

PLANT PEOPLE Season One Episode Five ‘Houseplants’ Transcript

JENNIFER BERNSTEIN NARRATION: We all love the beauty and charm that houseplants bring into our homes, but have you ever stopped to consider where they come from? Do we really think about their origins, as long as they have amazing colors, smell good, and impress our guests?

During the pandemic, many of us reconnected with our plants, reigniting our passion to take care of them from seedlings to full bloom. But even with their popularity, fewer people know about the darker side to the houseplant industry, such as the risks of poaching and the illegal trade of plants sold globally. Now, it's time for us to take a second look at how to be responsible plant parents and make sure our beloved houseplants are obtained ethically so that we can take care of them as well as they take care of us.

This is Plant People from NYBG. I'm your host Jennifer Bernstein, CEO & The William C. Steere Sr. President at the New York Botanical Garden.

I'm a plant person and have made it my mission to talk with enthusiasts from all walks of life who are passionate about plants. Through research, stories and conversation, this season is about how plants are connected to human thriving. Today, you'll meet someone from here on Garden grounds whose work can help you at home by leveling up your understanding of houseplants.

JENNIFER BERNSTEIN: Marc, can you please introduce yourself to our listeners?

MARC HACHADOURIAN: I am Marc Hachadourian, Director of Glass House Horticulture and Senior Curator of Orchids here at the New York Botanical Garden.

JENNIFER: Wonderful. Ok Marc, I'm gonna start how I always do. How did you become a plant person?

MARC: It's something that's been so much a part of my life, even from a young age, it's very difficult to target which particular moment got me into plants. I was always interested in science, dinosaurs, insects, you name it. I was more interested in nature than I was sports as a kid.

Spent a lot of time with my grandmother. And rather than allowing us to sit in front of the television, she would often put us to work in her garden, in which we would

be working alongside her, weeding, picking vegetables, helping sow flower seeds, and that relationship was very important to me growing up.

So that, kind of fostered my interest in gardening. And from there, my interest in science, nature, and horticulture developed as I spent time running around the woods as a kid, watching all sorts of nature documentaries and kind of dreaming of the idea of one day traveling to the rainforest to understand and explore. And from there I just decided to turn this passion of mine into a career, studying plant science and then working my way and eventually landing here at the New York Botanical Garden.

JENNIFER NARRATION: Many people may not know what glasshouse horticulture is, and Marc's expertise can help us understand our own house plants better. Marc manages optimal growth conditions to make plants healthy and beautiful. He also has an eye for designing how we arrange our plants. Now you might be wondering: What's the difference between a greenhouse and a glasshouse? While these terms can be used interchangeably, a greenhouse is designed for growing plants by controlling temperature, humidity and light.

A glasshouse, on the other hand, is usually a glass structure that can be used for plant cultivation or as a beautiful conservatory, like we have here at NYBG.

JESSICA MILLER: We're making a podcast for the Garden; would you mind telling me what you're up to today?

NYBG STAFF 1: Oh yeah, so I'm changing out the orchid case. So during the Orchid Show we always have miniatures in this orchid case and we change them out when the flowers start to go, we'll bring up whatever's flowering from our collections.

JENNIFER: So walk us through your role as the Director of Glasshouse Horticulture.

MARC: Well, I wear a number of different hats here. Most people know me as The Orchid Guy. Not only as the curator of the Orchid Collection, but someone who has been very intimately involved in the creation and design and execution of our very popular Orchid Show, which happens every year.

My role involves overseeing the glasshouse collections, both in the Conservatory and the behind the scenes greenhouses, the Nolen Greenhouses for Living Collections. My job really is about overseeing those plants, making sure they're

cared for as one of the stewards of our collections, understanding their cultural needs, their history, anything that a museum curator might do.

I'm also part of the team of people responsible for growing what I call the living content for our exhibitions, in which we cultivate a huge range of plants.

JESSICA MILLER: Do you have a favorite orchid in here?

NYBG STAFF 1: In here? Some of the *Paphiopedilums* are really, really beautiful, really unique with the rounded lip there. Alto, do you have a favorite in here?

NYBG STAFF 2: I like the *Renanthera*.

MARC: Everything from recreating Monet's garden to this year an exploration of Wonderland.

JENNIFER: That's terrific. It's an incredible array of different kinds of plants that you're cultivating and communicating about. So, can you talk about the role that conservatories play in preserving plant biodiversity?

MARC: So conservatories were once a storehouse for scientific research, people traveling the world and collecting plants, bringing them back, not only for horticultural display, but mainly for scientific research.

Having access to these plants is like a library in which scientists, scholars, or even just visiting people can have an opportunity to see, learn, understand, study the plants, whether it's their flowers or even looking at their molecular DNA, or in some cases looking at their physiology and how they react to the environment.

The study of plants is very important in not only allowing us to understand the natural world, but really how plants tick and where they evolved from. These collections provide not only a resource, but a refuge for a lot of plant species. There are quite a few plant species, including one that comes to mind, *Osa pulchra*, which is a very rare tree; there are probably less than two dozen plants existing in the wild. So the plants themselves not only can be naturally rare, but they may be rare even in cultivation and having them not only growing here provides a conservation through horticulture strategy, but allows people easy access rather than traveling into the extreme distances into the rainforest, you can come to a place like the New York Botanical Garden and access a huge diversity of information in the form of living plants within our glasshouses.

JENNIFER: Yeah, it's wonderful to be in the Conservatory and to see our visitors interacting with this incredible range of plants. And I've definitely seen visitors who are recognizing plants from the places that they came from and making that connection. How do botanical gardens like NYBG shape the public interest in particular plants?

MARC: In terms of shaping visitors' expectations, they come here searching for the exotic and the unusual things to fuel their imagination. Popular plants like Venus flytraps or of course the multitude of forms within the cacti, are very popular with our visitors. People recognize them. They're fascinated with them. They share the stories that they know about them.

But as they explore the conservatory and go through those galleries, they see things that they don't know the unexpected, the unusual, the beautiful, the bizarre, the strange, and that natural curiosity and that exploration helps not only guide our visitors but stimulate their mind and understanding where these plants come from, what they are, whether it's a strange colored flower like the jade vine or even the *Victoria amazonica*, the giant Amazonian water lilies, which never fail to capture people's attention, seeing these enormous floating platter-like leaves.

And then from there, trying to make that connection to where it's something they can relate to and understand. Recently I had an interaction with one of our employees who saw a plant and immediately his face kind of winced up and he just kind of made this yuck noise because it was an herb his mother used to give him when he had a sick stomach and which apparently it tastes terrible. So there was that wonderful visceral reaction. The Conservatory really inspires people, connects them to the natural world and I find, as people explore those spaces and interact with those plants, there is an emotional connection that develops with the natural world.

JENNIFER: And connecting people with nature is a huge part of what we do here at NYBG and forging that relationship. So let's talk houseplants.

MARC: Well, first off let's define what a houseplant is.

JENNIFER: Okay.

MARC: Many people know about trees, shrubs, perennials, annuals, and we often throw this term around houseplants. What is a houseplant? It really is a made up

term for any plant grown at our homes. There isn't any botanical classification that differs one type of plant from another just because we call it a houseplant.

JENNIFER: There's no taxa for a houseplant?

MARC: There's no set characters that unite all these plants, other than they're plants that we grow in our homes.

There's a long history, even dating back to ancient China and early cultures, everything from the Egyptians to early Chinese cultures, in cultivating plants, wanting to bring nature into our homes, whether it's a spiritual appreciation, a horticultural appreciation, or just a desire to have nature around us in our homes.

Early houseplants, say for instance, in Victorian England, were plants that needed to survive drafty, cold, dark spaces. Many plants like ivies, South African bulbs even, cold-season annuals, or many plants that we might even cultivate in our outdoor gardens were grown in Victorian England because they could survive growing in the home.

Nowadays, many of those plants are not as popular because our homes have changed. They're much more insulated, they have better temperature control, and so the houseplants have changed. Not only through fashion and trend, but also in our spaces in which now you're seeing many more tropical plants; warm-growing plants like philodendrons or even orchids into our homes where these plants like ivies would languish and suffer in the modern home.

JENNIFER: Sure. What trends are you seeing in houseplant choices post-pandemic? The pandemic caused a houseplant surge.

MARC: In addition to sourdough, houseplants definitely took a leap in popularity in which plants like aroids, including philodendrons, monstera, became kind of the social media darlings in which people wanted to pose with their rare houseplants to show off their collections.

Orchids are still as popular as ever, now surpassing, long surpassed, the poinsettia is the most cultivated houseplant out there.

But as trends kind of wax and wane, aroids are still becoming popular. Sansevierias are becoming popular, which is the commonly known as the snake plant. I think because of their durability and tolerance of abuse in our homes.

No one wants to have a houseplant like I, I guess I can shame Calatheas, which are beautiful and very popular for their exquisitely patterned foliage, but they're a real challenge to grow in the home. A little bit of low humidity or just the wrong environment, and they crisp up and are gone in no time. Whereas a snake plant or a Sansevieria seems to kind of thrive on neglect and abuse.

Houseplants, the journey from the wild to our cultivation has varied depending on the type of plant.

Most of the plants we grow and cultivate as house plants originated somewhere. Whether it be India, China, South America, the diversity of geography where these plants come from is all over the globe. But it's just a matter of trend and cultivation and seeing how these plants have worked their way through often long ocean journeys historically into cultivation, into greenhouses, propagation, and in our homes. Some of these houseplants are very familiar. You see them, you know, in every grocery store. But there are a lot of plants that are now cultivated because of their rarity. And therein lies the trouble.

Our appreciation of these plants and this desire to possess the rarest and most unusual things can quite often threaten some of these plants in the wild, in which rare cacti that may take decades to reach a significant size are now being poached to supply this demand for the rare and unusual.

Even plants that years ago I never would have even considered as not only houseplants, but these botanical obscurities that have now become the sort of 'hot' collector items, the 'holy grails' for the houseplant collectors.

There's a plant called *Philodendron spiritus-sancti*. This philodendron is native to Brazil, and it is naturally rare, only being found in a few areas. What makes this philodendron different is kind of the beauty and grace of its foliage. The leaves can reach up to almost three feet long and are very long and sword-like.

As this houseplant trend not only increased, but this desire to grow and collect rare philodendrons kind of swept the nation, this monstera mania fueling that, *Philodendron spiritus-sancti* became one of the 'holy grail' collector plants, in which at times they were selling online at auction for upwards of \$10,000 a plant.

JENNIFER: So people clearly want to avoid trading in house plants that have been trafficked illegally or where there's poaching. We don't want to create any threat to these rare plants in the wild. But are there examples where the propagation of these plants has been protective for rare plants?

MARC: So the idea behind conservation through cultivation is something that's not new. And one of the fundamental aspects of that to me is propagation. Some people might want to keep that plant rare to keep that price and value high.

But in my opinion, the value to help ease the black market trade is to make the plant accessible. Things that used to be extreme rarities years ago are relatively common today because of propagation. For instance, even with this *Philodendron spiritus-sancti*, a plant that was kept very rare because only a few collectors had it, it propagated slowly, has now through modern technology been propagated through tissue culture in which thousands and thousands of plants can be made without impacting the wild populations.

And as these become more available, a person who is not going to spend a thousand dollars could grow and possess a plant that they find beautiful, but it doesn't deplete the natural populations.

People looking to make some quick money or some collector feeling that a wild-collected plant has more cachet than one grown from seed and cultivation, put pressure on wild populations in which these plants were being taken illegally to supply the black market trade. And many people, if you walked by this philodendron, it might catch your attention.

It looks definitely very different than a lot of other philodendrons, but the question would be, does it really warrant these hefty price tags? Or is this something that we have kind of created a mystique around this plant that increases its value?

JENNIFER: And the risk to poaching to extinction in the wild. So how can people, if you're going to buy a house plant, how can you avoid unwittingly buying plants that are contributing to that kind of poaching or illegal activity?

MARC: Most of the houseplants that we have access to are nursery-grown. They're grown through tissue culture or seed propagated legally. But if you start getting into the collecting of true rarities, whether it be orchids, cacti, nepenthes, or philodendrons, you want to make sure that your plants are nursery-sourced, and that they are not only acquired ethically, but grown ethically.

Ideally, you want to deal with a legitimate and reputable nursery. And it's never a bad idea to ask, especially when you're dealing with true rarities in plant collecting, where the plants come from, how they grew them, where their original source plants come from.

Because sometimes the first plants that come into cultivation may not be legally collected, but then they're propagated from those. And so even though you're buying young seedlings, you want to make sure that parental stock was legally acquired. It's a slippery slope and it's a difficult thing to manage, especially nowadays with the global trade in plants being in the billions of dollars, especially in the rare plant market.

So if there's an offer that sounds too good to be true from someone overseas who's going to send you some rarity for a relatively cheap price, there's a pretty good chance that it is too good to be true.

JENNIFER NARRATION: There are two sides to every story, and there are darker stories of how houseplants can be acquired, that's why it's important that we do our due diligence when it comes to being aware of where we get our plants and seeds from.

When we return from the break, Marc will help us understand the health benefits that plants have for us and the environment.

[BREAK]

JENNIFER NARRATION: This is Plant People from NYBG. I'm Jennifer Bernstein. I've been talking with Marc Hachadourian, our Director of Glasshouse Horticulture, about how conservatories play a role in preserving biodiversity and the environmental impacts of houseplants.

There is so much more when it comes to houseplants, like the potential benefits that they can have on our mental well-being, health for us as humans and the environment altogether. But sometimes we get a little ahead of ourselves.

MARC: There's a lot of studies that have come up over the years, including one from the late 1980s, in which NASA said that houseplants can purify the air in our environments. It's since been disproven because we would need a tremendous amount of houseplants...

JENNIFER: It would be a lot of houseplants.

MARC: ...for them to make a significant effect.

JENNIFER: To the extent that maybe you're living outside.

MARC: You're basically living in an indoor jungle, which may not be a bad thing if that's your style. But you'd need ten to a hundred plants per square meter. So we're talking a heavily forested house here. But in reality, the act of caring for plants and having them around not only has been scientifically proven to reduce stress, our blood pressure, but the physical act of gardening, quite often many people will talk about that's how they find their happy place and their calming is coming home and working with their plants.

I think surrounding ourselves with nature, whether you're coming to a botanical garden or cultivating a small garden on your windowsill, does have a tremendous benefit for our psychological well-being, more than it would be using them as kind of living filters for the air in our home.

It really makes a big benefit. I know it does for me.

JENNIFER: Well I was going to ask you, what trends do you hope will catch on? What plant do you think should become popular?

MARC: If there was one group of houseplants that I think is highly undervalued and unexplored right now, it would be gesneriads; members of the African violet family. There was a book that had a wonderful title called *Miracle House Plants*, and it was all about gesneriads. Gesneriads kind of thrive in the same conditions we enjoy. So if we're happy, they're happy. This includes plants like African violets, which, nowadays have been bred into colors, patterns, shape that are not your grandma's African violets. They're really incredible.

JENNIFER: I was just thinking about my grandmother's African violets. She loved her African violets.

MARC: Not only were they very popular during that period, I think one of the reasons they were popular then is they were easy to propagate. You can grow them from leaf cuttings. I have friends who have leaf cuttings from their grandmother's African violets. So this group of plants, gesneriads, has plants that have wonderful foliage, which they're grown for the beauty of their leaves.

They have flowers, they can be hanging baskets, they can be miniatures. Just a huge range of size, shape, and color and ease of propagation, which I love the idea of being able to share cuttings of plants with friends to grow more. So everything from Cape primrose, known as *Streptocarpus*, to rediscovering the classic African violet, I think it's time for gesneriads to make a comeback.

JENNIFER: Okay, you heard it here. So what practices, Marc, do you see shaping the field of horticulture?

MARC: Right now, I think the biggest thing is sustainability. A lot of gardeners being intimately connected and appreciative of the environment; I think many people are taking a look at how their practices, not only as gardeners, as horticulturists, and just as people, impact the environment around us.

Any good gardener who's had their hands in the soil for a lifetime will tell you that in this area the climate has changed, weather patterns have changed, the types of plants we used to be able to grow, some we have trouble cultivating now, whereas others that never could survive a winter here are now bonehardy and thriving, as the climate changes frost patterns, the weather. Whether it be storms in one extreme or another.

I think every gardener is intimately aware that the environment is changing and what our role is and responsibility towards making a positive impact and getting that word out there, whether it's sharing with your neighbors or talking to people about it.

And that communication and that understanding as a first-hand observer, as a gardener, I think is very important. And I think sustainability is probably one of the biggest messages we, as gardeners and horticulturists, can communicate to the public with kind of real-world practical evidence, things that are observable, rather than these larger concepts that exist somewhere else in a mystery in science that many people don't understand.

JENNIFER: Are there technological advances that are making indoor gardening more accessible and sustainable?

MARC: In my opinion one of the largest driving factors for indoor garden, believe it or not, was the cannabis industry. The cannabis industry, obviously with a high money industry and a large investment into technology and understanding of growing plants, has really not only driven indoor growing technology, but spawned some really incredible tools for the indoor home gardener.

Years ago, I grew many orchids under lights in my basement, in which you had to have fluorescent light fixtures which would generate a lot of heat and the bulbs would burn out and there were some orchids that didn't do well because you couldn't give them enough light using artificial lights.

Nowadays simply with LED technology, where you can dial in a very specific light spectrum, you can cultivate a huge range of plants in rooms without windows, functionally, to where they can almost grow better than in a greenhouse.

Because under lights there are no cloudy days. And with our ability and control, even web access to where you can have a computer-controlled or a smartphone-controlled indoor greenhouse was something that was, growing up in horticulture, to me, kind of a Star Trek-level fantasy.

But now it's something that's readily accessible and now affordable for the home gardener, which I think is miraculous. From when I was 10 years old, trying to figure out how to grow these plants on my windowsill.

JENNIFER: So you've been a plant person your whole life it sounds like. How do you envision the relationship between people and plants evolving in the future?

MARC: I think plants will always be an important part of our lives.

JENNIFER: Well, we like to breathe. So there's that.

MARC: Well, yeah, no plants, no people, really, when it comes down to it. But houseplants, gardens, and even just horticulture in general, I think is something that really is not only essential to human civilization, but truly functionally, very central and essential to human existence.

When we talk about visiting and even colonizing other planets, some of the first things that people discuss is horticulture: growing food, having those plants in an environment that help us survive. And I wish more people understood this, obviously, and gained an appreciation for the natural world.

But even if you're not a gardener, I think we all do realize that not only green space, gardens, horticulture, forests, natural places are really key and essential for our survival in the future, whether it be physically or even mentally.

JENNIFER: Yeah, I think we should stay on this planet though.

MARC: Absolutely.

JENNIFER: You know, I don't think we should try to colonize...

MARC: I actually agree with you there. In a conversation recently, I was talking with a friend about this idea of colonizing other worlds and, what would be the important things? And the question came up is, why do you need to go elsewhere when we need to fix what we have here?

And the idea of plants being a possible solution for a changing climate, whether it be through reforestation or looking at plants as sources for inspiration for green energy. They're the original solar battery. They're the original solar powered machine. I think if we look inwards, towards Earth, I think a lot of the answers that we need are just around us.

JENNIFER: I agree. So what advice would you give to someone looking to expand their indoor garden sustainably?

MARC: First thing would be: right plant, right place.

JENNIFER: Say more.

MARC: I think a lot of people choose the plants they like rather than the plants that are best suited for their environments. And quite often you come home say with that maidenhair fern, you fall in love with it, and maidenhair ferns don't like low humidity and if you miss watering they crisp up in no time. And people feel that that single moment of failure kind of defines the ability of their green thumb.

JENNIFER: "I can't keep a plant alive." Yeah. Yeah, we've all heard that.

MARC: Whereas if you did a little research, talk to a professional horticulturist, people in the nursery, understood your environment and chose the right plant for that environment, it would thrive and grow. Rather than choosing something that's ill-suited for your home, see what succeeds in your environment, what your neighbors, friends are growing, and maybe even ask them to share a cutting because there's something to me special about not only the stories that come along with those plants, but the memories that come along with them.

And those emotional attachments to me, really make it not only more interesting, but give those plants more value than something you just picked up at the checkout counter.

JENNIFER: I have a couple of houseplants that were grown from cuttings that I got from friends 20 years ago and that connection is still there for me. So it's a lovely way to create a kind of lineage for your plants.

MARC: I still have the first house plant my grandmother gave me when I was three years old.

JENNIFER: Oh you do?

MARC: It is a snake plant, so it's even survived a house fire, believe it or not.

JENNIFER: She gave it to you when you were three years old?

MARC: When I was three years old. My grandmother propagated everything she can get her hands on, every tiny piece of plants that fell off she propagated because she couldn't throw it away. And in doing so, she kind of just gave them away to anybody who would stop by. You left with a full stomach and a plant whenever you would visit.

JENNIFER: Oh.

MARC: I've propagated that plant and shared it with friends and everyone knows that's Marc's grandma's snake plant. Is it anything rare and unusual? No. But is it something I treasure? Absolutely.

JENNIFER: That's terrific. That's a wonderful story. Well, Marc, thank you so much for being here. We really appreciate having you at NYBG, of course, and here on Plant People. I also want to wish you luck in the big challenge that's coming up with Denver.

MARC: Oh, that challenge. Yes. Made me nervous there. So of course the *Victoria* Water Lily Weigh-Off. Last year, to have some fun, we put some weights on our enormous *Victoria* leaves, challenged by Denver Botanic Garden.

And we have not only accepted their challenge again this year, but made a little video showing the *Victoria* is getting bigger by the day. So hopefully we can keep our title over Denver this year.

JENNIFER: I hope so. Marc, where can people follow you online?

MARC: Well, you can obviously follow my personal Instagram, which is Orchid Marc. Marc with a C. Or I make a lot of appearances on NYBG social media, both TikTok and Instagram, talking about a lot of the interesting, fascinating plants and things that happen here at the Garden.

So I'm a little bit of everywhere.

JENNIFER: Wonderful. Plant TikTok, plant social media, is my favorite kind of social media.

JENNIFER NARRATION: As we pick plants for our homes, often we choose them for their looks, fragrance, or maybe their popularity—but we don't think about their backstory.

The next time you shop for plants for your home, I invite you to stop and take a second look at where they're coming from. Let's dig a bit deeper into how we take care of them, because they surely take care of us. We can start by paying more attention to the plants that we have at home or those that surround us. My son has *named* our houseplants; you don't have to go that far but *do* get to know them.

In our next episode we welcome Dr. Eric Sanderson, author and NYBG's Vice President of Urban Conservation. Eric is an expert on urban ecology and the role that plants can play in helping keep our homes and communities safe from flooding.

Thanks for listening to Plant People. We're excited to bring you more stories about plants and the people who love, study, and care for them in new episodes dropping every two weeks.

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