Oliver Sacks was a neurologist and author of many books. This is an excerpt from the forthcoming collection of his essays, Everything in Its Place. He died in 2015. It appeared in the New York Times in February of 2019. He had great insight into the power of plants to heal and calm our psyches.

As a writer, I find gardens essential to the creative process; as a physician, I take my patients to gardens whenever possible. All of us have had the experience of wandering through a lush garden or a timeless desert, walking by a river or an ocean, or climbing a mountain and finding ourselves simultaneously calmed and reinvigorated, engaged in mind, refreshed in body and spirit. The importance of these physiological states on individual and community health is fundamental and wide-ranging. In 40 years of medical practice, I have found only two types of non-pharmaceutical “therapy” to be vitally important for patients with chronic neurological diseases: music and gardens.

The wonder of gardens was introduced to me very early, before the war, when my mother or Auntie Len would take me to the great botanical garden at Kew. We had common ferns in our garden, but not the gold and silver ferns, the water ferns, the filmy ferns, the tree ferns I first saw at Kew. It was at Kew that I saw the gigantic leaf of the great Amazon water lily, Victoria regia, and like many children of my era, I was sat upon one of these giant lily pads as a baby.
As a student at Oxford, I discovered with delight a very different garden — the Oxford Botanic Garden, one of the first walled gardens established in Europe. It pleased me to think that Boyle, Hooke, Willis and other Oxford figures might have walked and meditated there in the 17th century.

I try to visit botanical gardens wherever I travel, seeing them as reflections of their times and cultures, no less than living museums or libraries of plants. I felt this strongly in the beautiful 17th-century Hortus Botanicus in Amsterdam, coeval with its neighbor, the great Portuguese Synagogue, and liked to imagine how Spinoza might have enjoyed the former after he had been excommunicated by the latter — was his vision of “Deus sive Natura” in part inspired by the Hortus?

The botanical garden in Padua is even older, going right back to the 1540s, and medieval in its design. Here, Europeans got their first look at plants from the Americas and the Orient, plant forms stranger than anything they had ever seen or dreamed of. It was here, too, that Goethe, looking at a palm, conceived his theory of the metamorphoses of plants.
Padua’s botanical garden, in Italy, was founded in 1545 by Francesco Bonafede, professor of botany in the medical school of Padua’s university. Credit David Lees/Corbis, via VCG, via Getty Images

When I travel with fellow swimmers and divers to the Cayman Islands, to Curacao, to Cuba, wherever—I seek out botanical gardens, counterpoints to the exquisite underwater gardens I see when I snorkel or scuba above them.

I have lived in New York City for 50 years, and living here is sometimes made bearable for me only by its gardens. This has been true for my patients, too. When I worked at Beth Abraham, a hospital just across the road from the New York Botanical Garden, I found that there was nothing long-shut-in patients loved more than a visit to the garden — they spoke of the hospital and the garden as two different worlds.
I cannot say exactly how nature exerts its calming and organizing effects on our brains, but I have seen in my patients the restorative and healing powers of nature and gardens, even for those who are deeply disabled neurologically. In many cases, gardens and nature are more powerful than any medication.

My friend Lowell has moderately severe Tourette syndrome. In his usual busy, city environment, he has hundreds of tics and verbal ejaculations each day — grunting, jumping, touching things compulsively. I was therefore amazed one day when we were hiking in a desert to realize that his tics had completely disappeared. The remoteness and uncrowdedness of the scene, combined with some ineffable calming effect of nature, served to defuse his ticcing, to “normalize” his neurological state, at least for a time.

An elderly lady with Parkinson’s disease, whom I met in Guam, often found herself frozen, unable to initiate movement — a common problem for those with parkinsonism. But once we led her out into the garden, where plants and a rock garden provided a varied landscape, she was galvanized by this, and could rapidly, unaided, climb up the rocks and down again.
I have a number of patients with very advanced dementia or Alzheimer's disease, who may have very little sense of orientation to their surroundings. They have forgotten, or cannot access, how to tie their shoes or handle cooking implements. But put them in front of a flower bed with some seedlings, and they will know exactly what to do — I have never seen such a patient plant something upside down.

My patients often live in nursing homes or chronic-care institutions, so the physical environment of these settings is crucial in promoting their well-being. Some of these institutions have actively used the design and management of their open spaces to promote better health for their patients. For example, Beth Abraham hospital, in the Bronx, is where I saw the severely parkinsonian postencephalitic patients I wrote about in “Awakenings.” In the 1960s, it was a pavilion surrounded by large gardens. As it expanded to a 500-bed institution, it swallowed most of the gardens, but it did retain a central patio full of potted plants that remains very crucial for the patients. There are also raised beds so that blind patients can touch and smell, and wheelchair patients can have direct contact with the plants.

Clearly, nature calls to something very deep in us. Biophilia, the love of nature and living things, is an essential part of the human condition. Hortophilia, the desire to interact with, manage and tend nature, is also deeply instilled in us. The role that nature plays in health and healing becomes even more critical for people working long days in windowless offices, for those living in city neighborhoods without access to green spaces, for children in city schools or for those in institutional settings such as nursing homes. The effects of nature's qualities on health are not only spiritual and emotional but physical and neurological. I have no doubt that they reflect deep changes in the brain's physiology, and perhaps even its structure.

Take advantage of our warmer and dryer weather to visit these great local places. Have even more fun by taking a friend with you!


**Holden Arboretum**, 9500 Sperry Rd., Kirtland, OH - Established in 1931 on a 100-acre parcel donated by Roberta Holden Bole, The Holden Arboretum has grown to 3,500 acres, making it one of the country's largest arboreta. The Holden Arboretum and Cleveland Botanical Garden together make up Holden Forests & Gardens.

**Rockefeller Park Greenhouse** - The Cleveland City Greenhouse has displays in the greenhouse and outside. The Willott Iris Garden is here. Dorothy Willott is an Emeritus with Honors MGV. It is open to the public, with free admission and parking.

**Stan Hywet Hall & Gardens** - The Seiberling estate near Akron, Ohio, designed between 1911 and 1915 by renowned American landscape architect Warren Manning. Stan Hywet's grounds represent one of the finest remaining examples of Mr. Manning's private work in the United States. Cooperation between Manning and Tudor manor architect Charles Schneider resulted in a remarkable blending of nature and architecture. See the gardens and conservatory.
Recently, I took advantage of a discount offered in a magazine for the course, The Science of Gardening, taught by Dr. Linda Chalker-Scott. This 24-lecture course introduced me to the work of Dr. Chalker-Scott. As I watched and listened to the series, I became an instant fan. Dr. Chalker-Scott is an Extension Specialist in Urban Horticulture and an Associate Professor of Horticulture at Washington State University. The emphasis in all her work is disseminating horticulture information backed by scientific research. Through her books and on-line blog, http://gardenprofessors.com, she acts as a myth buster for numerous gardening questions.

Master Gardeners are always seeking information on a multitude of subjects. It is hard for us to “know everything.” To help us in our quest, I would highly recommend the two books written by Dr. Chalker-Scott, The Informed Gardener, University of Washington Press, 2008, and the Informed Gardener Blooms Again, University of Washington Press, 2010. Both of these books cover many horticultural topics and are very easy to read. Each chapter takes a specific topic, explains the myth surrounding that topic, and then goes on to explain what the reality of the myth really is. She concludes every topic with a summary that she calls “The Bottom Line” and then cites her list of references. Each chapter is set up this way and is succinct and to the point.

There are many subjects covered in the two books, and not all are of interest to every Master Gardener. The first myth covered in the first book is, “If it’s published, it must be true.” This is a problem that Master Gardeners confront all the time. Dr. Chalker-Scott uses as an example the book, The Sound of Music and Plants, which she says is cited by dozens of Web sites as solid scientific evidence that classical music benefits plant growth, while acid rock has a negative effect. In the Reality section of this chapter, Dr. Chalker-Scott analyzes this publication for its scientific merit and details why she thinks it comes up short. She uses this example to show us that we must be careful about what we accept as information backed by scientific research.

Some of the myths that are explained in The Informed Gardener that might be of interest to Master Gardeners are:
1—“Organic products are safer than chemicals.”
2— “You shouldn’t disturb the root ball when transplanting trees and shrubs.”
3— “How hard can it be to stick a plant in the ground?”
4— “Garden plants do not become invasive.”
5— “Balled and burlapped root balls must be left intact during transplanting.”
6— “Newly planted trees should be staked firmly and securely.”

This is just a sampling of the questions answered in The Informed Gardener. Dr. Chalker-Scott continues in The Informed Gardener Blooms Again with more topics such as;
1— “The Myth of Cloroxed Clippers”
2— “Adding Epsom salts to gardens is a safe, natural way to increase plant growth.”
3— “The Myth of Gypsum Magic”
4— “The Myth of Allelopathic Wood Chips”

Also, in The Informed Gardener Blooms Again, Dr. Chalker-Scott inserts a few pages to cover important topics like:
--How to Avoid Phosphate Overloads in Your Landscape
--Why Weeds Will Always Be in Your Garden
--What’s Wrong with My Plants: An Initial Guide to Diagnosis
The topics covered in both books sometimes lend themselves to vegetable gardening, but most of the advice is meant for landscape gardening. At times, Dr. Chalker-Scott can get a bit technical in her explanations, but, in general, these books are very easy to read and to absorb. Both books are available in Cuyahoga County libraries. Many Cuyahoga County Master Gardeners are already familiar with Dr. Chalker-Scott’s work. Through her books and her blog, it is possible to extend our knowledge in the pursuit of scientifically based information.

Dear Reader:

I was recently in England and, for the first time, I saw this amazing plant in bloom. It is a Ceanothus and can be a tree or large shrub. In the U.S., it is native to California and is often called a California Lilac. Even though we can’t grow it, I wanted to share this lovely plant with you.

Sandy Welches, Editor

California Lilacs, or Ceanothus, are some of our most fragrant and colorful shrubs in California. They are also evergreen and very drought tolerant.
Hort Tips
Contribution by Sandy Welches, MGV 2005

Broken-stem First Aid for Veggies
If the central stem of a young tomato, pepper or eggplant folds over but doesn’t break off, the plant is not doomed. Carefully straighten the stem, and brace it with a toothpick alongside the stem. Wrap the stem and toothpick with tape or soft string to hold it in place. When the stem regains its strength, carefully cut away the brace.


Leggy Succulents
Q.: I bought this amazing succulent on clearance last fall. Over the last few months, it has gotten very tall and spindly and has completely lost its shape. Can I trim it back and fix it somehow?
A.: The vast majority of succulents grow best with higher light levels than can be found in the average home. Indoor light levels during the winter months are especially low. Even if placed on your brightest windowsill, some varieties will still elongate over time. This elongation is a natural response as the plant searches for more light. The good news is that succulents are, in general, very easy to both rejuvenate and propagate. If you find yourself with a spindly plant, you can just snip off the spindly parts and stick those cuttings into the potting mix. Within a few weeks, your cuttings will root, and you will have a whole new plant. Hang onto the original plant, because it will likely push out new growth after you give it a haircut. Unless you are able to increase your indoor light levels, the plants may just become spindly again, but you can just keep trimming.


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www.thesucculentdiary.com
From Bobbie Schwartz’s blog:

Are Natives Misunderstood?

January 18, 2019

After reading an article by Amanda Thompson in one of the green industry magazines to which I subscribe, I feel the need to discuss what it means to grow native plants.

Growing native plants has many benefits. The two most commonly cited are that they have adapted to particular sites and that they have a symbiotic relationship with many insects and animals. However, they may not necessarily be the best choices for some design parameters. There is also a great deal of debate about exactly what a native is. I discussed this in great detail in my post of 2/5/16 entitled “Going Native.” What I did not discuss in that post was the effect that insects have on natives. You should also be aware that being a native does not mean that deer and rabbits won’t eat them.

Asclepias incarnata [www.prairienursery.com](http://www.prairienursery.com)

Using butterflies as an example, particularly since there is so much interest in resuscitating Monarch populations, it is important to understand a butterfly’s life cycle. Stage one is the laying of minuscule eggs on leaves. During stage two (hatching), what emerges from the egg is a caterpillar. The mother butterfly only lays her eggs on the type of leaf on which the caterpillar will be born and will eat; each caterpillar type likes only certain kinds of leaves. Caterpillars need to eat and eat, so they can grow quickly. When born, they are extremely small; but as they start eating, they instantly start growing and expanding.

Butterfly eggs [www.thebutterflysite.com](http://www.thebutterflysite.com)
As soon as caterpillars reach their full length/weight, they form themselves into a pupa, the third stage. From the outside of the pupa, it looks as if the caterpillar may just be resting, but inside, the old body parts of the caterpillar are undergoing a remarkable transformation, called metamorphosis. Tissue, limbs and organs of a caterpillar have all been changed by the time the pupa is finished and are now ready for the final stage of a butterfly’s life cycle. The fourth and last stage is emergence. Usually within a three- or four-hour period, the butterfly will master flying and will search for a mate in order to reproduce. Then, the cycle begins again. I go into this much detail so that you understand growing native plants means that you will see eggs on the leaves, that you will encounter the caterpillars which will eat the leaves (sometimes leaving holes, sometimes decimating the leaves), and you will see the pupae hanging from stalks or branches. All of this means that you will have “bugs” in your garden.
Bobbie’s front west bed – mid-June 2010

Mine is a garden of diversity. I grow natives, nativars, and “exotics,” meaning that I grow plants that are native to other areas of our country and to other countries but have similar zone hardiness and culture. I know that there is also a bemoaning of the decimation of bee populations, but I will tell you that my garden is full of beneficial insects. I accept the fact that the plants in my garden may not look perfect; but, frankly, the garden is so crowded that I rarely notice the holes in the leaves. As long as you don’t need a garden that looks perfect, you will be happy growing natives while contributing to the environment.