-and-related-facilities/>.

6. Fleming, Lesley, et al. “Horticulture for Health Activity in U.S. Hospitals: Horticultural Therapy, Nutrition-Led Programming, Gardens at Hospitals, and Affiliated Community Gardens.” *Journal of Therapeutic Horticulture*, XXXII, no. 1, 2022, pp. 13–32.

7. American Horticultural Therapy Association. (2022b). Member directory. [https://ahta.memberclicks.net/index.php?option=com\\_mcdirectoryse-arch&view=search&id=10605#/](https://ahta.memberclicks.net/index.php?option=com_mcdirectoryse-arch&view=search&id=10605#/).

8. Wachter RM, Goldman L. The Emerging Role of “Hospitalists” in the American Health Care System. *New England Journal of Medicine*.

1996;335(7):514-517. doi:10.1056/NEJM199608153350713

9. Jonas WB, Chez RA, Smith K, Sakallaris B. Salutogenesis: The Defining Concept for a New Healthcare System. *Glob Adv Health Med*. 2014;3(3):82-91. doi:10.7453/gahmj.2014.005

10. Arnetz BB, Goetz CM, Arnetz JE, et al. Enhancing healthcare efficiency to achieve the Quadruple Aim: an exploratory study. *BMC Res Notes*. 2020;13:362. doi:10.1186/s13104-020-05199-8

11. Most Frequent Principal Diagnoses for Inpatient Stays in U.S. Hospitals, 2018 #277. Accessed July 16, 2023. <https://hcup-us.ahrq.gov/reports/statbriefs/sb277-Top-Reasons-Hospital-Stays-2018.jsp>

12. Downer, S., Clippinger, E., Kummer, C., Hager, K. & Acosta, V. (2022). Food Is Medicine Research Action Plan. Center for Health Law and Policy Innovation. [https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-Is-Medicine-Action-Plan-Final\\_012722.Pdf](https://www.aspeninstitute.org/wp-content/uploads/2022/01/Food-Is-Medicine-Action-Plan-Final_012722.Pdf).

13. Cordoza M, Ulrich RS, Manulik BJ, et al. Impact of Nurses Taking Daily Work Breaks in a Hospital Garden on Burnout. *Am J Crit Care*. 2018;27(6):508-512. doi:10.4037/ajcc2018131

14. Teisberg E, Wallace S, O'Hara S. Defining and Implementing Value-Based Health Care: A Strategic Framework. *Acad Med*. 2020;95(5):682-685. doi:10.1097/ACM.00000000000003122

15. Ulrich RS. View through a window may influence recovery from surgery. *Science*. 1984;224(4647):420-421. doi:10.1126/science.6143402

16. Murphy S and Walseng A. Take Burnout from Red to Green. *Nature Sacred*. Published June 6, 2022. Accessed July 16, 2023. <https://naturesacred.org/new-report-take-burnout-from-red-to-green/>



# EDUCATION & TRAINING

## Therapeutic Horticulture at the North Carolina Botanical Garden

By Emilee Weaver

The North Carolina Botanical Garden's (NCBG) guiding mission is to inspire understanding, appreciation, and conservation of plants and to advance a sustainable relationship between people and nature. Toward this mission, NCBG has provided direct horticultural therapy services and HT educational programs for 44 years before broadening their focus and transitioning to a therapeutic horticulture program in 2022.

Based on a growing national and international thirst for therapeutic horticulture (TH) education, in 2019 NCBG partnered with the North Carolina State University Extension Gardener Program to create a 100% online, asynchronous [Certificate in Therapeutic Horticulture](#) program. The program consists of four 6-week long courses entitled, Introduction to TH, TH Program Development, Accommodating Diverse Populations in TH, and TH Program Management. The University of North Carolina at Chapel Hill offers continuing education credits for all four courses.

In just two years, 400 students have entered our program from 29 states and 10 countries. Our students represent a wide range of allied professions such as, occupational/physical/speech/recreational/art therapists, social workers, psychologists, nurses, educators, landscape architects, vocational rehabilitation counselors, and public garden staff. They have a



HCTH student field trip to The Farm at Penny Lane.  
All photos by Emilee Weaver

wealth of education and experience in their respective fields and recognize the importance of integrating therapeutic horticulture practices into their own treatment modalities. The affordable, flexible nature of the Online Certificate in Therapeutic Horticulture enables these working professionals to pursue continued education regardless of socioeconomic status, geographic location, or work/family commitments.

Building upon the high-quality content of the online program, NCBG created [a Hybrid Certificate in Therapeutic Horticulture](#) that merges online content with reinforcing in-person, hands-on workshops. This program is held annually in Chapel Hill, NC, at NCBG between the months of August and May, uniquely

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HCTH students practicing hands-on direct service skills.



HCTH guest lecturer Amy Brightwood, HTR.

# BOOK REVIEW

## Outdoor Kids in an Inside World: Getting Your Family Out of the House and Radically Engaged with Nature

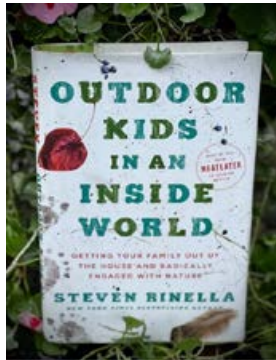
Author: Steven Rinella  
2022

Review by Karin A. Bailey

**S**teven Rinella, a New York Times bestselling author, conservationist, and host of the Netflix television show “Meateater,” has written a passionate and compelling book documenting his love and deep respect for the outdoors while emphasizing the importance of getting children outside and engaged with nature.

Throughout the book, the author provides personal accounts of his unique and radical upbringing where being involved in outdoor activities was central to his family's existence and livelihood. The author describes tactics for getting his own family outdoors, and he provides nature education and suggestions for those wanting to help break their children away from screen time, isolation, and boredom that have become commonplace in our modern-day society. Being steadfast in his quest to instill in his own children respect for nature and conservation efforts and a sense of stewardship for the environment, Rinella challenges his readers to make the effort to encourage their own children to do the same.

Each chapter in the book addresses various outdoor activities



such as camping, gardening, fishing, foraging, and hunting, and ideas are provided that can help draw children and their families into a meaningful connection with nature. Within these chapters, personal family experiences in the outdoors are shared which invoke wonder and delight yet also teach hard life lessons surrounding the realities of life and death. Rinella admits that not all of his ideas and methods, some of which appear to be radical and sometimes extreme, will be embraced by all who read this book. However, he encourages his readers to set their own comfort level and be

creative, patient, encouraging, and supportive of their children as they venture into the outdoors. Through Rinella's vivid storytelling, his vast experiences, his expertise in outdoorsmanship and conservation, and his resolve to help children engage in nature, adults can find ways to help children develop their own unique and magical experiences in the great outdoors. Whether it be harvesting dandelions from a busy city sidewalk to enjoy in a salad to braving harsh elements and threats of grizzly bear attacks on a caribou hunt in the remote wild, Rinella reminds his readers that no matter where they live or their circumstances, there are always opportunities for children to connect with nature, develop new skills and self-confidence, become good stewards of the environment, decrease dependence on technology and social media, and discover themselves in a new light. 🌿

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offering the flexibility of an online program with the benefits of hands-on skill building workshops delivered by seasoned TH/HT professionals, plus field trips to local TH/HT program sites. 100% of the graduates of the hybrid program have stated that they “completely agree” that they, “feel more confident in their knowledge and ability to implement a TH program as a result of taking this program.”

The flexibility of an online TH certificate program allows for participation globally. In 2022, a veteran rehabilitation hospital in Kiev, Ukraine approached NCBG about translating the Online Certificate into Ukrainian so their service providers at the hospital could become trained and provide TH services with their active duty and veteran patients. To date, NCBG has offered a series

of educational TH webinars for Ukrainian service providers and, with our partners, are pursuing grant funding to support the translation of the online program, as well as ongoing TH consultation services.

The North Carolina Botanical Garden is excited to envision and work towards a future where aspiring TH/HT professionals have a greater level of access to education and professional development opportunities. If you are interested in learning more about our programs, please [visit our website](#). 🌿

### About the author: Emilee Weaver

*Emilee Weaver is a therapeutic horticulture educator, facilitator, and consultant in her role as the TH Program Manager for the North Carolina Botanical Garden. She earned her horticultural therapy certificate from the Horticultural Therapy Institute and holds a bachelor's degree in social work.*



# ACTIVITY

## Why Build a Bee House?

By Donna Hunt and Debra Edwards, HTR

**D**id you know that about 90% of the 4,000 native bee species in the United States are “solitary nesters”? Most have nests in the ground, and some take over the nests of others. But, about 15% nest in cavities using hollow plant stems or creating holes in wood. These solitary bees do not have queens or workers, nor do they store any honey in their tiny nests. These bees are also non-aggressive and do not swarm

A pollinator house is a home for solitary-nesting bees. But before you start making your bee hotel, you need to know why you want one. The short answer is: the solitary bees make excellent pollinators for your garden and they are almost as cute as the bee hotel.

These often overlooked garden allies require and seek out a cozy home in which to nest. Since bee populations are declining due to habitat destruction and other factors, creating a pollinator house in your garden can help them have a safe home to raise their young.



Example of pollinator house using holes drilled in wood, dried bamboo pieces and pine cones.

Photo Credit: Debra Edwards

Any time of year is fine for buying or building and installing a bee house.

### If you buy or build a mason bee house:

- It should be at least eight inches deep with removable or cleanable tunnels.
- The bee house should be anchored on a tree, fence, deck or house.
- Place in a spot where it is exposed to morning sun and afternoon shade.
- Hang it away from vegetation.

If you would like to create your own pollinator house – this can be a really satisfying project which may have a great impact for locally residing pollinators. Making a bee hotel is easy, though some of the prep should be done only by adults.



Bee hotel made from can painted to look like a bee.

Photo Credit: Donna Hunt

### Materials:

- 1 tin can for each hotel
- 12-inch piece of string
- Yellow paint. Spray paint is the easiest.
- Black paint or electrical tape (preferred)
- Items to make face (markers, googly eyes, etc.)
- Premade bee tubes or paper; pencil and tape. Number of tubes depend on size of the can. A soup can holds about 30 tubes.

### Instructions:

1. Collect tin cans and wash thoroughly. Paint the can yellow and don't forget the bottom. Spray paint is the easiest and quickest way to go.
2. To hang the can, make two small holes on the side of the can about 3 inches apart. Knot one end of string and pull it through the hole from inside to outside. Take the unknotted end and push through the second hole pull from outside to inside. Pull string through can and knot that end. On the outside of the can, pull the string up to form a handle to hang the hotel.
3. Either paint black stripes around the can or use black electrical tape.
4. On the bottom of can paint a happy face or use googly eyes

► [continues on next page](#)

# ACTIVITY

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and pipe cleaner smile. This is where you can be creative.

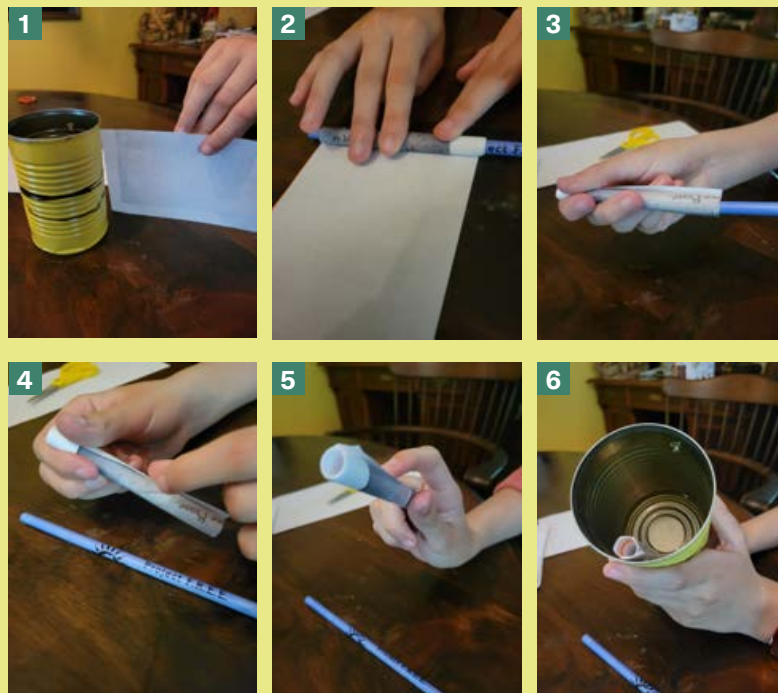
5. Fill can with bee tubes which you can order online or you can make your own using paper and slightly shorter than the can. Wrap it tightly around a pencil several times. Tape it closed and slide off pencil. It takes about 30 tubes for small can. (Figures 1-6 to the right.)
6. Hang in sunny area and wait for a bee to check-in. It may take one or two weeks for a bee to arrive. 🐝

## Resources

Weisenhorn, J. (n.d.). *Nests for pollinators*. UMN Extension. <https://extension.umn.edu/lawns-and-landscapes/pollinator-nests>

Flow Hive US. (n.d.). *What is the pollinator house?*. Flow Hive US. <https://www.honeyflow.com/blogs/beekeeping-basics/what-is-the-pollinator-house>

## Rolling paper into bee tubes



All above photos by Donna Hunt



Debra Edwards in front of the very large "Air Bee & Bee" at the JC Raulston Arboretum in Raleigh, NC.

Photo Credit: Debra Edwards



Very large "Air Bee & Bee" at the JC Raulston Arboretum in Raleigh, NC.

Photo Credit: Debra Edwards

# AHTA MAGAZINE

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