

# A Lifelike Version of Nature, but Not to Scale



“The Valley” by Matthew Albanese is a photograph of a tabletop-scale diorama that he created. Benrubi Gallery

By Michael Tortorello

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Picture a redwood forest. The trunks like monoliths. The tree canopy like clouds. The fallen needles: a shag rug piled centuries deep.

Now imagine someone has left a busted refrigerator somewhere in the scene. If you were to Instagram this natural tableau, what would your friends identify as the subject?

An abandoned fridge, right?

A term exists in conservation biology to explain this odd selectivity in how and what we see: “plant blindness.” The concept, developed 20 years ago by James H. Wandersee and Elisabeth E. Schussler, describes the human tendency to ignore what the two scientists describe as “the aesthetic qualities of plants and their structures.” We habitually overlook such obvious elements as color, size, spacing, symmetry and tactility.

The consequence for ecological awareness? What’s out of sight is out of — wait ... do you see a Red Bull in the refrigerator?

Would people notice the majesty of trees if they were, paradoxically, smaller? That premise guides the practice of botanical miniatures: tiny plants sculpted in 3-D.

Say what you will about the challenges of growing a shrub in the garden. Replicating a plant in miniature demands a lot more ingenuity. The attempt to fabricate a simple tiny twig or leaf has inspired designers and artists to experiment with anything and everything: polymer clay, wax, wood, glass, copper, paper, vellum, resin, foam, cotton, sponge, feathers, fake fur, artificial crocodile skin and parsley.

Botanical miniatures belong in a cabinet of curiosities: They invite a level of scrutiny that makes the everyday appear not just unfamiliar but exotic. Occupying the border between science and art places them in the land of design. It’s a small niche, with few practitioners.

And yet the work is making a sizable footprint: in botanical sanctuaries such as Longue Vue House and Gardens in New Orleans, and Callaway Resort & Gardens in Pine Mountain, Ga.; in museum shows in New York, Miami and Palo Alto, Calif.; and in natural history museums, such as the Wild Center in Tupper Lake, N.Y.

These curiosities invite us to see plants — their color, size, spacing, etc. — for the sake of seeing plants. No small feat.

Patrick Jacobs, 46, began his career in sculpture by studying old pest- and weed-control manuals. Next, he recreated the demonstration photos — a cellar floor, an empty sidewalk — as dioramas of dead space. Eventually, Mr. Jacobs added the latex rubber cast of a yellow-splotched “broad-leafed plant,” soon to be poisoned into oblivion.

A few decades later, the weeds have won out. (They always do.) The viewer observes Mr. Jacobs’s teeming green worlds through a custom-ordered biconcave lens. The diorama may measure just a foot wide by 10 inches tall and deep. Yet objects farther from the lens appear smaller, creating the illusion of great depth. A sealed steel box becomes a sort of holodeck, transporting the visitor to a wide-open meadow.





The hand of the artist, Patrick Jacobs, can be seen with tweezers through the window as he works on “Window With View of the Brooklyn-Queens Expressway & Gowanus Heights.” Joe Carrotta for The New York Times

This bit of enchantment works just as well once you've learned the trick. A work like "Field of Dandelions," for instance, reveals some 300 dandelions overrunning a lawn of grass and clover. But each margarine-colored flower presents a handmade fabrication by Mr. Jacobs: an assemblage of vellum, styrene, glue and acrylic paint.

The hoary dandelion seed heads? These tufts come from individual white cat hairs, glued into distinct seeds, then arranged together into a globe. Nature, of course, produces dandelions everywhere, in effortless abundance. With his miniature, Mr. Jacobs seems to be exploring just how much labor it takes to get someone to notice.

## Duping the Birds and Bees

However small they may be, botanical miniatures don't fit neatly in the taxonomy of conventional botanical art. Carol Woodin runs the exhibition program for the American Society of Botanical Artists, headquartered at the New York Botanical Garden. Nearly all the group's 1,700 members work in watercolor, pencil or pen-and-ink.

"Over the years that I've been involved in botanical art," Ms. Woodin said, "I've seen maybe half a dozen botanical sculptors."

Classic botanical art puts a premium on technical accuracy. This emphasis dates back some 500 years, to when botanical illustrations would introduce newly discovered species in scientific papers.

"You wouldn't want to find alternate leaves on a maple whose leaves should be opposite," Ms. Woodin said.





In Mr. Jacobs's "Field of Dandelions" miniature, the plants were made by hand from paper, styrene, copper and wax, among other things. For the dandelion fluff, individual white cat hairs were glued into seeds and formed into a globe. Patrick Jacobs

The acknowledged masters of botanical sculpture were a father-and-son team, Leopold and Rudolf Blaschka, 19th- and early-20th-century German artisans who created more than 4,000 plants out of glass. (A small part of the collection can be viewed at the Harvard Museum of Natural History, which originally commissioned the work.)

A tiny number of botanical sculptors continue to abide by this same spirit. (Their work is miniature to the extent that the anther cap of a pink lady slipper orchid may be the size of a Tic Tac.)

The Thai artist Supawadee “Pa” Ngamhuy, for example, formed 128 plants out of polymer clay for the Wild Center, in the Adirondack Mountains. But good luck trying to find them.

With few exceptions, Ms. Ngamhuy’s reproductions appear indistinguishable from living specimens. A handful depict colorful woodland mushrooms, such as the rosy russula. She has smuggled dozens of native wildflowers and orchids into a 20-foot-long display of a sphagnum moss bog.

Stephanie Ratcliffe, 59, the executive director of the museum, said that sculptures like these, in a glass cabinet, could help visitors recognize the plants on a hike in the field. “There’s only so much you can learn in two dimensions — cameras and phones and flat screens,” Ms. Ratcliffe said.

The botanical sculptor Trailer McQuilkin, 71, shares that belief. The only way to render a wildflower with his extreme level of accuracy is to work from a living model. “I take these plants apart and dissect them, and count each stamen,” he said.





Supawadee “Pa” Ngamhuy, a Thai artist, created this pink lady’s slipper orchid from polymer clay. Rick Godin/The Wild Center

After collecting a rare glacier lily from 11,000 feet up in the North Pole Basin of the Colorado Rockies and stashing it in a cooler, Mr. McQuilkin will rush home to his studio on the Mississippi Gulf Coast. Then he'll fabricate the sundry plant forms — the buds, the flower, the calyx — for days on end. If the plant dies first, he needs to return to the alpine meadow to dig up another one. If it's not in bloom? See you next year.

One business advantage of Mr. McQuilkin's method is that almost no one else would have the patience to try it. In part that comes from his supremely unforgiving material: sheet copper, copper wire and oil paints. For almost 50 years, he's been employing a tool set that includes shears, surgical scissors, pliers, a rubber mallet, an anvil and a butane torch. (At this autumnal stage in his own life cycle, Mr. McQuilkin also relies on jeweler's glasses.)

He works at life scale, but the plant parts can be minute. To paint the fine veins on a leaf, Mr. McQuilkin said, "I'll take a sable-hair brush and cut it down to two or three hairs."

Many of the finished pieces go to botanical gardens. Mr. McQuilkin's work will be shown Thursday and Friday at the Miami Beach Botanical Garden. "Artists have art critics," he said. "My critics are botanists." An even better endorsement comes when a bee or hummingbird dive bombs his copper flowers in search of pollen.

How much verisimilitude is too much? Imagine being enticed to bite into the replica salad in a deli display case. Now think how the bee must feel.

## A Miniature Turns 'Bigature'

One of the great virtues of botanical art, Ms. Woodin said, is "you're never going to run out of subject matter." But then no law of the jungle says the artist must stick to existing plants.





Trailer McQuilkin creates stunningly accurate reproductions of American wildflowers out of copper, working from living models. William Widmer for The New York Times

In recent years, Matthew Albanese, 35, has recreated oaks and willows from his memories and imagination. This Eden turns out to be the northwest corner of New Jersey, where he lives. But for the past few months, Mr. Albanese has been studying paleobotany for a diorama called “The Hottest Day on Earth.” The garden includes vanished genera such as *Tempskya* (a trunkless tree fern of the Cretaceous period) and *Sigillaria* (a spore-bearing tree of the Late Carboniferous period).

“You may think it’s a normal jungle, but it’s actually quite alien,” Mr. Albanese said. “If you look closely, you’ll say, ‘I’ve never seen a tree like that.’”

The plan for the finished model involves hundreds of specimens staged on a plywood platform the size of a Ping-Pong table. “It’s more a bigature than a miniature,” Mr. Albanese said.

In preparation, Mr. Albanese has been stocking a fake tree nursery on a wire shelving unit in his parlor workshop. He’s been getting good results so far with artificial snakeskin for the trunk of an extinct cycad relative called *Williamsonia*. Through his previous botanical miniatures, Mr. Albanese has concluded that you can make a convincing replica of just about any environment on Earth if you have \$200 to spend at Hobby Lobby.

Willing to travel a little further afield? Mr. Albanese has discovered through trial and error that the dust surface of the planet Mars looks like a mixture of cinnamon, chili pepper and paprika. Science-fiction movies were his first love, and his finished art takes the form of highly staged cinematic photographs. Mr. Albanese constructs his landscapes as they appear through the lens of his Canon 5D. From this angle, Mr. Albanese isn’t just goofing around with dyed feathers and fake fur; he’s building a movie set.

Mr. Albanese doesn’t sweeten the shot in postproduction (or Photoshop, as it were). He prints what he shoots. The artistry comes from a mastery of lighting and forced perspective (plus a little dry ice). “Without the photographic aspect,” he said, “the illusion would never be able to exist. The miniatures themselves would not hold up.”





The painter Gregory Euclide created “Anywhere Kept the Frame Around Wanting.” He finds materials for his works, which explore themes of urban decay, with miniature forests spilling off the canvas, on his six-acre hobby farm in St. Peter, Minn. Rik Sferra

For all his inventiveness, there are two approaches that Mr. Albanese won't try. One is working at a fixed scale (“I can't add two numbers together,” he said). The other is gardening (“I can't keep a plant alive to save my life”).

The irony here is that plants make some of the most versatile and convincing materials for imitating other plants. Think of it as the equivalent of fashioning poetry out of a shredded newspaper, or a jean jacket out of old Wranglers.



The painter Gregory Euclide, 44, has created a go-to list of botanical substitutions. Dried sedum, with its billowing seed head, looks like the archetype of a leafy tree. A single pinecone scale resembles a shelf mushroom.

Mr. Euclide collects a lot of these supplies from around his six-acre hobby farm in St. Peter, Minn. Until a few months ago, his studio was the farm's derelict milking parlor; patches of 50-year-old cow dung remain bonded to the floor.

Mr. Euclide seems to admire the tenacity of the stuff. His paintings explore themes of urban decay, with miniature forests spilling off the canvas. It's tromp l'oeil crossed with an oil spill.

In some sense, however, the trick to Mr. Euclide's art is that there's no trick. By working with plants like jasmine flower and sage as modeling materials, "There's nothing in there that's not what it is," Mr. Euclide said. "A wolf is an animal even when it's wearing a sheep's coat."

A plant is a plant, no matter how small.

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