antennae
THE JOURNAL OF NATURE IN VISUAL CULTURE
AUTUMN 2020

vegetal entanglements

antennae

THE JOURNAL OF NATURE IN VISUAL CULTURE
edited by Giovanni Aloi

Antennae (founded in 2006) is the international, peer reviewed, academic journal on the subject of nature in contemporary art. Its format and contents are inspired by the concepts of 'knowledge transfer' and 'widening participation'. Three times a year, the Journal brings academic knowledge within a broader arena, one including practitioners and a readership that may not regularly engage in academic discussion. Ultimately, *Antennae* encourages communication and crossovers of knowledge amongst artists, scientists, scholars, activists, curators, and students. In January 2009, the establishment of *Antennae*'s Senior Academic Board, Advisory Board, and Network of Global Contributors has affirmed the journal as an indispensable research tool for the subject of environmental and nature studies. Contact the Editor in Chief at: antennaeproject@gmail.com Visit our website for more info and back issues: www.antennae.org.uk

Front and back cover: Ebony G. Patterson, *...could...*, 2019. (detail) Digital print on hand-cut, archival watercolor paper with hand-cut paper elements, poster board, acrylic gel medium, hot glue, plastic letters, feathered butterflies 95 1/2 x 107 x 2 in. (242.6 x 271.8 x 5.1 cm) Courtesy of the artist and Monique Meloche Gallery, Chicago and Hales Gallery, New York/London.

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vegetal

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Dor Guez: Lilies of the valley

interviewee: **Dor Guez**
interviewer: **Giovanni Aloi**

Dor Guez produces photographs and video installations that explore the relationship between art, narrative, and memory, interrogating personal and official accounts of the past. In Lilies of the valley, Guez explores religious botanical souvenirs as traces of past historys of faith and identity.

Composting in the herbarium

text: **Keith Pluymers and Melissa Oresky**
images: **Melissa Oresky**

In this essay, historian Keith Pluymers and artist Melissa Oresky explore her production of an artist's book *Finder* (2020), that makes compost from the visual languages of botany.

The 1970s plant craze

text: **Teresa Castro**

In the early 1970s, a general plant craze caught on in visual and popular culture alike. Against the background of New Age spirituality and the flourishing of ecological thinking, the 1970s plant mania came as an eccentric blow to the belief that sentience and intelligence are a human prerogative.

Exhibiting plants: Curating the gaze on vegetal beings

text: **Joela Jacobs**

The current proliferation of work in plant studies includes a host of exhibits that focus on the vegetal. Curators—often in collaboration with academics—seem to be on a mission to cure plant blindness.

Right: Alex Israel, detail of *Valet Parking,* 2013
Mural installed at the Marciano Art Foundation, Los Angeles © Alex Isarel. Photo: Joshua White. Courtesy the artist and Gagosian.

editorial

Giovanni Aloi

Inspired by the work of African American photographer Roy DeCarava and the poetry of Langston Hughes, the photographic series "Night Coming Tenderly, Black" by Dawoud Bey makes a political statement through images of landscapes in which forests and trees feature prominetly.

The power of Bey's photographs lies in their tacit acknowledgment that nature is not a given and that neither is it the opposite of culture. Nature is a concept we have shaped over millennia of images, texts, compositions, constructions, garments, and performances. The trees, the rocks, the air, and the water simply are. They don't care about us, our desires, spirituality, pasts, and even futures. Nature is in our heads. It is a concept inescapably defined by our histories, our desires, our spirituality, our pasts, and even our futures. It is therefore not a surprise that encountering plants always entails a process of negotiation between one's own cultural background, race, gender, beliefs, and values. Our coming to terms with the vegetal world is always inescapably mediated by tools or contexts, even when we claim to be objective.

At first glance, Bey's black and white photographs strategically present themselves as a history piece. In the artist's words, the series is "a visual reimagining of the movement of (early 19th century) fugitive slaves through the Cleveland and Hudson, Ohio landscape as they approached Lake Erie and the final passage to freedom in Canada". Bey's reimagining reaches deep into the history of western landscape, its aesthetic ambitions, psychological dimension, and the elitist subjectivity that over time has defined our conception of nature and, with that, race.

In our minds, nature is culturally constructed as the true, the baseline, the unchangeable. Centuries of landscape paintings commissioned by wealthy European landowners have directly influenced our conception of what in nature is beautiful and what isn't. This process has unfolded in almost subliminal ways. Bey's photographic series shows how we easily construct nature from the point of view of privilege, thus also pointing at the possibility to deconstruct and reconfigure what we consider a given. "Night Coming Tenderly, Black" entrusts photography with the important deconstructing work of undoing the painterly gaze of art historical giants. Each image captures a landmark of the so-called Underground Railroad – a network of safe houses and sheltered locations that fugitive slaves could find on their journey to freedom. The photographs capitalize on a rich range of subtle grey and black tones typical of gelatine silver prints to produce softly contrasted views that invite close inspection.

In the place of alluring dawns or golden sunsets, Bey exposes an often eerie and ambiguous American landscape at twilight. His images evade any easy classification in the pre-existing aesthetic categories of the beautiful, the picturesque, and the sublime. This is because the camera lens is made to coincide with the eye of the fugitive slave. We see no glorious hill-top views and sweeping expanses of land, for these would entail high visibility and vulnerability in the world of a fugitive slave. It is in this context that we are made to wonder impenetrable thickets of trees: an uncertain, non-affirmative landscape that continually flickers between the promise and the threat, tinged by the uncertainty brought by night's imminent fall.

Across the series, Bey's images of forests more directly spoke to my European upbringing and the cultural connotations that have defined them for me. I grew up with the notion that forests are magical and gorgeous, the setting of fairy tales, hauntings, and medieval epics – places of adventure in which sometimes one can get lost. Dante Alighieri's decision to situate the entry of hell at the edge of the Selva Oscura (The Dark Forest) and the Surrealist artists who followed Sigmund Freud into the woods to decipher the unconscious speak volumes about the values western culture has attached to forests.

But Bey's images of forests belong to a different world, and that's where their political power lies. They are ambiguously quiet and unnervingly enigmatic. They are simultaneously yesterday and today—places of temporary shelter, for the fugitive slaves dreading to cross open-lands by day, and insurmountable barriers or inescapable labyrinths where lives can be lost.

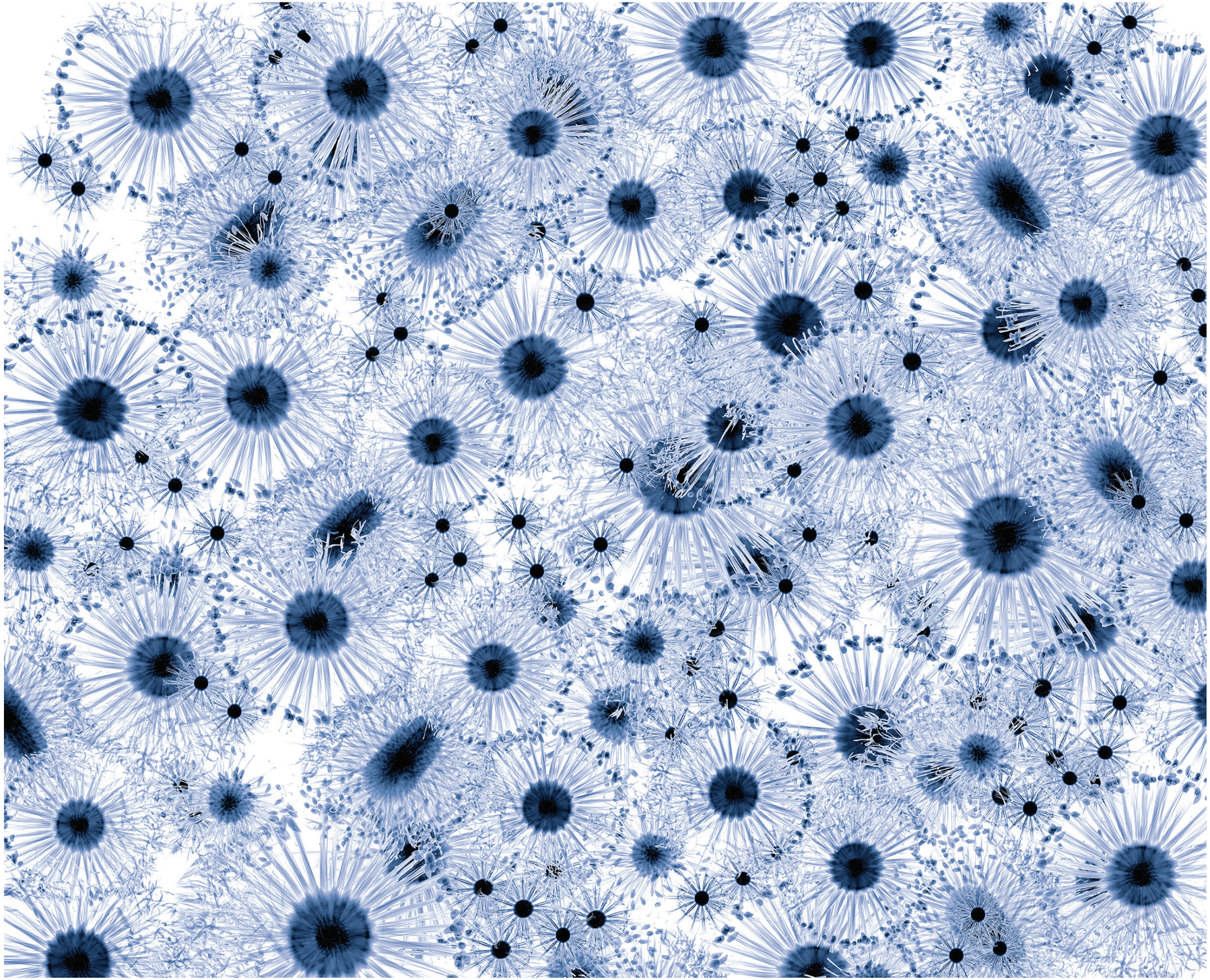
The sad truth, so vividly impressed upon the silvery surface of Bey's photographs, is not remotely concerned with witches and spells, swords stuck in rocks, or breadcrumbs concealed by the snow. It is neither mythological nor magical. Night Falling Tenderly, Black is drenched with the palpable fear for one's own life, the truth of utter vulnerability, the oppressive force of systemic social injustice, and the most profound loneliness on a desperate journey to freedom across a stranger land that, yesterday as today, only white people have the right to call home.

The contributions gathered in the second volume of *Vegetal Entanglements*—a tryptic entirely dedicated to plants in art and culture—focus on the notion of plant-encounters as opportunity to overcome plant-blindness and see plants beyond the strictures of objectification. It is in this context that the artists, scholars, curators, and plant lovers featured on these pages stage and analyse original encounters with the vegetal world; they make visible, problematize, deconstruct and recontextualize to show how encounters with plants define our lives in multiple and often unpredictable ways.

As always, I'd like to thank everyone involved in making this issue—from the wonderful contributors to those who generously lent their time to peer review, proofread, and assisted along the way.

Giovanni Aloi
Editor in Chief of AntennaeProject

Overleaf: Dawoud Bey, *Forest #17*, from "Night Coming Tenderly, Black," 2017, gelatin silver print, 44 by 55 inches © Dawoud Bey



Dornith Doherty: Archiving Eden

A photographic project by artist Dornith Doherty, Archiving Eden *considers the scientific, ecological, and philosophical implications of seed banks. The images range from documentary style to lyric compositions, including X-rays of seeds and the use of lenticular panels. Through the interweaving of scientific research, historical references, and poetic aesthetics,* Archiving Eden *is a transdisciplinary approach that demonstrates how the visual arts can connect seemingly siloed disciplines and prompt contemplative introspection.*

text by **Katherine Ryckman Siegwarth**

images by **Dornith Doherty**

Entwined in the narratives of my lifetime is a deep-seated anxiety about the acute gravity of climate change, diminishing biodiversity, and the possibility that we may not be able to retreat from the brink. When I read that a Doomsday Vault—a modern-day ark for plants—had been built near the North Pole, I became determined to photograph it. Two years later, I crossed the threshold into the icy cavern containing a comprehensive catalogue of life.
Dornith Doherty [1]

Archiving Eden is a photographic project by artist Dornith Doherty that considers the scientific, ecological, and philosophical implications of seed banks. Since 2008, Doherty has traveled across five continents, visiting eighteen seed banks and research centers to document these locations and their contents. The series is a poignant exploration of global preservation initiatives in the face of decreased biodiversity.

Seed banks vary in size and focus but share a common mission to safeguard genetic material to ensure plant diversity and adaptability, often with an emphasis on food crops. Multiple existential factors impact the survival of life on earth, including climate change, natural disasters, pandemics, and civil strife. Collecting seeds to protect biodiversity is one of the many global conservation initiatives that seek to combat these threats. These collections may save humanity from famine or other disasters and may help scientists understand which genes will improve resiliency for plants in our changing environments.

Planting the Seed

Often discussed in apocalyptic terms by the media, it was a 2007 *New Yorker* article titled "Sowing for Apocalypse" that introduced Doherty to seed banks and was the source of inspiration for *Archiving Eden*.[2] The article highlighted Cary Folwer, then-director of Global Crop Diversity Trust, and the construction of the Svalbard Global Seed Vault, which the Trust underwrites (the vault opened in 2008). Located on an island under the sovereignty of Norway, it is situated 50 miles north of the Arctic Circle and anticipated to remain above sea level should the ice caps melt.[3] The vault's mission is to serve as the back-up supply to seed banks around the world. Its ambition was realized in 2015 when the first withdrawal of seeds occurred due to the Syrian civil war damaging a gene bank near Aleppo.[4]

The necessity of seed banks is made evident by these threats. However, seed banks are sites brimming with hope: even within these cold, archival spaces an Eden may exist, ready to sprout. It is here, in the duality of apocalyptic threats and the optimism of global preservation efforts that *Archiving Eden* is grounded. The reference to the archetypal garden is itself a dichotomic term, not only referencing paradise but our expulsion from it. The pairing of scientific terminology with lyric symbolism situates the artworks as not only sites of scientific knowledge, but also of philosophical inquiry and historical contextualization, constructing an augmented understanding of the various disciplines. Within seed banks, Doherty sees "a glowing, verdant, technological garden."[5]

Illuminating Life

Archiving Eden sheds light on seed banks through various aesthetic choices. One section, sub-titled *The Vaults,* consists of documentary-style photographs of the banks' exteriors, interiors, and aspects of processing the collections. *Seed Vault, Kuban Experimental Station*, *Russia* provides a glimpse into a site generally hidden from public view, whose shelves of seemingly infinite glass containers are filled with abundant, biodiverse resources.

Many images are reminiscent of 19th-century geological survey photographs of the American West, with their matter of fact documentation of a new terrain for scientific inquiry. Doherty cites such photographs as influential to her practice, which is rooted in the landscape tradition. Rather than focus on the concept of untouched landscapes of unlimited resources, she examines how environments have been manipulated by human events, extended to even the tiniest seed.[6] Her photographs imagine a terrain of possibility while questioning the limitations of natural resources and the role of humans in their depletion and preservation.

Dornith Doherty
Seed Vault, Kuban Experimental Station of the VIR, Krasnodar Territory, Russia, archival pigment print, 2012 © Dornith Doherty

Dornith Doherty
pp.14-15: *Banksias,* archival pigment print, 2014
© Dornith Doherty

Dornith Doherty

Svalbard Global Seed Vault, Spitsbergen Island, Norway, archival pigment print, 2010 © Dornith Doherty

Another section of *Archiving Eden* is comprised of enlarged X-ray images of seeds and plant tissue. Doherty collaborated with scientists to utilize on-site equipment, customarily employed to determine statistical seed viability of the collection. Later, she edits the images, in some cases flipping the tones, making composite images of multiple seeds and plants. These images maintain scientific detail, but Doherty notes they are openly metaphoric, allowing visitors to reflect between what is shown and the invisible, poetic possibilities of seed banking.[7]

Some photographs, including *Banksia,* are digitally collaged compositions of X-ray images whose altered colors depict blue specimens on a white background. The array of delicate, circular spindles is reminiscent of the botanical cyanotypes by Anna Atkins, whose *British Algae* (published 1843–1854) was the first book created entirely from photographs. By illustrating and identifying aqueous organisms, Atkins fused two contemporaneous cultural phenomena, natural sciences and photography, while positioning the new medium as overlapping the arts and sciences, where Doherty's work is also situated.[8]

The blue and white compositions also allude to Delftware ceramics from the Netherlands. A by-product of trans-Eurasia trade, Delftware was an affordable alternative to Chinese export ware, which was designed exclusively for a European market after the opening of trade routes in the 14th century. Ecological history was also impacted through these same trade routes and cultural exchanges, as human interest and preferences in certain plants led to a relationship in which we have modified their genetic evolution.

Ecological history was also impacted through these same trade routes and cultural exchanges, as human interest and preferences in certain plants led to a relationship in which we have modified their genetic evolution.

Trade and cultural relations are explicit in photographs such as *Columbian Exchange III.* The title references the global impact—intended and unintended—of Christopher Columbus' arrival in the Americas in the 15th century.[9] Depicting collaged X-rays of teosinte, eucalyptus, mesquite, and pecan, these plants are indicative of the Texas landscape, Doherty's home state. However, they are not all native to the region and their co-mingling highlights how humans have altered their environment. The bouquet-like composition of *Columbian Exchange III* suggests bountiful abundance. Yet, the seeds and tissue samples used for X-ray viability tests are ultimately damaged by the radiation and are unusable specimens. Much like 17th-century Dutch still lifes, these compositions serve as *memento mori* and highlight the fragility of life.

The melding of science with metaphoric interpretations permeates Doherty's art, further augmented by using monumental scale and lenticular panels.[10] *More than This* is an eight-foot-tall lenticular photograph, whose scale elicits an immediate physical response when encountered. Lenticular panels produce a hologram-like effect of movement within the composition, including a color shift as viewers engage with the object. The overall blue and green hues of *More than This* references cryogenics, a crucial aspect to seed preservation. The color shift performs this transition to keep seeds in suspended animation and vice versa, breathing life back into dormant seeds.

More than This is a composite image of nearly 5,000 individual seed X-rays captured at Kings Park Botanic Gardens, Australia. The number is not arbitrary but symbolic: it is the smallest number required to preserve a single plant species. By visualizing this number, Doherty addresses the issue of psychic numbing, common to conceptual data related to scientific or humanitarian issues.[11] *Archiving Eden* is an effective entry point for visitors to consider the vastness of global preservation endeavors as the photographs maintain scientific accuracy while scaling down the concepts to an accessible level.

Cultivating Integrative Vision

Through the interweaving of scientific research, historical references, and poetic aesthetics, *Archiving Eden* is a transdisciplinary approach that demonstrates how the visual arts can connect seemingly siloed disciplines.[12] Doherty's artworks demonstrate our coevolutionary relationship with plants and the environment, thereby negating the

Dornith Doherty

Columbian Exchange III, archival pigment print, 2014. Digital Collage made from x-rays captured at the National Center for Genetic Resources Preservation (USA) and PlantBank (Australia) © Dornith Doherty

18th-century concept of humans existing outside of Nature.[13] Unlike scientific disciplines, which often centralize knowledge and rationality outside of a cultural context, Doherty's artworks present an expansive framework for the seed vaults, connecting the humanities and sciences. The photographs offer contemplative introspection to viewers into fields that may not be a part of their everyday consciousness. Within each suspended, animated seed lies the possibility of metamorphosis and *Archiving Eden* reveals how something as small as a grain of sand can spark the imagination.

The display of *Archiving Eden* at the Dayton Art Institute in 2020 demonstrates the continued relevancy of this project. Like many cultural institutions, the DAI shut down in March to assist in global efforts to stem the coronavirus pandemic (the museum reopened in July). At the time of this writing, over one million people have died from the virus, and millions more are affected by the variety of ways the pandemic has affected global trade and infrastructure. Supply-chains were disrupted, causing scarcity of products. This includes food supplies, creating scenarios of unimaginable food waste as producers could not get their products to consumers.[14] The questions of where our food comes from and what actions are being taken to safeguard our future have been brought to the forefront, confirming the integral role of seed banks and the need for innovative projects such as *Archiving Eden* to shed light on these concerns.

Endnotes

[1] Dornith Doherty, *Archiving Eden* (Stuttgart: Schilt Publishing, 2017), 9.

[2] John Seabrook, "Sowing for Apocalypse," *The New Yorker*. August 20, 2007. https://www.newyorker.com/magazine/2007/08/27/sowing-for-apocalypse

[3] Michael Zimmerman, "High North and High Stakes: The Svalbard Archipelago Could be the Epicenter of Rising Tension in the Artic," *PRISM*, 7, no. 4 (2018): 106–123. Cary Fowler, "A 'Doomsday' Seed Vault to Protect the World's Diversity," *Journal of International Affairs*, 67, no. 2 (2014): 141–146. Cary Fowler, "The Svalbard Seed Vault and Crop Security," *BioScience*, 58, no. 3 (2008): 190–191. Marte Qvenild, "Svalbard Global Seed Vault: A 'Noah's Ark' for the World Seeds," *Development in Practice*, 18, no. 1 (2018): 110–116.

[4] Laura Wagner, "Syrian Civil War Prompts First Withdrawal From Doomsday Seed Vault In The Artic," *National Public Radio*, September 23, 2015. https://www.npr.org/sections/thetwo-way/2015/09/23/442858657/syrian-civil-war-prompts-first-withdrawal-from-doomsday-seed-vault-in-the-arctic

[5] Elizabeth Avedon, "Trusted Witness." In *Archiving Eden* (Stuttgart: Schilt Publishing, 2017), 81.

[6] The Americas were not, of course, pristine, untouched lands at the time of these survey, a concept that omits acknowledgment of Native Americans' presence and their land management techniques. See Charles C. Mann, *1491: New Revelations of the Americas before Columbus* (New York: Knopf, 2005).

[7] Dornith Doherty, email message to author, August 10, 2020.

[8] Hope Saska, "Anna Atkins: Photographs of British Algae," *Bulletin of the Detroit Institute of Arts*, 84, no. 1 (2010): 11.

[9] The term "Columbian Exchange" was first coined by Alfred W. Crosby, whose 1972 book, *The Columbian Exchange: Biological and Cultural Consequences of 1493* (Westport: Greenwood Pub. Co., 1972) was a novel approach and turning point in the field of geologic history. Doherty notes that Charles C. Mann's *1493*: *Uncovering the New World Columbus Created* (New York: Knopf, 2011) was influential to her project. For comparison of trans-Eurasia trade and the Columbian Exchange, see Nicole Boivin, Dorian Q. Fuller and Alison Crowther, "Old World globalization and the Columbian exchange: comparison and contrast," *World Archeology,* 44, no. 3 (2012): 452–469.

[10] Lenticular panels are multi-angled surfaces that allow the eye to register different portions of a collaged image from various vantage points. Therefore, as you move and engage with the artwork, the angle of perception changes and allows you to see other aspects of the composition, creating the effect of movement within the image.

[11] Paul Slovic, Daniel Västfjäll, Arvid Erlandsson and Robin Gregory, "Iconic photographs and the ebb and flow of empathic response to humanitarian disasters," *Proceedings of the National Academy of Sciences of the United States of America*, 114, no. 4 (2017): 640–644.

[12] John C. Ryan, "Cultural Botany: Towards a Model of Transdisciplinary, Embodied and Poetic Research into Plants," *Nature and Culture*, 6, no. 2 (2011): 123–148.

[13] P.K. Jamison and Donna Haraway, "No Eden Under Glass: A Discussion with Donna Haraway," *Feminist Teacher*, 6, no. 2 (1992): 10–15. Dalia Nassar, "Metamorphic Plants: Goethe's *Metamorphosis of Plants* and the Metaphors of Reason," in *Covert Plants: Vegetal Consciousness and Agency in the Anthropocentric World*, edited by Prudence Gibson and Baylee Brits (Goleta, CA: Brainstorm Books, 2018), 101–122.

[14] Sarah Gibbens, "These 5 foods show how coronavirus has disrupted supply chains," *National Geographic*, May 19, 2020. https://www.nationalgeographic.com/science/2020/05/covid-19-disrupts-complex-food-chains-beef-milk-eggs-produce/

Katherine Ryckman Siegwarth is the Kettering Curator of Photography and Special Projects at the Dayton Art Institute (Dayton, Ohio). She curated the exhibition, *Archiving Eden: Dornith Doherty Photographs*, on view at the DAI September 13, 2020–January 10, 2021. Prior, Siegwarth was the Assistant Director of Zhulong Gallery (Dallas, TX), and was the Luce Curatorial Fellow for the photography department at the Amon Carter Museum of American Art (Fort Worth, TX). She has held positions at the Scottsdale Museum of Contemporary Art (Scottsdale, AZ) and the Center for Creative Photography (Tucson, AZ). Siegwarth received her MA in Art History, specializing in the history of photography and museum studies, from The University of Arizona (Tucson, AZ).

Dornith Doherty is an American artist whose work is concerned with human entanglement in the rapidly changing environment. A 2012 Guggenheim Foundation Fellow, Doherty has also received grants from the Fulbright Foundation, the Japan Foundation, and the United States Department of the Interior. Working primarily with photography, video, and scientific imaging, Doherty's work is in numerous permanent collections, and has been featured in exhibitions and publications widely in the US and abroad. A monograph of her project *Archiving Eden* was published in 2018.

Diana Scherer Plantrootweaving

Through her installations Diana Scherer examines the boundaries between plant culture and nature. What does "natural" mean in the Anthropocene and are humans not also part of nature or are we a parasitic species? For the past few years Scherer's fascination has focused on the dynamics of underground plant parts. She has been captivated by the root system, with its hidden processes. Her longterm project Exercises in Rootsystem Domestication *originated as an art project with an intuitive approach has also developed into an innovative material research. Working on this project, Scherer shifts between disciplines, from design to art, craft and science. To develop the work she collaborates with biologists, engineers and designers.*

interviewee **Diana Scherer**

interviewer **Dawn Sanders**

Embarking on a more artistic endeavour and fascinated by the intelligence and behaviour of plant roots, Diana Scherer has explored the material ability of plant roots at the seedling stage to create an unprecedented textile-like material, Interwoven. Through a self-developed technique, aided by digital fabricated templates which guides the growth of plant roots (patent pending), the artist directs plant roots into geometric patterns found in nature, like honeycomb structures, or foliate designs reminiscent of Middle Eastern arabesques.

Scherer's work illustrates that roots are not only productive means but also intelligent agents that respond to and adapt actively and dynamically to their environment.

Dawn Sanders: When did you start working with plants and why?

Diana Sherer: I started working with plants ten years ago. I was interested in the nature/culture dichotomy and our desire to control nature. I first worked with the plant parts that grow above ground and then slowly went down to the bottom. I became captivated by the root system, with its hidden, underground processes. It's not always easy to explain a fascination and where it comes from. Often this are unconscious processes. But in this case I know that my interest for crops started with my grandparents. They were farmers and during the visits to the farm I explored in a naturally way the life of plants. In this case mainly food plants such as grain. In my current project I also work a lot with grain such as oats or corn. My grandmother was also extremely telented with textiles. I consider her, Walburga Scherer, to be the basis of *Exercises in Rootsystem Domestication.*

DSa: In your work you make public the parts of plants that are often unseen- the roots. Has working in such close physical contact with the roots of plants impacted on your understanding of plants and if so, in what ways?

DSh: From my collaboration with the root system I learned about underground biodiversity. For example some plants like to grow close to each other and support each other below ground and other species fight their living space and don't tolerate other species next to them. I have studied their appearance and their aesthetic quality and on a certain moment I started to approach the root system as if it were yarn. For example, the refined, white root structure of grass reminds me of silk and the powerful, yellowish strands of the daisy I compare to wool. I have learned that an enormous communication takes place underground. The rhizosphere forms a very dynamic environment in which the plant roots and many organisms are located. Plants communicate with each other and collaborate with other organisms for example fungi and bacteria.

For example plants are able to warn each other via the subterranean network over kilometres of danger or use it to feed each other and eliminate or support weaker plants. Roots are incredibly strong. In their search for food and space they fight for every space they can find. I use this natural strength to weave my textiles of plant roots.

DSa: Can you describe how your work *Exercises in Root System Domestication* first began and what the key factors were in deciding to work this way?

DSh: In the beginning I started to collect and photograph plants. I also found it especially exciting to bring nature and its phenomena into my studio. At one point I had a whole collection of molehills.

The rootbound image, a plant that had grown in a pot for a very long period, remained for a long time in my mind and on a photograph on my studio wall. At one point, I started to work with this image and filled my vase collection, which I collected for many years, with soil and seeds. I nurtured the plants for three month and then broke the vases. The root system shaped itself around the vase. It all happened very intuitively but in this period I learned a lot about roots. After this project *Nurture Studies,* 2012 (book published by van Zoetendaal publishers), I carried on exploring this burried matter.

After a period of research I had the idea to weave the root system. To make this possible, in 2016, I contacted scientists. I started to study the below ground processes in cooperation with experts at Radboud University Nijmegen. In this period I developed the new technique "interwoven" to control the growth of plant roots. With "interwoven" the natural network of the system turns into a textile. During the growing process the roots assimilate to underground templates and weaves the material itself.

When I told them that I wanted to weave the root system underground they had little faith in it but because my enthusiasm and my earlier work convinced them I was allowed to join them in the greenhouses.

DSa: How has working across disciplines impacted upon the ways you think about, and construct your own artistic identity, in work such as the new exhibition Hyper Rhizome?

DSh: The collaboration has inspired me ta lot. In particular, I contacted biologists from the Radboud University Nijmegen to expand my botanical knowledge. It was a very practical approach. Mainly I wanted to know more about the world of roots. Radboud University was known for its specialists and they had just set up an entire root lab. This collaboration satisfied my curiosity to a certain extent. In addition to the research, I have seen a lot that it has inspired me to new ideas. My role as an artist has not changed except that I have become aware that my work can be a link between science and society as kind of translator.

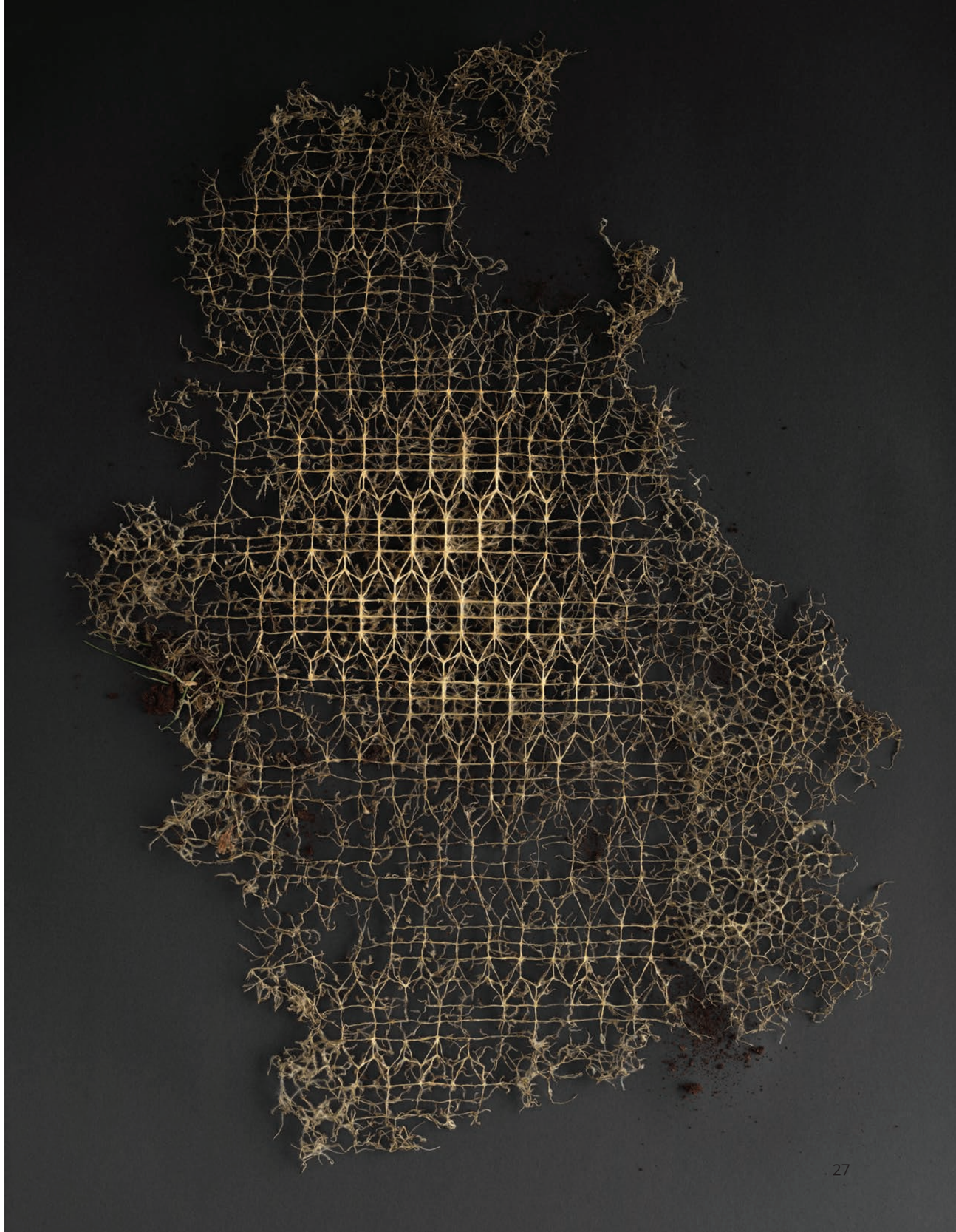
I also found it interesting to see that my open-mindedness and unscientific approach can help me to take steps that science has long regarded as impossible and excluded in advance. For example, when I told them that I wanted to weave the root system underground they had little faith in it but because my enthusiasm and my earlier work convinced them I was allowed to join them in the greenhouses.

DSa: I am interested in your partnership with biologists and engineers in the Materials Experience Lab, especially as a cross-disciplinary act, even the name of the lab suggests a conscious move to create epistemic border-crossings. Can you describe how this space provokes, and/or facilitates new relationships around art and science? Has it changed your practice as an artist?

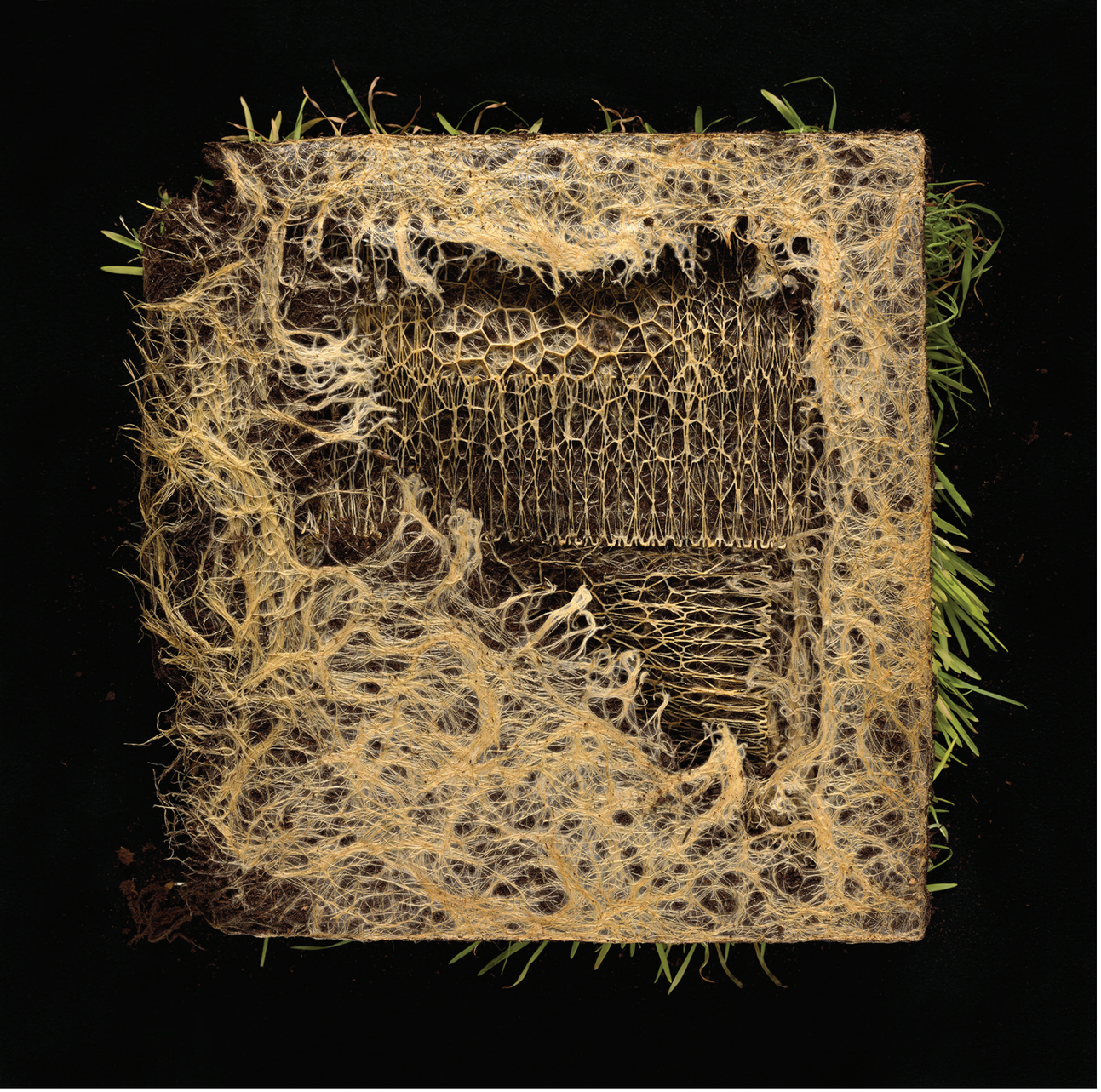
DSh: In addition to my autonomous work, I also started an innovative material research. My goal in the coming period is to develop the bio-manufactured material from plant roots into a sustainable and applicable material.

I contacted the Material Experience Lab because of their research in 'Growing Material'. Two Master students graduated last year on my project *Interwoven.* (master of science) with the assignment to develop the material more solid and into 3d.

That was a new experience for me as an artist. I was curious about the scientific approach in addition to my intuitive research. A textile of plant roots is a new material and has never been used for a material application. I see it as a challenge to develop the material to such an extent that it can be applied, for example in the tex-



Diana Scherer
Hyper Rhizome # 2 2019,
Photography Fine
art print 150 x 100 cm



Diana Scherer
Hyper Rhizome #12 Plantrootweaving
tapestry 120 x 80 cm /2020
pp 20-21: *Interwoven #4* , Photography
100 x 80 cm / 2017 © Diana Scherer

tile industry. The fabric also has the potential of a sustainable material because during the production process it stores CO2 instead of emissions.

At my exhibition *Hyper Rhizome* I show a selection of our experiments. It hasn't changed my practise as an artist. I can easily separate my autonomic work from these excursions to science. They are learning moments for me and often they are helpful. I experience it as inspiring and it supports my autonomous practice. My visual background gives me the opportunity to approach the world of science in an open-minded way and make it accessible to the viewer through my work.

A textile of plant roots is a new material and has never been used for a material application. I see it as a challenge to develop the material to such an extent that it can be applied, for example in the textile industry.

DSa: In the invite to your new exhibition, *Hyper Rhizome,* the work of Charles Darwin is mentioned, especially his book *The Power of Movement in Plants.* Does Darwin the botanist influence your thinking about plants? And if so, are there any particular aspects of his work that resonate with your current entanglements with plant-life?

DSh: When I became interested in the root system I came across the experiments of Charles and Francis Darwin. From the Darwins, I learned that plants did not belong where they were classified by Aristotle: at the bottom of the hierarchy of living nature, just a decor for man and animal.

Their research helped me to better understand my own root observations. They experimented a lot with the dynamics of the roots. They described the root apex as a 'brain- like' organ. I found that exciting. The book describes their botanical experiments with the movements of various plant parts and development stages of the plant root. I found that very helpful. My approach is intuitive and I work with my imagination, but I find the confirmation from the scientific world a pleasant addition. In the book *The Power of Movements of Plants* the 'intelligence' of plants is seriously considered and tested the first time. In my work *Exercises in Rootsystem Domestication* I use this dynamic/intelligence. They describe how roots do not passively grow down, but move and observe. A root navigates, knows what's up and down, observes gravity and localizes moisture and chemicals.

For the project I developed a technique to guide the growth of the plant root. With the help of underground templates, I control the root system. During the growing process, the roots conform to underground templates and the textile weaves or braids itself. In this project I apply the strength of nature to weave a textile.

DSa: The Netherlands is known for its horticultural production: fields of tulips and ranges of vegetable growing glasshouses. This industrial approach creates a particular aesthetic of, and relationship to, the plant-world against which your productions seem to be more consciously associated with characteristics of the growth entangled with plants, and yet, the titles of your work acknowledge your domesticating role. Do you feel a tension here? Is it a conscious commentary on the current relationship between much of the urban human population and the plant community?

DSh: My projects are certainly a response on the relationship of man versus his natural environment. The point of departure is the ambiguous tendency of man to cherish nature, while simultaneously recklessly manipulating it.

I was interested in the beauty, necessity and at the same time the destructive side of the manipulation. With *Exercises in Rootsystem Domestication* I force nature to go my way and use its strength to create the work. I try to approache this subject in a poetic way. I am aware of the cruel part of the project.

DSa: Your work occupies 'plant-time' by its very nature of working with growing plant material. Has working in this time-zone impacted on how you think about time scales in relation to environmental futures and art-based practice?

DSh: Yes, growing time is a beautiful addition to my daily work practice. I have learned to adapt to this. That gives me a sort of regularity in my often rather chaotic work

practice and therefore peace. Today, I also live much more consciously with the seasons, day lengths and the weather; a bit like a farmer. That sometimes also means the same complications such as a bad summer and a failed harvest. I also had problems with a mouse plague and plant diseases.

Due to the daily conscious handling of weather and seasons, I am also much more aware of the small shifts and changes in the climate.

DSa: What challenges have you encountered in working with roots?

DSh: In all the years it has been a challenge to find a strong root that grows fast and also likes to grow into my templates. A plant that doesn't mind growing close to each other and can therefore form a firm root -mat. Grass species are the most suitable for this. They like to grow close together and do not fight for space below ground. And grain in particular is very suitable for my project. I prefer to work with oats. Another challenge was to control the strength of the plant root. It took a while for me to find the right materials to guide the root. Roots grow into every little hole they can find and it often happened in the begining that the roots stuck to my templates.

I know that there are also dried plant roots found in Pyramids. It would not surprise me that my roots have a longer shelf life than a drawing or a photo.

It was also interesting to experiment with aquatic plants. We thought they were ideal plants, they are strong and clean because they grow in water. In addition, they have water-purifying properties. We soon discovered that aquatic plantroots do not interweave in the water but they just simply float next to each other.

DSa: How have institutions and collectors responded to the organic materiality that characterizes your work?

DSh: Collectors are not used to buying plant roots. Indeed, I often get the question about the shelf life of the work. My textile needs to be protected just like any other work of art from UV light and moisture. For my collectors I keep the work behind museum glass.

The roots have a fairly high acidity and preserve themselves the way they are. You can also compare it to a dried flower. These too have a very long shelf life if they are well preserved. Next to that, I know that there are also dried plant roots found in pyramids. It would not surprise me that my roots have a longer shelf life than a drawing or a photo. Of course I can't prove that yet.

DSa: What are you currently working on?

DSh: I am busy preparing an exhibition for the Kunstverein in Kassel, *Artificial Ecologies*. I will plant a field of gras and other plants 10mtr long in the exhibition space. During the exhibition, the roots of various plants will weave a rug. After a few growing weeks we will harvest the work in the exhibition space.

Next to this I am mainly concentrating on the development of new structures. The work starts in the computer but the real point of departure has already been laid by nature. The structures in my work are based on the construction and ordering principles of nature. This theory assumes that the same elements and patterns reappear in every plant and consist of a geometric order. Mathematicians such as Pythagoras and Euclid were already convinced of a universal building plan constructed by the same geometric principles.

Next to that, I feel the need to intrude colour into the work. I will shortly start dyeing (natural) the material. I have also started a new project. A work about the concept of the *Urplant* by Johan Wolfgang von Goethe. A concept on the ideal

Diana Scherer

Gallery Droog Amsterdam, *Exhibition Hyper Rhizome* Installation view 2020

prototype that contains all the plants of the past and the future. Among the many interesting contributions that Goethe made to morphology, the most valuable and most elaborated is the *Metamorphosis of Plants*, published in 1790. In this book of his many years of botanical studies he derived the entire wealth of forms of the plant world from a single primordial plant and created all the various organs of the plant by manifold transformation and formation of a single basic organ, the leaf. In which way exactly this new project is developing , I don't know yet.

I already made a work based on his scientific theory in light and colour work a few years ago. The installation *Spectrum Crops - Findings in Color* was a botanical test on the decomposition of the lightspectrum in different colours. For this project, I built six greenhouses in which the same plants were grown. Each greenhouse consists of a different coloured stained window, in order to stimulate the developmentof a plant in different ways under the influence of one isolated colour from the light spectrum.

Diana Scherer is a visual artist living and working in Amsterdam. She was born in Lauingen, Germany and studied fine art at Rietveld Academy in Amsterdam. Her practice encompasses photography, material research, plant root-weaving and sculpture. She has exhibited in several international solo and group shows: Kunstverein Kassel - *Artifical Ecologies*, *Earth Matters*; Textile Museum Tilburg, *Art & Science Exhibition* Tasis National Museum Beijing, *Springtide;* Photography Museum Rotterdam and *A Queen Within – Adorned Archetypes*; New Orleans Museum of Art. She published two books at Van Zoetendaal Publishers; *Nurture Studies* 2014 and *Mädchen* 2016.

Dawn Sanders has studied both fine art and ecology. Her doctoral research (Geography Department, Sussex University, 2004) examined botanic gardens as environments for learning. She has worked at Gothenburg University, Sweden since arriving as a visiting researcher, in 2011. As an associate professor, her work focuses on interdisciplinary approaches to Life as Plant and the materiality of gardens. Research grants include the project: *Beyond Plant Blindness: Seeing the importance of plants for a sustainable world* (Dnr 2014-2013). In 2019, Dawn edited a special issue of *Plants, People, Planet - Standing in the Shadows of Plants: New Perspectives on Plant-Blindness* (open-access).

Hackers of the ‘wood wide web’: a visual guide

The ancestors of plants could not have moved from the water onto the land some 500 million years ago without striking up a relationship with fungi. Today, nearly all plants depend on the symbiotic mycorrhizal fungi that live in their roots. Some plants have become fully dependent on their fungal partners, and have lost the ability to photosynthesise. These plants are able to draw their nutrition from their photosynthetic neighbours through shared fungal networks, and thus became gateway-organisms to the concept of the ‘wood wide web’. This sequence of images documents the life of one of these peculiar plants, the jungle gentian, Voyria tenella, *and reveals the astonishing intimacy of the association between plants and fungi — an association that lies at the base of the food chains that sustain nearly all life on land, including our own.*

text by **Merlin Sheldrake**

In the rainforests of Central America lives a small gentian flower, *Voyria tenella,* that has lost the ability to photosynthesise. These plants are neither green, nor do they have leaves. They grow in deeply shaded parts of the forest understory where few other plants can live. But how? In most cases, photosynthesis is a fundamental feature of planthood. Without it, *Voyria* are unable to produce the energy-rich carbon compounds — sugars and lipids — that they need to live. In fact, neither are they able to take up mineral nutrients and water from the soil. Their roots have evolved into clusters of fleshy fingers ill-suited to absorb anything at all.

Over ninety percent of plants depend on mycorrhizal fungi — from the Greek words for fungus *(mykes)* and root *(rhiza)* — to provide them with mineral nutrients from the soil such as nitrogen or phosphorus. In return, plants provide their fungal associates with the carbon compounds produced in photosynthesis. Both have evolved to farm each other. The relationship is ancient, and prolific. Without fungi, the algal ancestors of plants would have been unable to move out of the water and onto land around 500 million years ago. It was another fifty million years before plants evolved roots. During this time, mycorrhizal fungi were plants’ roots, providing nutrients and water scavenged from the ground. The word ‘mycorrhiza’ depicts this chronology: roots *(rhiza)* followed fungi *(mykes)* into existence. The mutually beneficial relationships between plants and mycorrhizal fungi lie at the base of the food chains that sustain nearly all subsequent life on land.

Voyria, like most land plants, depend on mycorrhizal fungi. But their symbiotic manners differ. Photosynthetic plants receive mineral nutrients from their fungal partners and in return supply the fungi with energy rich carbon compounds. *Voyria* have evolved a way to bypass this exchange. Instead, they draw both carbon and mineral nutrients from their fungal associates and don’t seem to give anything back. Then where does Voyria’s carbon come from? Voyria’s mycorrhizal fungal partners obtain all of their carbon from photosynthetic plants. This means that the carbon that powers the life of *Voyria* — and which makes up the stuff from which they are made — must come from nearby photosynthetic plants through a shared fungal network. If carbon couldn’t pass from plant to plant through mycorrhizal fungi, *Voyria* could not exist.

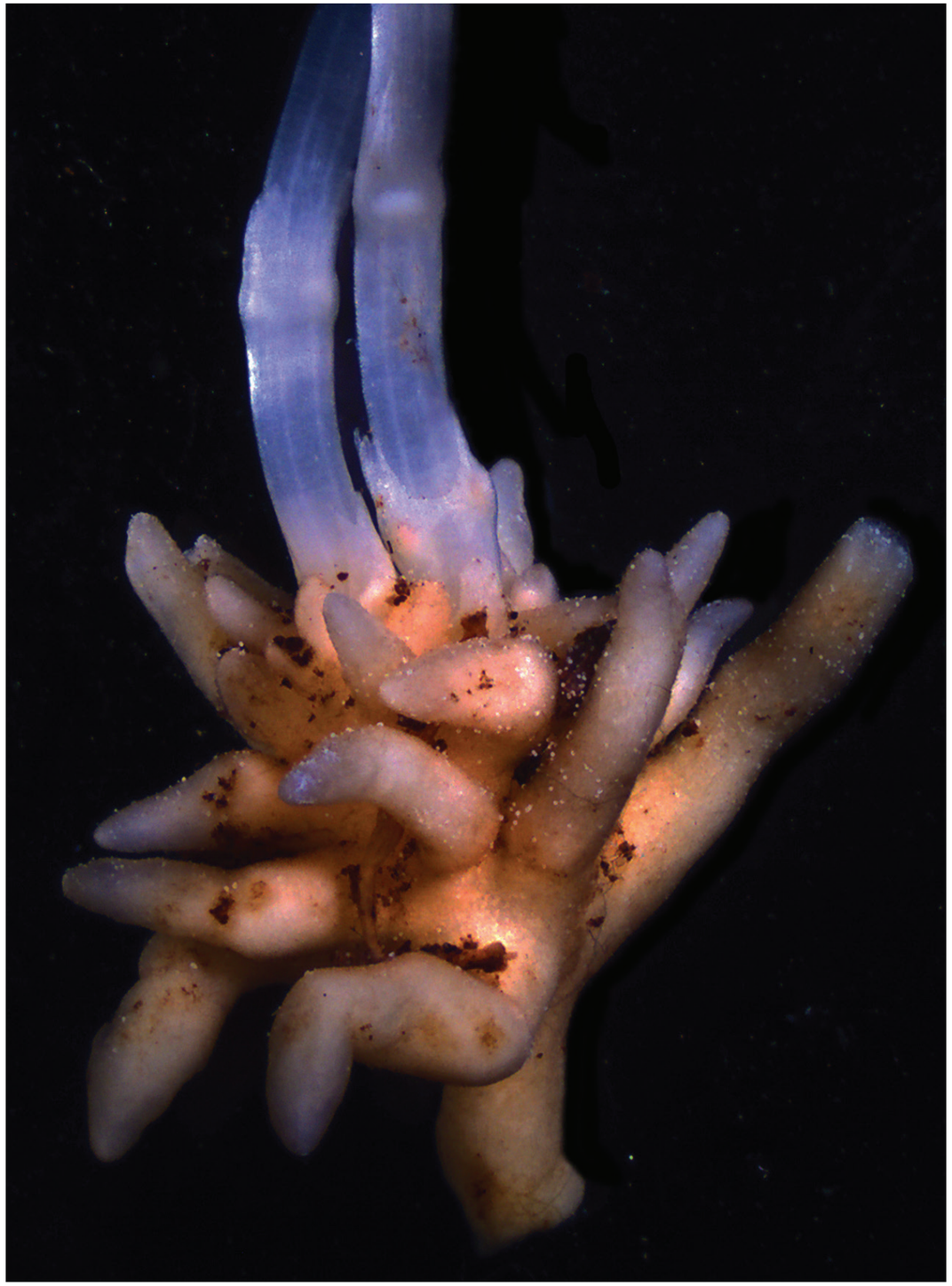
Voyria are what’s known as ‘mycoheterotrophs’. ‘Myco’ because they depend on a fungus, ‘heterotroph’ (from ‘hetero’, meaning ‘other’; and ‘troph,’ meaning ‘feeder’) because they don’t photosynthesise and have to obtain their energy from elsewhere. Around ten percent of plant species share the habit: it is a way of life that has evolved independently in at least forty-six separate plant lineages. Some species, such as *Voyria,* remain mycoheterotrophs for their whole life. Some — like most species of orchid — live as mycoheterotrophs when they’re young, and start to photosynthesise when they grow older, an approach known as ‘take now, pay later’. *All* twenty-five thousand species of orchid are mycoheterotrophs at some point in their development, whether they take now and pay later, or take now and continue to take later, as *Voyria* does. Because fully mycoheterotrophic plants like *Voyria* don’t appear to give anything back to the fungus, they are sometimes described as parasites. However, it isn’t known whether mycoheterotrophs provide other benefits to fungi, such as protection or vitamins, in return for nutritional support.

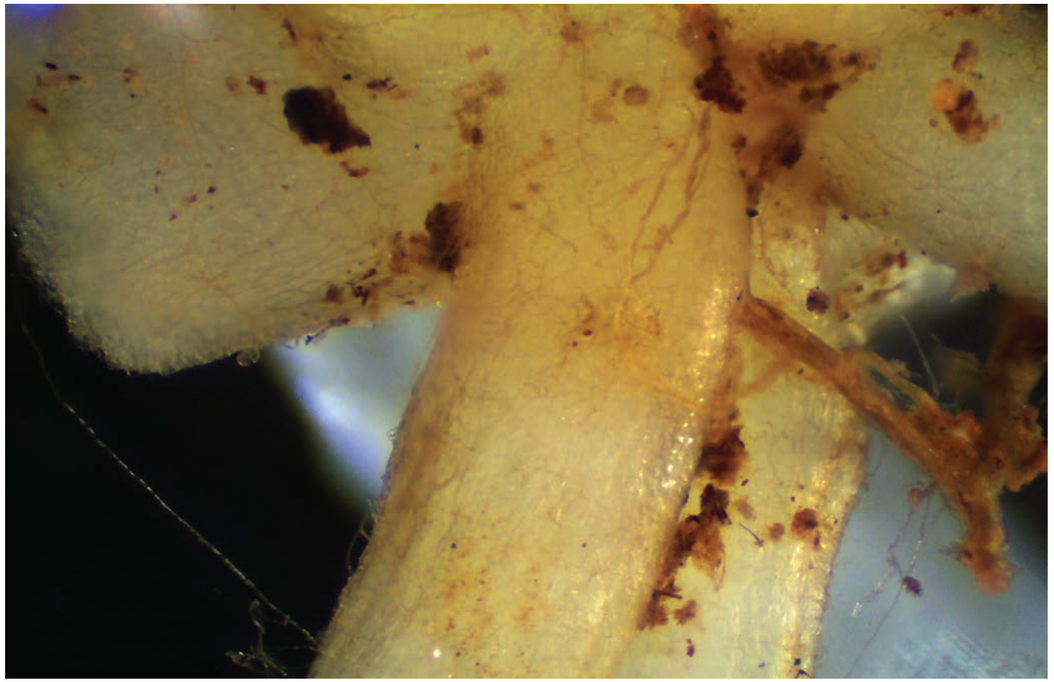
Shared mycorrhizal networks arise because both plants and mycorrhizal fungi are promiscuous and can form relationships with multiple partners. And indeed, mycoheterotrophs aren’t the only plants to receive nutrition from other plants via fungal connections. Since the mid 1990s, it has been known that some species of ‘normal’ green plant behave in similar ways. For example, in the temperate forests of British Columbia, on the west coast of Canada, carbon passes between birch trees and Douglas fir trees, flowing ‘downhill’ from larger plants with more access to resources into smaller plants. A wide range of substances have since been found to pass between plants via shared fungal connections — whether nitrogen, phosphorus, water, toxins, the chemicals that regulate plant growth, and even signalling compounds. These shared mycorrhizal networks are sometimes referred to as the ‘wood wide web’.

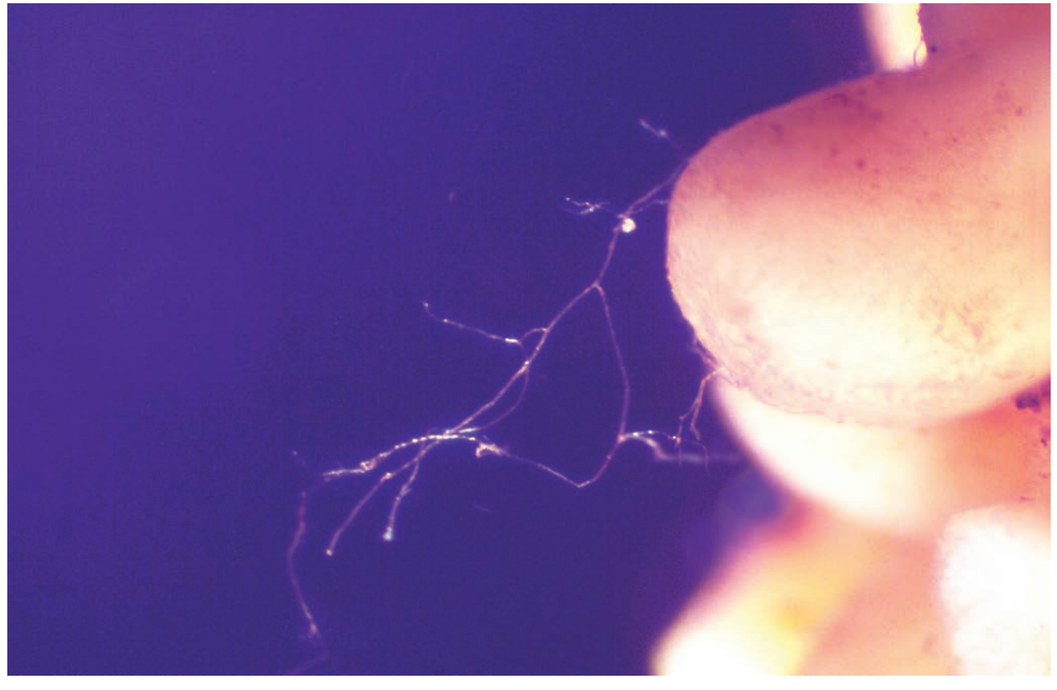
Mycoheterotrophs — ‘hackers’ of the wood wide web — lured botanists into discovering an entirely new biological possibility, making them gateway organisms to the concept of shared mycorrhizal networks. Perhaps it is no surprise. Released from the need to have leaves or produce chlorophyll — the green pigment that makes photosynthesis possible — mycoheterotrophs are free for evolution to pull them in new aesthetic directions. Many are eye-catching and charismatic, and their peculiar appearances have long been the source of puzzlement. ‘Ghost pipes’ *(Monotropa uniflora),* look like clay tobacco pipes balanced on their ends. The snow plant *(Sarcodes sanguines)* is a brilliant red, and in 1912 was described by the American naturalist John Muir as ‘a bright glowing pillar of fire’. In tropical forests in Panama, I spent many weeks scuffing along peering at the forest floor searching for *Voyria* in the hope that these curious plants could tell me something about what was taking place underground. In this sequence of images, I follow *Voyria* from its flowers into its roots to portray the strange beauty of these organisms and the astonishing intimacy of the symbiosis between plant and fungus. *Voyria* serve as periscopes into the mycorrhizal underground.

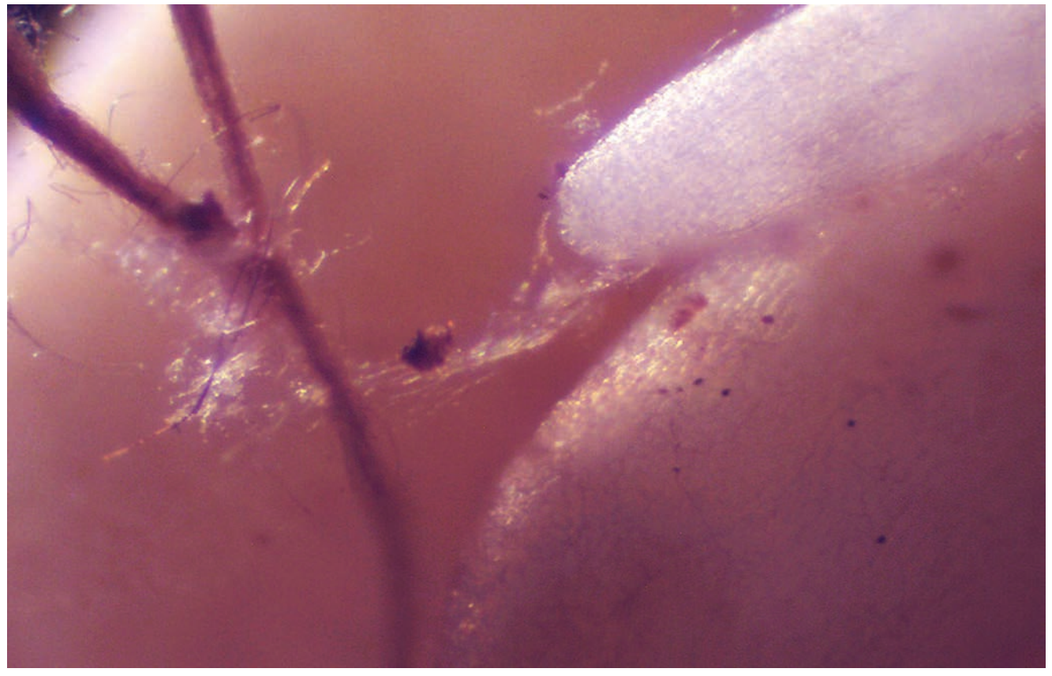
Above: *Voyria tenella* growing in a rainforest in Panama. *Voyria* produces what are known as 'dust seeds', which are among the smallest produced by any plant (many orchids also produce dust seeds). Their size means that they are easily dispersed, but there is a tradeoff: dust seeds contain no stored nutrients to sustain the early growth of seedlings. *Voyria* seeds must encounter a mycorrhizal fungus before they can germinate. From the very beginning of their lives, *Voyria* depend on their fungal partners for nourishment. Photograph: Christian Ziegler.

Right and top of page 38: The root systems of *Voyria* are poorly adapted to the task of absorbing minerals and water from the soil, and have evolved into fungal 'farms'. Mycorrhizal fungi crowd into their roots in a tangled mass. A close look will reveal fungal hyphae encasing and trailing off the roots. This is particularly visible in the top image of page 38, where small fragments of soil remain caught in the sticky fungal web — a rare glimpse of the connections that link plant roots and their surroundings. On the right, the vestiges of *Voyria's* leaves are visible as small scales that tightly hug the stem. The root clusters of *Voyria* range from 50-150 millimetre across.

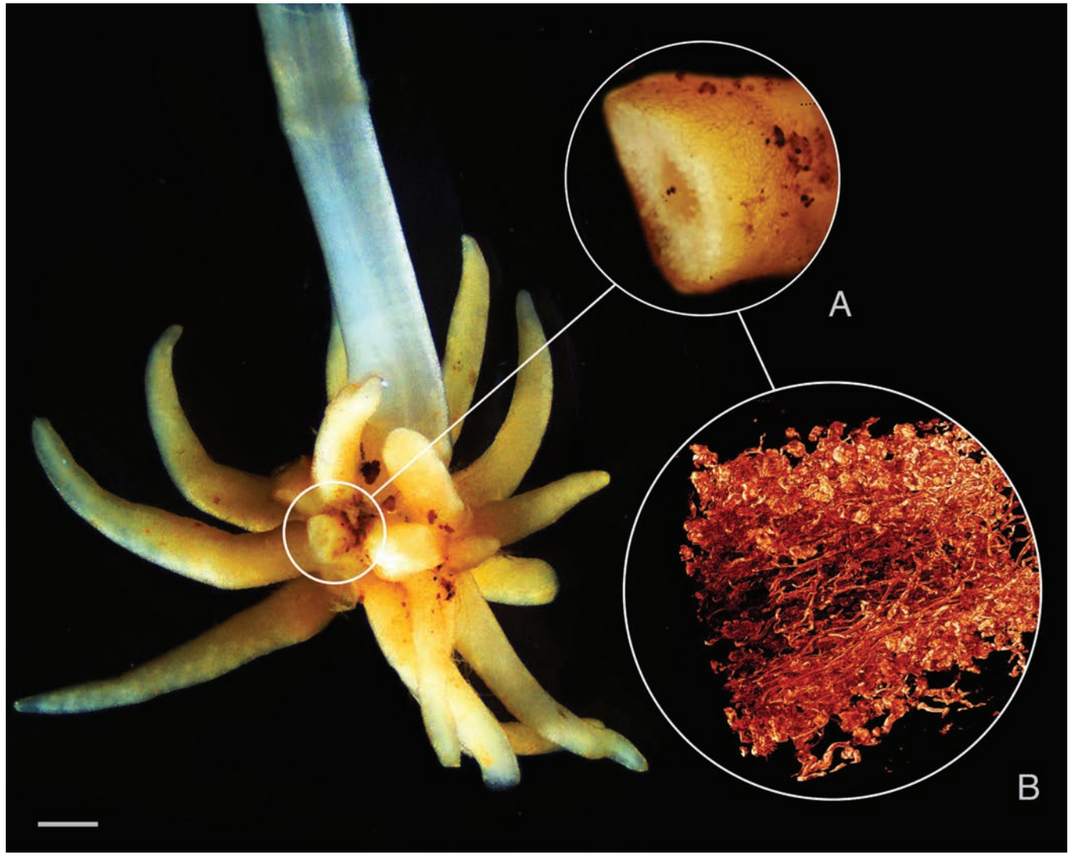




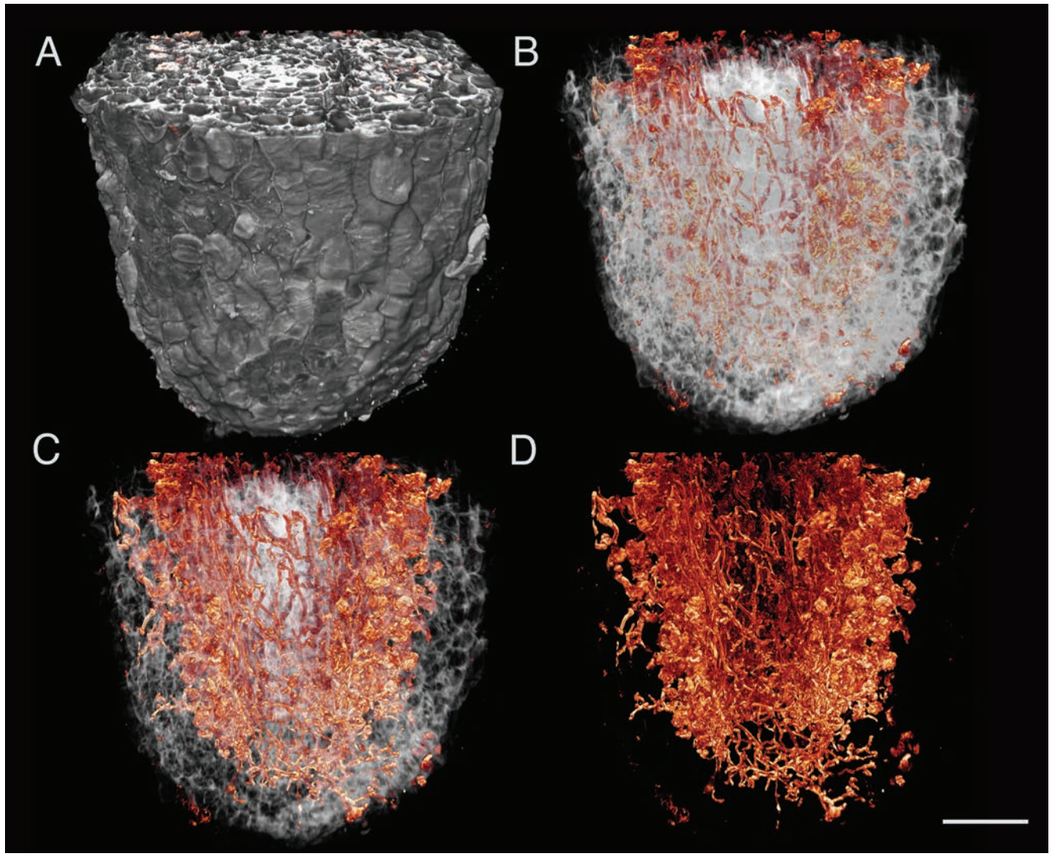




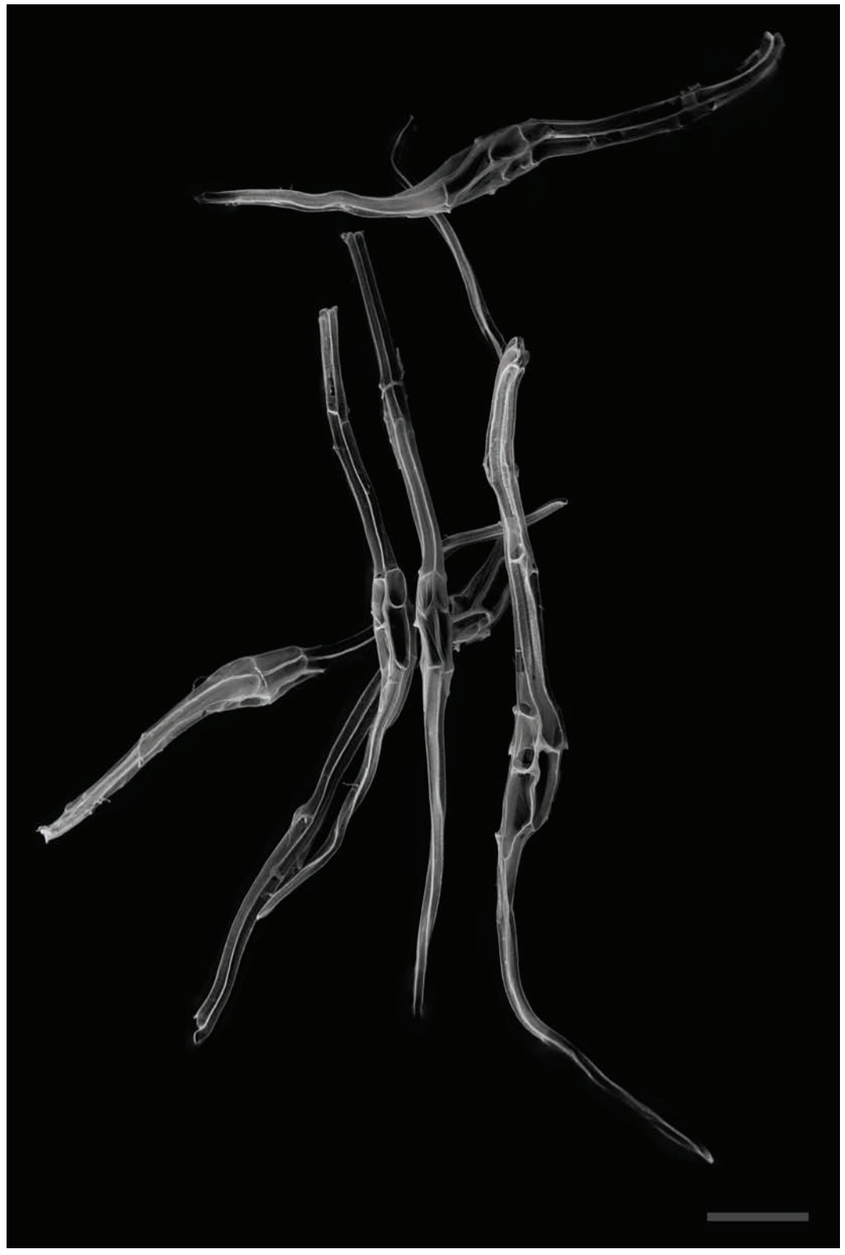
Bottom left and above: Mycorrhizal fungal mycelium laces out from *Voyria's* roots. Above, the hyphae tousle into a thick brown weft on the lefthand side of the image.



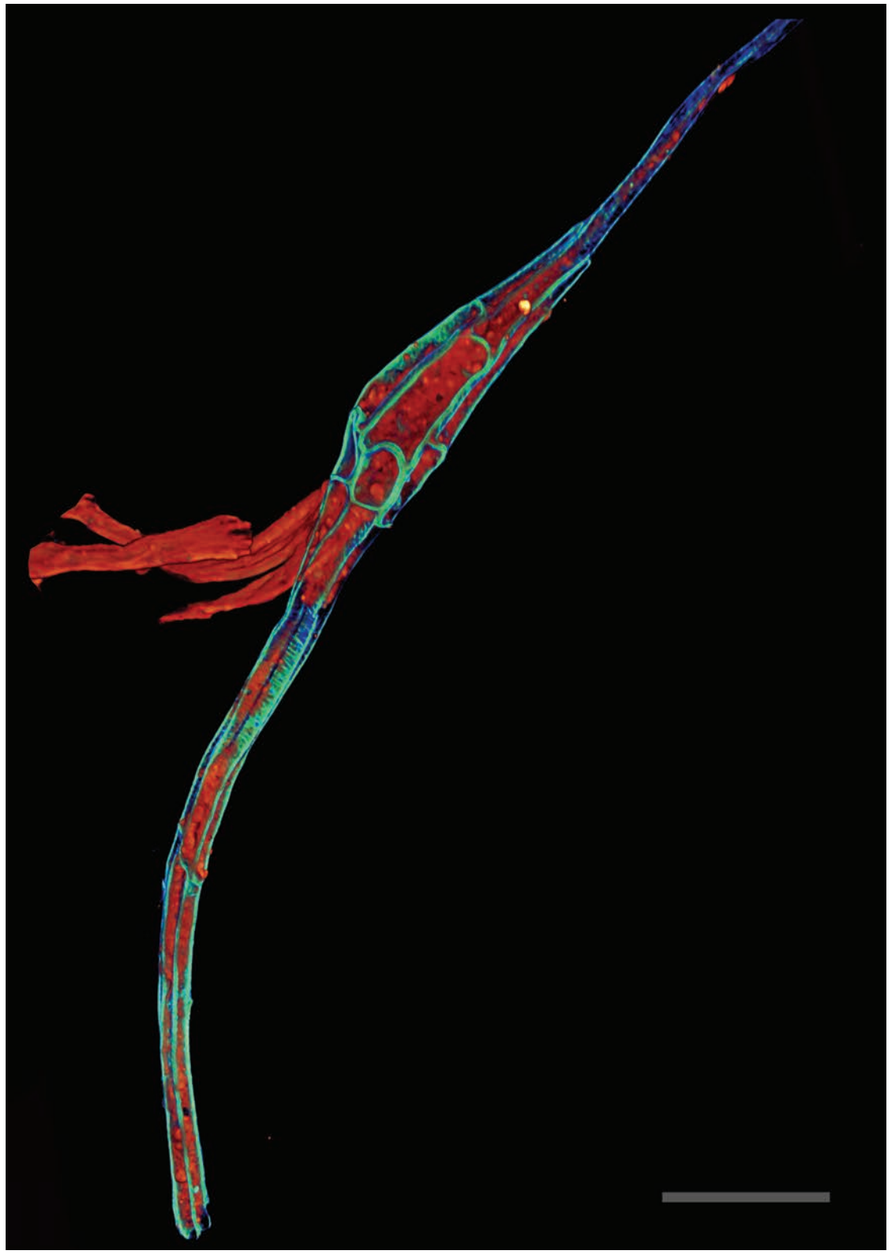
Intimacies within intimacies. Composite image revealing the fungal tissue within the roots of *Voyria,* where fungal hyphae ravel into knots and coils. In A, fungi are visible as a light-coloured ring around the central vasculature. In B, plant tissue is not shown, and fungal tissue is rendered in red. Scale bar = 1 millimetre.



The same root tip is shown in A-D, with the plant tissue (coloured grey) made increasingly transparent to reveal the fungus within the root (coloured red). Within Voyria's roots, fungi are carefully contained within certain specialised tissues. Within plant cells, fungal hyphae swell into coiled bladders and eventually burst, releasing their contents. Scale bar = 100 micrometres.



Voyria's dust seeds. Scale bar = 100 micrometres.



Conception. Mycorrhizal fungal hyphae (shown in red) growing into one of *Voyria*'s seeds prior to germination (plant material is shown in green-blue). This isn't sex: plant and fungal cells don't fuse and combine their genetic information. But it is sexy: for a *Voyria* plant to arise, two different organisms must meet, incorporate each other, and collaborate in the building of a new life. To my knowledge, this moment has never before been observed. I collected thousands of *Voyria* seeds, sealed them in small bags made of fine nylon mesh, and buried them in pots in a greenhouse in which grew tree seedlings. After several months I pulled up the bags and searched through them to see if any had sprouted. Of more than a thousand mesh bags, only a single bag contained germinating seeds. Note that the red material in the 'whiskers' of the seed is unlikely to represent mycorrhizal fungal tissue, and probably depicts yeasts. Scale bar = 500 micrometres.

Note on methods: I used a Leica dissecting microscope with a moveable light source to obtain the images on pages 37 to 39, and a scanning electron microscope to produce the image on page 42. To obtain the images on page 41 and 43, I used confocal laser scanning microscopy. This technique uses lasers to scan 'slices' of a sample, which can later be reconstructed into a three-dimensional projection. Plant and fungal tissues are first stained with fluorescent dyes, which produce a signal when stimulated by lasers of differing wavelength. Plant and fungal tissues are stained with different dyes, and so can be stimulated with different lasers. This allows plant and fungal images to be collected on separate channels. Using this approach, it is possible to selectively display plant and fungal material. The image on page 40 is a composite of light and laser scanning microscopy.

Acknowledgements: Camilo Zalamea operated the scanning electron microscope used to produce the image on page 42. Magnus Rath developed the method used to obtain the confocal images, and with enormous skill and precision prepared many of the samples. Stephan Imhof hosted me in the lab where images on pages 37-41 and 43 were obtained, and offered patient expertise and encouragement throughout. The Smithsonian Tropical Research Institute (STRI) served as the base of operations in Panama and provided invaluable logistical support.

Merlin Sheldrake is a biologist and bestselling author of *Entangled Life: How Fungi Make Our Worlds, Change Our Minds, and Shape Our Futures*. He received a Ph.D. in tropical ecology from Cambridge University for his work on underground fungal networks in tropical forests in Panama, where he was a predoctoral research fellow of the Smithsonian Tropical Research Institute. Merlin is a keen brewer and fermenter, and is fascinated by the relationships that arise between humans and more than-human organisms. Find out more at merlinsheldrake.com.

Beware of imposters (the secret life of flowers)

Cemeteries are complex multi-layered sites where flowers become a symbolic language for connecting to ghosts; they enable the invisible labour of mourning. Rural cemeteries are often sites of refuge. Less manicured than urban gardens, they are places that ironically hold open space for remnants of biodiversity to find sanctuary. An orchid specialist told me of an 'endling' that lives in the Campbelltown graveyard, in the midlands of lutruwita (Tasmania) and I have been visiting the site ever since. When I visit this cemetery I am looking for the living orchid, Prasophyllum- taphanyx, the last of its species, growing among the human dead.

text and images by **Selena de Carvalho**

Rural cemeteries are often sites of refuge. Less manicured than urban gardens, they are places that hold open space for remnants of biodiversity to find sanctuary. Orchids are masters of queer ecology and interspecies relationships. This interspecies sexuality means orchids are sensitive to disturbance and do not proliferate in contexts that lack either their companion insects or mycorrhizal fungal partners that enable nutrient acquisition.[1] Holobionts, they comprise multiple discreet entities, relationally enmeshed in complex-life enabling ways.[2] An orchid specialist told me of an 'endling' that lives in the Campbelltown graveyard, in the midlands of lutruwita (Tasmania) and I have been visiting the site ever since. The island lutruwita has an ever-present sense of haunting, the result of British colonizing efforts and genocidal agendas. Place names, such as Campbelltown hint of absence and the horror of colonial pasts, still present. Once a diverse native grassland, the midlands is now an arid, agricultural stretch of land studded with heritage estates, stark in contrast to the green ecology in much of the rest of the state. Found only in this haunted place, *Prasophyllum taphanyx* is the last of its species, hence the term 'endling'.

In contemplating the fate of this orchid, I have collected stories, shared water, read letters written by artists, played a recorded archive of people singing the chorus 'I never thought that I'd love somebody like you' (from the song *Wicked Game*)[3] and sat alongside this plant among other plants, lamenting the presence of weed killer and the tightly mown lawn. These actions form part of the work *Beware of Imposters (the secret life of flowers)* a participatory installation and series of ongoing engagements that seek to cultivate an anti-anthropogenic kind of attention through enacting poetic gestures of witnessing, as a means of drawing attention to the ecological hauntings of this time.

Derrida's notion of hauntology,[4] the potentiality of a ghostly absence and presence, neither living nor deceased is synonymous to sites that have been disturbed, places visited that no-longer exist, experiences amassed within

Selena de Carvalho

Beware of Imposters [the secret life of Flowers], participatory installation documentation, 2018 © Selena de Carvalho

bodies (human and more-than-human) and disembodied experiences held within technology. Theoretical physicist Karen Barad[5] also writes of speculative indeterminacy, of time-being layered with infinite multiplicities of histories present/absent, haunted by im/possibilities. Hauntings are not immaterial. They are an eternal feature of existing material conditions. 'To live in Tasmania is to live the eye of the storm',[6] to live amongst the largely unspoken, ethnic cleansing that colonists embarked upon following their arrival and the resulting Black War (in which 200 Britons and 1000 Aborigines died).[7] The ongoing colonial engagement with land permeates expansive areas of cleared grazing land iconic to the midlands. In the absence of Indigenous care for Country, the land is thirsty, overgrazed and lacking ecological diversity. In recognizing ecological hauntology, creative translation becomes a potential pathway to attune oneself to survivors of, and witnesses to decline, as well as a form of enacting care through critical creative storying.

Sarah Ahmed notices that 'a feminist life is how we get in touch with things',[8] and this atonement could also be translated as the way feminist stories are told as 'relational' and how 'survival can be' a form of protest. In making public these acts of witnessing the context of the cemetery, a privately owned allotment of land, upon which the owners continue to make choices that create adverse conditions for survival, the cemetery could be named as an ecological crime site or ecocide.[9]

Within my creative practice, I position myself as a witness, which can be defined as someone who is present, who has seen something happen, especially an accident or a crime. In law, a witness is someone who provides testimonial evidence, either oral or written, of what they know or claim to know. To witness is to make public, to hold oneself and be held accountable. This act of witnessing the witness (in this case, the endling orchid), archives experience, suspended in time. Moments witnessed are later opened up through creative translation in attempts to 'speak' for those that cannot speak, or those that speak but cannot be understood by human ears. Witnessing becomes active, capable of response-ability, acknowledging the diverse world making abilities of plants as assemblages.

I position myself as a witness, which can be defined as someone who is present, who has seen something happen, especially an accident or a crime.

In this sense considering the concept of assemblage as a 'coming together', a constellation of intra-activity between discreet entities, 'becoming' produces emergent qualities, as theorised by Deleuze and Guattari[10] (explored by later generations in different ways by Haraway, Bennet, Latour and Massumi). Rather than conglomerates (materials glued together by a substrate), these heterogeneous, compositions are sympathetic to the condition of holobionts, assemblage extends the individual, allowing us to imagine/ perceive relations of exchange between parts and wholes. This concept is synonymous with material and conceptual elements of 'artwork', installation practices assemblage. The installation brings together concepts, materials, skills, and in this case participants, to complete and become the work. 'Beware of Imposters' is more than the sum of its parts; it operates as a network — a multi-directional intra-active techno-ecology of creative and political exchange.

Ecological networks are not just transactional relationships- but intimate conversations of exchange. In many instances, to evolve is to relate, to grow in relationship. According to Margulis,[11] symbiosis, initially defined as 'unlike organisms living together' by German mycologist HA DeBary (1879), has swayed between perhaps more palatable anthropocentric/human-social interpretations of mutually helpful relations as opposed those that are perceived as unequal (by applying narratives of the stories 'we humans' like to hear). In the early 1900s, numerous Russian biologists and academics investigated *symbiogenesis* (the role of symbiosis in evolution); while in contrast American and French contemporaries investigating this field were thwarted and ridiculed. Margulis speculates that the feminine connotations of symbiosis and mutualism may have underpinned a perception that research on these topics was unimportant; hence the way the term symbiosis was obscured (as a synonym of mutualism) not only its literal meaning but also the phenomenon's instrumental role in evolution. Following Margulis, Haraway[12] puts forth the term 'sympoesis' meaning 'making with' which she articulates as 'a word for worlding'. An evolution of the intricate patterning first recognized as symbiosis. Based on a community of interests, networks of solidarity (as chosen modes of behaving) could be interpreted as resonant to symbiotic lifeworlds.

Politically, networks of solidarity enact the multiple through pro-active forms of affinity. A vital element of the ethics of solidarity is the necessity of reckoning with complex histories and difference. This reckoning involves challenging complicity, simultaneously being aware that complicity is inescapable; inescapable due to the intra-action between micro and macro scales of being, such as global actors of climate change interacting with local vulnerability.[13] For example, while I may choose to behave out of an ethically considered, site-specific, place-based care-full manner, the political and capital powers that frame the social structures and resource acquisitions with which I engage, and exist within and amongst, are powerfully overarching--thus, I am complicit. While this may be uncomfortable and at times, challenging to acknowledge,[14] it is crucial to remain critically engaged with, attentive to, and draw on this complexity as motivation for pro-active responses, so as not to lapse into a bystander approach to witnessing.

Queer ecology is another framework of observation that pushes back

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Beware of Imposters [the secret life of Flowers], moving image still, 5:19min, 2017 © Selena de Carvalho

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Beware of Imposters [the secret life of Flowers], moving image still, 5:19min, 2017 © Selena de Carvalho

against the nature/culture binary, unsettling cultural and codified beliefs of hetero-normative behaviours as the superior 'natural' mode of being. Ahmed puts forward that queer could be affirmed by what you are not, rather than what you are,[15] as somewhere/someone outside the bounds of definition. Johnson[16] acknowledges queering as potentiality, as opposed to nonconformity. Contradiction, fluidity and multiplicity are the dynamic, pro-active languages of queering, not only on the margins but integral to the fabric of existence. Queer make up the abundance of diversity that constitute a multiplicity of ecological worlds.

Frequently settler/ colonial cultures construct values around neatness, yield, aesthetics and order, which are often privileged over biodiversity or 'the mess of complexity'. Val Plumwood[17] identifies these values in the rural attitudes and behaviours that convey care and pride (such as 'tidy peaceful landscapes') also recreate and extend ongoing acts of colonisation and ecological violence. In 'The Cemetery Wars: Cemeteries, Biodiversity and the Sacred', Plumwood describes how, in a neglected 'messy' end of the untended graveyard, native grasslands and orchids re-emerge. This 'cemetery' could be any number of places: the side of a road, an abandoned lot. Neglect, or lack of domestic/agricultural interest, allows biodiversity to re/assemble.

The small midlands cemetery I've been visiting, for years now, is on the edge of a rural town, next to a highway. When I visit, I am looking for the living orchid, *Prasophyllum taphanyx*, growing among the human dead. The ritual space of death has a long, rich culture. This pilgrimage, which itself has become a form of ritual for me, is surreal, repeatedly looking for something that may no longer have form. A ghost plant.

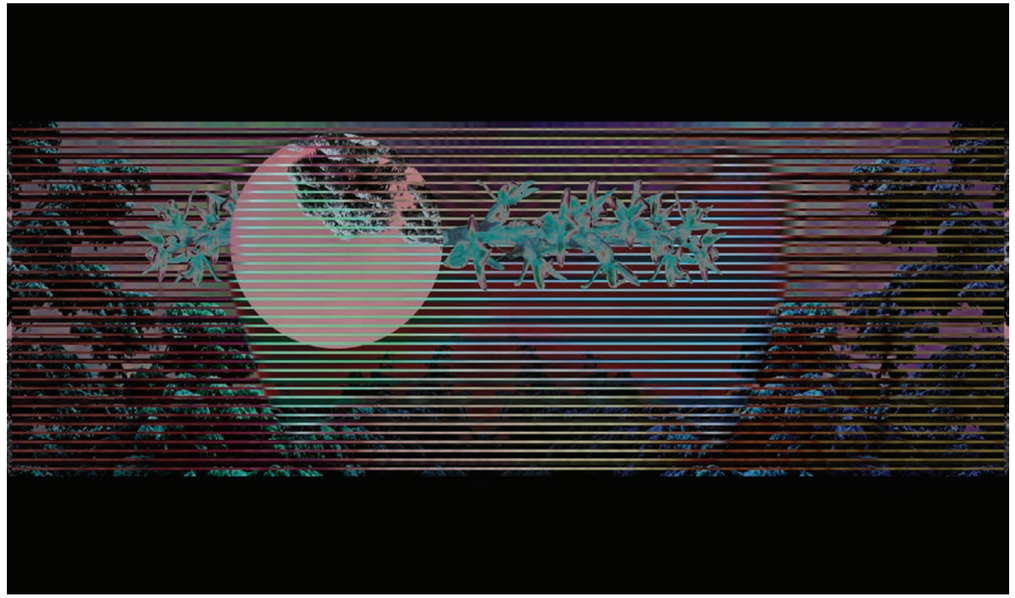
The space of death can be a threshold that allows for illumination as well as extinction. Contemplating decomposition and mortality (humans also compost) are inevitable phenomena of the cemetery. Death, decomposition, and decay are integral in the composition of nutrient-rich ground, (the soil biome) cultivating the environment in

Selena de Carvalho

Selena de Carvalho and Dan Rooke, [That orchid; it remained silent], aluminium plaque, 2017 © Selena de Carvalho

which life can reemerge. *Beware of Imposters (the secret life of flowers)* takes its title from the prolific offerings of immortal plastic flowers that adorn gravesites the world over. A ritual that enacts the desire to connect grieve and pay homage to loved ones passed, while also maintaining the tidy appearance of care, convenient for those with less opportunity of frequent visits. Flowers become a symbolic language for connecting to ghosts; they represent the invisible labour of mourning. Perhaps these never decaying flowers are all too fitting in this age of extinction and the mourning it will bring. Reverend Jeff Sickland,[18] however, bans plastic flowers from the cemetery he oversees. For him, the plastic bouquets miss the point of the metaphor of (real) flowers: 'the beauty that weathers and decays'.

In the Campbelltown cemetery, extinction, the ultimate death of a species, sits side-by-side nostalgic pollution, resistant to cycles of decay and regeneration. Death of an entire species, the erasure of its web of relations and life-world, is perhaps the ultimate haunting. If flowers enable links to ghosts, can a ghost flower that haunts through



Selena de Carvalho

Beware of Imposters [the secret life of Flowers], installation still, 2018 © Selena de Carvalho

translation as an artwork enable the consideration of trauma and loss with regard to the more-than-human world?

During flowering season in the Campbelltown cemetery, the Department of Threatened Species (whose acronym is DPIPWE) installs a low bunting fence of orange plastic triangles that hang 20cm off the ground. Taking on the ridiculous appearance of a clown grave, this 'fence' attempts to safeguard the patch of ground (where the plant was last seen), from the lawnmower and weed killer. Thus far, there has been absolutely no visible sign of the orchid. The more research I do, the more I discover cemeteries are sanctuaries, places that ironically hold open space for rare, remanent plants, animals and often homeless humans too. I recently read about a graveyard in Germany established explicitly as a measure to 'protect a stand of ancient trees from logging',[19] a welcome redefining of value. Perhaps though, in this public/ private realm of the colonial cemetery, rather than a refuge, this context is one of solitary confinement. A barrier can act as a layer of protection, other times a boundary incarcerates. 'It is the practice of colonialism to use borders for self-serving strategies — to be blind to borders, to deny their existence, to name new borders, to trespass across borders, to guard borders — to gain or protect territory'.[20] Some time ago I suggested to DPIPWE (the government body tasked with caring for threatened species) that we should try to purchase the cemetery, or at least the plot, to offer the orchid a more permanent opportunity for regeneration. I was told that they had suggested this to the church and were met with opposition. I was asked to tread lightly around this sensitive topic. The life and death of these organisms are inextricably entangled with human-made territories, cycles of life and death, as well as human cycles of neglect and care.

Recently I drove past a gang of council workers, clad in white chemical suits, clouds of red herbicide/ pesticide billowed past car windows as they 'fought' the

weeds on the traffic island. The vision was filmic. Surreal. An absurd manipulation of threat positions weeds as more dangerous than chemical inoculations, proven to be carcinogenic. I have visited the cemetery when these same chemicals stain the ground bordering graves. As Ahmed notices, 'it is dangerous to be perceived as dangerous'.[21] It is dangerous to be messy.

The orchid's dilemma holds a potent irony and a poetic sadness. Its predicament could read like a metaphor for the current climate regime or an allegory for 'the long emergency'[22] in which vulnerability is intimately perceived and locally experienced, yet it seems complicated to remain attentive to the complexity of interconnectivity and global climate risk.

My interest in *Beware of Imposters (the secret life of flowers)* is to explore this death space through an anti-anthropocentric perspective, as a form of ritualized participatory art-work. In stating this, I recognise that it is impossible to deconstruct my being 'human' modalities of perception or umwelt. In the same way that I align with and practice 'decolonising methodologies',[23] yet I recognize that I cannot deconstruct my heritage, or the culture within which I exist. I can, however, question and critically reflect, in so doing recognize and celebrate difference, as an ally or accomplice.

As a sort of conclusion to this project, I visited the Royal Hobart Botanical Gardens Seed Vault. The gardens have not had success in collecting seeds of *Prasophyllum taphanyx*, but if they had, they would also need to collect their mycorrhizal fungal partners. Each companion in this tangle of holobionts requires different conditions for suspended animation. Seeds for orchids are frozen, while fungi require humid conditions for survival. Even though the seeds and fungi may persist in this state, germination requires yet another balancing of elements. To proliferate, fungi need adequate and sometimes site-specific 'food' (nutritious decay). Without this, they may draw nutrients from the seed, effectively killing it. The seed, on the other hand, requires the fungi to wake it up, to germinate. When life world collaborators, intrinsically entangled in existence are separated as discreet entities, reductionist, but caring approaches of maintaining 'species' becomes a care-full multi-faceted, inter-species affair.

To be attentive to something is to give it the gift of your time. In this present era, in which attention is so heavily co-opted and commodified, time takes on a new status that has dimension and in many cases, capital.

To be attentive to something is to give it the gift of your time. In this present era, in which attention is so heavily co-opted and commodified, time takes on a new status that has dimension and in many cases, capital. For *Beware of Imposters (the secret life of flowers)*, I composed a format that was both durational and for one person only, with each participant spending 13-minutes amongst and within the assemblage. The experience is scored in a particular order. This score is a conceptual reflection on the orchids' solitude. Attention is captivated, and time is the medium.

As the audience member passes through the doorway into the installation space, a movement-triggered sensor evokes a sound world delivered through blue tooth headphones. This choreographed, ritualised (repeated) engagement does not vary, but the participants and their responses do. The audio begins with a voice disclosing a narrative that blurs fact and fabulation, exploring notions of loss and tragedy, from small mistakes to larger misfortunes, a human subjective narrative expands out across species, epochs, and disasters.

> 'You just left the fuel cap on the roof of your car and drove away, you are looking for someone you shared a moment within a bar five hours ago, your eight-year-old son lines up for ice-cream in Disneyland and this is the last you ever see of each other, your house, the house you grew up in, your home for decades, burns taking your family and everything you have ever owned, the place where your grandmother and her grandmother and her grandmothers' grandmothers were born is turned into a sewage plant, a landmass, that ancient part of you that broke away during Gondwana and drifted south supposedly into the middle of no-where, is a toxic dumping ground for nuclear waste, the planet you have been orbiting for eternity explodes and you lose your way…'[24]

This introduction is composed as a conditioning period, allowing the participant to 'enter'

physically and imaginatively into the assembled art-world. Presence with the more-than-human, through imagination, becomes a conduit for critically seeing/ sensing, dreaming and translating experience. Imagination is a lingering of the internal attention, without the need to make meaning of, assimilate or incorporate, composing the conditions of possibility. In imagined and real networks of solidarity, 'we' could become the pronoun.

Within the dimly-lit room resides a burnt vanity table with a circular mirror, inviting the viewer to take a seat. The vanity is scattered with scruffy dried and fake flowers (collected from graveyard rubbish bins), jars of seeds (souvenired from a pepper tree in a Melbourne graveyard), an old dictionary, alongside several other worn miscellanea that appear somewhat abandoned, not unlike a forgotten gravesite.

Projections mapped to these items punctuate the spoken narrative as well as make animate the objects in situ; a bird flies from a pair of hands; a drive past a dilapidated house is projected onto the open book; a small fire burns in the ashtray; light refracts through a ball of blown glass. The vignettes build tone and establish a sense of environment but don't directly visualize the spoken word. The world of the work feels private even though it is set within the public space of the gallery. There is only one person in the room, held by the intimacy of voice whispering into their ear via headphones. In the mirror, when they look up, they can see both themselves and a large-scale silk print in the background. This print reveals collaged images of the *Prasophyllum taphanyx* orchid. The palate is based on insects' ultraviolet vision and interpretation of flowers. This use of colour is a form of code, a realm just out of reach of meaning,[25] it references one of the ways that insects involve themselves in the lives of plants and visa versa.[26]

Sound re-calibrates the way the listener looks at objects and spaces. Richard Allan notices the way wearing headphones changes the experience of perceiving. This interrelation offers 'a way of thinking about the materiality of the encounter'

Sound re-calibrates the way the listener looks at objects and spaces. Richard Allan notices the way wearing headphones changes the experience of perceiving. This interrelation offers 'a way of thinking about the materiality of the encounter'.[27] Field recordings taken from the Sacred Heart cemetery in Campbelltown add a finely crafted nuance to the audio journey. Mixed by composer Joel Roberts (who accompanied me on numerous cemetery visits), layers of this disembodied place are called upon as samples, they perform memory as the act of hearing what is not really there. Recordings are captured and 'sent back' through technology composing a sort of absence presence or a 'kind of haunting'.[28]

A shard of light illuminates an antique perfume bottle. Engraved with small flowers and equipped with an atomizer spray pump, the recording speaks directly to the participant, 'put some on, lets smell delish together…',[29] this non-scent extends the favorable smells of the wearer and references the chemical messaging, or sensorium with which flowers and plants communicate. The direct provocation leads to the finale, where the participant is asked to sing a karaoke version of 'Wicked Game' by Chris Isaak, to 'show the orchid that you care'.[30] Karaoke lyrics are projected onto the open book, and via an automated microphone interface, the voice of responsive participants are recorded singing 'I never thought that I'd love somebody like you… I never thought that I'd lose somebody like you'.[31] Not all audience members are moved to sing, those that are become enmeshed in the techno-ecology of the work, archived and mixed into the virtual in-between-ness of exchange, the intention being to deliver this archive of songs to the Graveside Leek Orchid (*Prasophyllum taphanyx*). The tone of the work to this point has been earnest and poetic; the inclusion of karaoke adds an element of the absurd and popular culture. Humor is another access point into the art-work. While not really being funny, the request to sing shifts focus from the orchid to the participant, who arguably embodies vulnerability and solitude. The participant finds themselves within the assembled art world, singing as a way to connect to the imagined experience of the orchid.

The notion that plants respond positively to music was widely popularized through the book *The Secret Life of Plants* (1973) by Peter Tompkins and Christopher Bird, and although still broadly believed, has been scientifically disproven with no credible evidence surfacing in experiments since this time[32]. However, it is well documented that plants do communicate in various complex modalities, through the rhizosphere of soil, root and fungi networks as well as air-born messaging of volatile organic compounds. Recently scientist Monica Gagliano proved plants to be emitters and receivers of sound, capable of communication beyond the audible human sensorium; she also observed plants ability to hear water nearby through their roots, as well as capacities to learn behavioral responses to events recalled through memory.[33] I play on this speculation of plant listening and communication across species within the work. 'There is a deep and mysterious paradox, for a while music makes one experience pain and grief more intensely, it brings solace and consolation at the same time'.[34] Music is a universal language capable of translating and expressing states and feelings. I had considered 'Who puts flowers on a flowers grave', by Tom Waits, the final choice of song, however was informed by the powerful lyrical narrative, familiarity (while Tom Waits is a well-known artist, the theme chosen is widely known), and as a way to co-opt and re-contextualise a popular human-heterosexual love ballad as a symbolic method of entangled interspecies queering. I decided to work only with the chorus, which reflects on love and loss, not deception and fidelity, which the song also delves into.

Beware of Imposters (the secret life of flowers) was presented as part of a large, Tasmanian, 'gothic' winter-festival, Dark MOFO. Only a fixed and finite number of people could access the work (due to the duration of the solo experience, opening hours and limit of the festival season). This led to an influx of people rushing to see the work, at times lining up for hours. The positive reception of the work was, on the one hand, encouraging and enabling, my hope always with art-work is that it will make connections, to 'affect', the festival context also raised my profile as an artist. It supported the realization of the project, on the other hand, this in no way reflects success for the orchid. The booked out vibe, or desire to experience the work was absurd and ironic when coupled with the fact that we, humanity, are implicated in the highly marginalized, compromised living circumstance for this organism. This drew my attention to the dark reality of how scarcity can become a fetishised point of attraction/ abstraction, especially, (but not only) within the art-world and museum compendium; there also exists a culture of poachers, who seek out rare plants and animals for collection.

One morning the gallery attendant did not arrive, and I sat the space. The first participant to experience the work emerged, tears running down her cheeks. She shared that she was a scientist visiting from an interstate museum and that these were the stories she felt needed to be told in this time of extinction. The work *affected* her. 'When you affect something you are at the same time opening yourself up to being affected, in turn, and in a slightly different way than you might have been the moment before. You have made a transition, however slight.'[35] Solastalgia[36] is experienced as an existential melancholia at the negatively perceived transformation (desolation) of a loved environment. Albrecht developed this concept as a form of psychic or existential stress caused by mining or climate change, a word to translate emotional relations of loss associated with the more than human world. Indigenous peoples, who have intimately cared for the land since time immemorial, have no doubt been experiencing solastalgia well before the current forceful era of climate change.

The work hovers somewhere between installation, theatre and interactive art. This form of immersive durational narrative differs from my previous installations; in the past, I refrained from adding spoken-word narratives, and was focused on allowing the samples to 'speak for themselves'. In this work, the complexity of the concept and 'magic' of the creative world are enacted via the one, time-based, participatory experience. I am not asking viewers to read a wall statement disclosing and contextualizing concepts; the 'information' is embedded in the experience.

The ritual of the artwork attunes audiences through immersion within the temporarily assembled art-world. Engagement sensitises participants to the haunting qualities of loss. At the same time, experience nurtures knowledge and empathy through stories of human-to-human grief, and those of more-than-human complexity, as well as extinction. Conversation is embodied. Smells attract, and repel. Perfumed bodies communicate chemical signals. Records of moments past hold voices, messages sent through mecha-

nised memory are tuned and re-mixed, time is layered though symbolic notes, interpretation may be obscured, but care is delivered in the form of techno-ecological hauntings.

An endemic plant without backup. The Svalbard Global Seed Vault and the Hobart Botanical Gardens fail, there is no compendium: 'no seeds are set, no pollen smeared',[37] the tip of vanishing sharpens as finality and potentiality argue with roundup and neat appearances. The immortal dead own the soil biome, rooted in the labour of 'care', living relatives tend to gentrify the ground. Traces of the art-work/ecological-world are woven into memory and technology; haunted melodies play in the bodies of participants and in the air, soil and stones of a rural graveyard. Soundwaves transmit a symbolic lament.

Beware of Imposters (the secret life of flowers) assembles a mixture of viewing, smelling, listening and improvising. Guided by the score, the audience are choreographed into becoming witnesses in a sympoetic assemblage of solidarity.

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Endnotes

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Last flowers

If doctors said this was your last Spring, what would you do? Last Flowers *is a collaborative project where a photographer responds to a text about death, public and private property, transgression, and the flora of the Spring. At night, we were both being led by artificial light: street lights, motion sensors, fluorescent bulbs reflecting out of windows, and even Christmas lights on those houses that leave their ornaments up year round, occasionally plugging them in; treading the line between a hunter-gatherer, searching for flowers and blooms as if we might never see them again.*

text by **Brian Brett**
images by **Jeff Downer**

If doctors said this was your last spring, what would you do?
My answer has been to roam the night with pruning shears.
Brian Brett.

For this work, I was treading the line between a hunter-gatherer — searching for flowers that I was interested in but are also in line with Brian's beautiful text — and a race against the late sunset. These late spring and summer sunsets produce a light that finds its way between buildings and houses have a brilliant and radiant glow that lands on surfaces for a fleeting moment every dusk before the sun creeps below the horizon or behind a cloud. I found myself chasing these beams of light as they landed on many flowering plants, trees, and bushes that grow in Vancouver.

A large amount of the more unique and exotic flowering plants that I would come across and would want to photograph were on private property, so I started photographing under the cover of darkness. At night I was being led by artificial light, street lights, motion sensors, fluorescent bulbs reflecting out of windows, and even Christmas lights on those houses that leave their ornaments up year-round, occasionally plugging them in. This subtle transgression of trespassing onto private property to photograph is a nod to Brian's 'pruning' or cutting of flowering plants that he finds out in the city, an act that Brian is skilled at, but does not condone.
Jeff Downer

I have returned from another round of thievery. My bedroom is lush with loot, vases of flowers, some still fresh and exuding fragrance, others fading. I am the flower thief of Vancouver, and this is my confession. I plead necessity.

I've been a predator of beauty all my life, and beauty has many faces. As a child, beauty was a plum tree glistening purple, with dripping sap and cracked plums and ecstatic yellowjackets circling our semi-naked monkey bodies as we clambered through the branches, somehow unstung, filling our T-shirts with the sweet, sticky crop from the tree.

At first, my predations were mostly gardens, though I did branch out into comic books and chocolate bars until caught by my ruthless and righteous mother. Oh the shame of being marched down to the local Chinese convenience store and abjectly apologizing while I paid everything back.

My crooked ways soon returned. I was an incorrigible child. We discovered the old lady's carrot patch down the street. Nowadays, you can't get kids to eat a carrot at dinner. We would crouch in her garden and yank the tender young carrots out, rub them, clean and munch them down like Bugs Bunny before running, shrieking for our lives when the cane-wielding old lady appeared.

Jeff Downer
Oriental Poppy, 2019

Jeff Downer

Above: *Rhododendron,* 2019 © Jeff Downer

Right: *Ox-Eye Daisies and Brown Truck,* 2019 © Jeff Downe

This was followed by the discovery of the watermelon farm. How I miss those seedy and ineffably sweet watermelons, along with the cow corn, we ate raw, also sweet, only starchy. I miss smashing the stolen melon with my bare fist, scooping out the red flesh. I miss the seed spitting contests in the shade by the creek. Then, in the summer heat, leaping into the rushing, clean water, clothes and all. Today, both creek and field are potentially toxic, while the new hybrid watermelons have lost their teeth-hurting intensity.

A few years ago, I found myself gazing at an acreage of scarlet cherries on an Okanagan hill, the trees no longer trees but short columns of fruit, weak yet prolific columns that need replanting often. Something about those cherries made me suspicious. I climbed out of the car and read a warning sign, now compulsory along borders of sprayed orchards. It was forbidden to enter that ripe orchard for a few days more without wearing a hazmat suit. Just walking among and brushing the

trees was toxic. Yet the cherries were beautiful and would be harvested the day after the deadline. If you are not eating organic cherries, make sure you scrub the hell out of them.

One day, we kids were raiding the ancient man's garden across the street. He grew the best raspberries. Suddenly, the man came hobbling out the door wielding a broom, and I scurried for my house across the street. He followed me to my door and then inside! My parents were at work. I was terrified, so I slithered under their bed as he stalked through the rooms, grumbling, waving his broom. He shoved it under the bed where I was hiding, just missing me. Fortunately, he was so crippled he couldn't lean down far enough to see me. He left the house, slamming the door, cursing his way home.

Of course, I didn't dare tell my parents. I would have been thrashed and dragged to the old fart's door to apologize even though he'd invaded our house. The automatic attitude those days: "You must have been awfully bad if he did that!"

Thus ended my childhood days of garden raiding. In fact, I joined the righteous as I became an adult.

In my first year as a student at SFU, I was driving up the mountain to the university when I noticed three little toughs torturing a cherry tree recently planted on the boulevard. I stopped and stepped out of my car and said to the first wannabe thug, "How would you like it if I broke your arms just because I'm feeling a little bored?" He dropped the branch as if it were on fire. The three of them glared at me, realizing I was ready to thrash the bunch, and I was big and fierce enough that I could probably do it. They backed away snarling, showing their best bad. No doubt later, the little bastards came back after I was gone and killed the seedling out of spite.

That night I returned with a kitchen knife, hacked off the largest head, and kept it in a jug on the kitchen table. The sunflower impressed the lady, though a few days later, the guilt crept in and has stuck with me ever since, almost 50 years.

Alas, my evil instincts returned a few years later when I'd somehow lured a lovely woman to my home in White Rock. While walking the beach road, I noticed a row of enormous sunflowers growing alongside a shed.

That night I returned with a kitchen knife, hacked off the largest head, and kept it in a jug on the kitchen table. The sunflower impressed the lady, though a few days later, the guilt crept in and has stuck with me ever since, almost 50 years. The more I took to my gardening, the more I regarded myself as a crud, especially since I've never been able to grow a sunflower as large as that regal, stolen giant. My guilt remains larger than the sunflower.

By 1980 I had become almost too obsessed with gardening. Cultivating my garden made me a fierce protector of my roots and flowers, along with those of my neighbours, public gardens, and the wild nature of the only Earth in existence. Even though, when I look back at my life, I recognize no garden I planted has survived after I moved on.

Then came the brutal July of 2015. I lost my health to one of those ferocious hospital bacterias. I also lost the love of my life, who changed her mind about me after 38 years. We had to give up our farm paradise with its orchard and large garden that I'd dreamed into existence when I was 17 years old. In 2018 I came out of the hospital after two months, a lowly renter in Vancouver once again.

This February, the cancer surgeon told me I had less than a 50 percent chance of surviving the year. Not that I believed him, but the thought of being shut down so suddenly made me consider the losses and the reality that this could be my last spring. I walked out of that doctor's office, angry at his rude dismissal of my life, and then recognized how blue the sky was. It hadn't been that blue since I was 12 years old when I scratched "There are 287 kinds of blue" on the back of my clothes dresser along with Gail Russell, the name of a pretty young girl in Grade 6 so that neither would ever be forgotten. And they weren't, though the dresser is long gone.

Jeff Downer
Common Bearded Iris with Automobile, 2019

Jeff Downer

Above: *White Valerian, Tree of Heaven, Unidentified Rose Variety,* 2019 © Jeff Downer

Right: *Ox-Eye Daisies and Chainlink Fence,* 2019 © Jeff Downe

What a spring this has been, such a crazy unleashing of blossoms due to the weird weather. I realized I had to pay attention to every blossom, notably my darlings — the magnolias and the ornamental cherries. Then my heart specialist decided to compete with my oncologist for the role of Doctor Doom. She, too, told me my chances for another spring were slim. Her diagnosis was, in fact, more dire. My last flowers! The deranged flower prowler was unleashed. I nabbed them mostly with permission from people's yards or off the boulevards. My bedroom became thick with magnolias, camellias, quince, and crabapple. My brightest spring ever.

I still believe I'm unkillable, though I suspect everyone thinks that when they receive the death penalty. For insurance, however, I continued on my raids. I know snatching flowers is a shitty thing to do, but I also know what I'm doing, so the pruning is very artful.

Also, in a further plea for leniency, I've generally been sticking to the public boulevards where the trees can require repair or are poorly pruned. Vancouver has added 105,000 trees in the last nine years to an already planted 140,000 street trees and 300,000 park trees. The city, amazingly, keeps a public spreadsheet labelling every tree in the city, its location, cultivar, age, health, and so on, and each is pruned every eight years, which is sufficient for an older tree but tends to leave the delicate younger ones in poor shape.

While the city has some brilliant arborists, it clearly doesn't have enough staff to prune everything correctly, so I tidy the trees up as I snatch the blossoms. You may call this Vigilante Pruning, or more artistically, Guerrilla Ikebana.

This is not something the average idiot with a hacksaw should practice.

As I carry out my forays, I think of a quote attributed to Buddha: "Attention leads to immortality. Carelessness leads to death. Those who pay attention will not die, while the careless are as good as dead already".

I think, too, of what the good Dr. Johnson said: "When a man knows he is to be hanged in a fortnight, it concentrates his mind wonderfully".

That's why I've become enamoured with the two splendid camellias that grow in my yard. Many centuries back, an intrepid Japanese gardener noticed that certain camellias faded even as they bloomed. Rather than breed them to correct that flaw, he bred to enhance it so that his fellow citizens would understand the transience of death and its presence even in these elegant, almost near-perfect blossoms.

The pottery vases I'd made decades ago are now filled with cascading blossoms in my bedroom. Since I already keep at least three orchids at my bedside, the room has grown crowded very quickly. I keep the orchids so that, should I die in my sleep, they will be the last thing I see when I turn out the lights.

Since I already keep at least three orchids at my bedside, the room has grown crowded very quickly. I keep the orchids so that, should I die in my sleep, they will be the last thing I see when I turn out the lights.

It never occurred to me that so many flowers would soon clutter the house. This beautiful dilemma was made worse by my kitten, who discovered that vases full of quince, cherry, plum, camellia, roses, and peonies made excellent batting practice. So I find myself practically welded to the vacuum cleaner for 30 minutes a day.

And yet I set out every day for more. If a particularly spectacular flower is in a yard, I will ask the person living there for a cutting. Even those who don't speak English figure me out quickly, with my pruning shears and my pantomimes pointing at a branch. They invariably nod, yes.

Only one person has ever turned me down. Not long ago, I trudged up to a door and knocked, and could see through the curtains a large man and a woman snuggled up on the sofa, watching TV. They never moved. So I knocked again. She rose and walked to the window by the door, and pulled the curtain aside, stared at me for a moment, and then put the curtain back and returned to the sofa. This so inflamed me. I chopped off a dangling branch of her magnolia as I returned down the sidewalk. Now I feel guilty about that one. She could have been harassed by a local gang or was a frightened refugee; there could have been any reason for her rudeness.

I take early evening walks to map out the best flowers, which means they must be poorly maintained and still beautiful. Then I go back when there is just enough light to see the flowers. I check if the coast is clear and have at it like Edward Scissorhands, turning some bedraggled hawthorn or Magnolia liliflora "Nigra" into a beauty, and fleeing with my ill-gotten gains.

As I rushed to pay attention, I made my house ripe with the reek of flowers, especially the cherry and plum blossoms when they were in season, which I could taste in the air, and the kitten is fully engaged in her own flower wars.

I should receive a good citizenship award for donating my decades of pruning skills to the city for free, but I'll probably get arrested for writing this article.

As I have noted, Vancouver is known worldwide for its exquisite tree planting, though some of our trees have a complicated history. For example, Vancouver's original 50 sakura or cherry trees were a gift from the mayors of Kobe and Yokohama in the 1930s, thanking the city for honouring Japanese Canadians who served in the First World War. Unfortunately, we repaid them ten years later by interning all Japanese residents in prison camps.

Now there are 90,000 flowering and 40,000 non-flowering cherry trees, including Yoshino (five petals), Kwanzan kikuzakura (100 petals), Ichiyo (20), Shogetsu (white), Kanzan (pink), Ukon (yellow). An incredible assortment and cleverly planted. For instance, one block near my house consists of tree-form white Magnolia stellatas and white plum blossom trees. What a show for a few weeks of the year!

When my health issues exploded in the winter of 2018, and after two months across the water, in a Victoria hospital, I recognized I had to leave Salt

Jeff Downer
Uprooted Poppy, 2019

Spring Island to be closer to the medical specialists in Vancouver. On my first night in my new Vancouver home, I awoke with horror around dawn, knowing there was something wrong. I couldn't figure it out. Then I did.

It was the silence of the birds. I had become accustomed to the roar of the dawn chorus on Salt Spring. Now I heard the cry of ambulances and sirens. No bird song. This is what most people in Vancouver are unconsciously missing. The shrubs and trees that provide us colour and blossoms are food and habitat for other creatures, including birds. The city is taking some measures to slow down our contribution to the epic avalanche of worldwide species loss. Much of Vancouver is terrifyingly empty of birds, so trees for nesting, shelter, and food are also being planted, along with native trees for bugs that can nourish birds. That said, the city council is still allowing the erasure of swaths of tree habitat for new housing developments, under the assumption, perhaps, that not enough of us do pay attention.

My research for this piece (Vancouver's history, ecology, collective love of our gardens) made reality return with a vengeance. I realized with some horror what I was doing. I (again) set down my pruning shears forever. "O mother, tell your children not to do what I have done!" You — good citizens that almost all of you are, walking unconsciously in beauty, living among the few sanctuaries of birds, the glory of the trees and flowers, treat our city of gardens with respect. Save the flowers for your children. Yes, pay attention!

Myself? Though spring approaches its end, and with it the great flush of Vancouver's roses, no longer will I prowl our evenings, pruning shears in hand, even though my damaged heart is exploding like one of those deep red roses.

Stolen beauty has a unique, dangerous quality. But it's also a destructive quality, never as special as admiring natural beauty in its natural place and living like the flowers who behave the way life lives — our real duty to bloom and grow bright and then fade and die.

Brian Brett is a Canadian poet, journalist, editor and novelist. He has been writing and publishing since the late 1960s, and he is a recipient of British Columbia's Lieutenant Governor's Award for Literary Excellence. His books include, most recently, *Tuco: The Parrot, the Others and the Scattershot World*, winner of the Hubert Evans Non-Fiction Prize.

Jeff Downer is a Vacouver based photographer. His work aims to explore potency in the ordinary, creating images that portray the surreal in everyday life. Humour, melancholy and discrepancies: the subjects of the photographs are observations on our lives lived ordinarily.

Adjacent field, Milan

Adjacent Field, Milan *assembled thousands of meadowland plants in the Jil Sander showroom for Milan Design Week, 2019. In parallel to this artwork, Linda Tegg produced four books of photographs made by her, David Fox, Federico Torra, that documented aspects of the artwork's creation and disbandment. A process that recalls the strategies of 'site' and 'non-site' developed by pioneer land artist Robert Smithson. Linda Tegg revisit* Adjacent Field, Milan *a year later and considers, through photographs, how plants push back upon frameworks of representation and containment.*

text by **Linda Tegg**
photographs by **David Fox**

The city, built by us, for us, actively works to exclude anything that doesn't serve us. Stone, concrete, and bitumen insist upon our enduring presence. When a fissure opens up in these surfaces an opportunity arises. A crack in the pavement, a pocket of sedimentary build-up, any soil exposed to sun and rain becomes a space for life outside the logic that governs what, or who, belongs where.

In the name of beautification, plants are regularly found in various forms of containment; garden beds and planters are the most obvious; street trees are admitted when they can conform (by either genetic selection or amputation) to the invisible boundaries set by the city planners; parks on the map designate green space.

The plants that self-organise do so despite the systems of control that maintain the city, and remind us of the potential of the ground beneath the pavement. Plants act on the city in their own time – the fast pioneer plants come and go in a season, while the perennials take root and trouble the stability of our constructed ground.

David Fox's *Field-Photographs* observe the spontaneous plants of Milan. They attune us to the familiar but overlooked vegetal beings that exist in our own peripheries. Within each photographic frame, two forces act upon the other. The earthly fabric of Milan – granite, marble, and concrete – assembled over centuries to unify and steady the ground, is punctured by plant life that comes and goes in a season. A fleeting life that collectively pushes back on the built conditions through accumulated pressure. In the split second of the photographic moment, these two forces are equalised. The images in sequence confuse scale and direction in flat disorientation.

Displacements

White paper plays a remarkable role in isolating things from their environments. In the herbarium, plant specimens are dried, splayed upon loose sheets of paper, and classified. Likewise, the traditional botanical illustration defines an edge to its subjects and represents them in a void. The milieu in which they once existed is erased within the frame, only to be partially recovered via an even more abstracted form of taxonomic representation. The work of taxonomy is to isolate, pull apart, and focus human attention toward objects of knowledge rather than subjects of life.

The voids of the city, described by Architect Ignasi de Solà-Morales as *Terrains Vagues* hold space outside of human definition, these are 'external places, strange places left outside of the city's effective circuits and productive structures…mentally exterior in the physical interior of the city.'[1] These marginal spaces are often left by industry and occupied by diverse, complex and highly dynamic life. To engage in the muddy work of extracting a section feels akin to cutting out a quote from a textbook beyond comprehension, and having faith that the pages will recover.

Documentation

The white room of the gallery encloses both viewer and artwork to produce a particular quality of encounter. The co-constitution of modernist and minimalist artworks and their architectural frame was the subject of much discussion in the 1960s and 70s. In a series of articles published in *Artforum* in 1976 artist and critic Brian O'Doherty considered the white cube as belonging to a typology of spaces, alongside the church, courtroom, and laboratory 'where conventions are preserved through a closed set of values'.[2] He points out that construction of both the gallery and religious spaces aim to suspend the passage of time, through isolation from the outside world, he says that 'this eternity gives the gallery a limbo like status; one has to have died already to be there'[3].

O'Doherty points out that photographic documentation of these spaces

David Fox
pp.71 and 74:
Field photographs, Milan, 2019
© David Fox

David Fox
Field photographs, Milan, 2019 © David Fox

These marginal spaces are often left by industry and occupied by diverse, complex and highly dynamic life. To engage in the muddy work of extracting a section feels akin to cutting out a quote from a textbook beyond comprehension, and having faith that the pages will recover.

further compounds their disembodying affect. 'The Eye is the only inhabitant of the installation shot.'[4] The single hovering viewpoint renders an environment airless, and displaces the viewer in both physical and temporal registers. From this scaleless perspective bodies are erased in what becomes a one-way visual experience.

Documentary photography is largely an exercise in framing. The installation shot, reinscribes the relation between the artwork and it's hygienic container. Considering what's left out can be equally informative as what's brought into view. Likewise, the gallery's visual attempt to mask the social and economic implications of its construction becomes material for consideration. The impossible neutrality of the gallery space has been made abundantly visible by generations of artists working in a mode of institutional critique. At its most cynical, the gallery and related institutions are revealed as capitalist structures that function to confer economic value on objects through an enduring timelessness.

Working at the inception of institutional critique, Robert Smithson connected the visual frameworks of the New York-centred art world to natural sites. His explorations troubled the distinction between inside and outside. Smithson labelled the gallery 'non-site' and through this work he relocated objects such as quarried rocks from the peripheries (New Jersey) into the gallery space. Photographs would provide another index of the 'sites' from which the rocks were extracted. By making a geographical link between 'site' and 'non-site' Smithson revealed the impossibility of the gallery as a closed system and turned it outward to increased possibilities of relation; there is no outside.

Smithson's chosen materials manifest in geological time. Despite their relocation, the minerals had an inert quality that served the artist's notion of crystalline time – an atomised endless presence. A time that can commence when all energy has diffused into equilibrium. Where a landscape accumulates complexity – a plant reveals its connection to other life forms and temporal scales in an instant - the crystal perpetuates sameness. A time opposed to organic durations, which is to say life.

Replacements

For Smithson, the surface of the earth served as metaphor for the processes of the human mind. Earthly events, like erosion, avalanches, and debris falls would stand in for the giving way of knowledge and concepts in what the artist termed 'Abstract Geology.'[5] The 'out there' of landscape was pure projection, so you could get on your bulldozer and move it all around. In geological timescales it makes no difference, as indifference is inevitable.

When attuning to the uneven vectors and velocities of life, action and impact approach you differently. Not everything affects everyone equally in organic time. Grasses are fast – take some from the field and others should pop up in their place. A minor disturbance among centuries of human disruption, the field will recover. But by focusing on specificity, and resisting the outward deferral to increasingly larger and abstract systems, an opportunity to encounter plants in the space of our shared lifetimes arises. The plants of *Adjacent Field* have journeyed between site and non-site and know two environments. After a disturbance like this can they recover their niche in the field?

Linda Tegg
Adjacent Field, Milan, 2019. Photo: Federico Torra, courtesy: Jil Sander

David Fox

Left and above: *Field photographs, Milan,* 2019 © David Fox

Endnotes

[1] Ignasi de Solà-Morales, "Terrain vague," *Quaderns 212* (1996), quoted in Nina Bassoli, "Il Grande Vuto" *Lotus International 161* (2017), p.9.
[2] Brian O'Doherty, *Inside the White Cube: The Ideology of the Gallery Space.* (University of California Press, Berkeley, 1999), 14.
[3] O'Doherty, p.15.
[4] Ibid, p.44.
[5] Robert Smithson, "A Sedimentation of the Mind: Earth Projects" *Artforum* (New York, September 1968) cited in Nancy Holt (ed.) *The Writings of Robert Smithson* (New York University Press, 1979) p. 82-91.

Linda Tegg is an Australian Artist who makes work out of inhabiting and reconfiguring the conditions of spectatorship. Within her immersive installations, plants, animals, images, and the built environment are brought into unlikely proximities to generate new points of orientation and relation. This speculative work questions the impulses and methods used to frame the world as resource, and seeks new forms of coexistence. Tegg's artwork engages with cultural institutions as well as public space and has been widely exhibited in Australia, The United States, and Europe. In 2018, Tegg was the Co-Creative Director, with Baracco+Wright Architects, of *Repair* at the Australian Pavilion at the Venice Architecture Biennale.

David Fox works between art and design art. His open approach has seen his work connect into a wide range of creative fields including fashion and architecture. David's work is marked by a dedication to craft across an impressive range of media, technologies and systems. Recent collaborative works have been showcased at the Venice Architecture Biennale, 2018 (with Linda Tegg and Baracco+Wright Architects); Milan Design Week, and Barneys New York City, 2019 (with Jil Sander).

Paul Harfleet
For Stonewall. Christopher Street, New York, 2019 © Paul Harfleet

The pansy project

British artist Paul Harfleet plants pansies at sites of homophobic and transphobic abuse He finds the nearest source of soil to where the incident occurred and generally without civic permission plants one unmarked pansy. The flower is then documented in its location, the image is entitled after the abuse. Titles like "Let's kill the Bati-man!" and "Fucking Faggot!" reveal a frequent reality of LGBTQ+ experience, which often goes unreported to authorities. This simple action operates as a gesture of quiet resistance; some pansies flourish, others wilt in urban hedgerows.

interviewee **Paul Harfleet**
interviewer **Joey Orr**

A string of homophobic abuse on a warm summer's day was the catalyst for this project. The day began with two builders shouting; "it's about time we went gay-bashing again isn't it?"; continued with a gang of yobs throwing abuse and stones at my then boyfriend and me, and ended with a bizarre and unsettling confrontation with a man who called us 'ladies' under his breath.

Over the years I have become accustomed to this kind of behaviour, but I came to realise it was a shocking concept to most of my friends and colleagues. It was in this context that I began to ponder the nature of these verbal attacks and their influence on my life. I realised that I felt differently about these experiences depending on my mental state so I decided to explore the way I was made to feel at the location where these incidents occur.

However, I did not feel it would be appropriate to equate my personal experience of verbal homophobic abuse with a death or fatal accident; I felt that planting a small unmarked living plant at the site would correspond with the nature of the abuse: A plant continues to grow as I do through my experience. Placing a live plant felt like a positive action, it was a comment on the abuse; a potential 'remedy'.

The species of plant was of course vitally important and the pansy instantly seemed perfect. Not only does the word refer to an effeminate or gay man: The name of the flower originates from the French verb; penser (to think), as the bowing head of the flower was seen to visually echo a person in deep thought. The subtlety and elegiac quality of the flower was ideal for my requirements. The action of planting reinforced these qualities, as kneeling in the street and digging in the often neglected hedgerows felt like a sorrowful act.

Paul Hartfleet talks to Joey Orr, Andrew W. Mellon Curator for Research at the Spencer Museum of Art in Lawrence, Kansas.

Joey Orr: Before we talk about *The Pansy Project*, I wonder if you might say something about your relationship with plants and gardening more generally.

Paul Harfleet: Before *The Pansy Project,* my interest in plants was fleeting. As a child, I was fascinated by the natural world, especially insects and birds. This interest is something I explore in a picture book I wrote and illustrated to introduce *The Pansy Project* to wider audiences. *Pansy Boy* tells the story of a boy that loves to draw and write and is "potentially gay." Bullied at school, he searches for a solution: "In the gardens of Kew, he read for hours, and learned the language of the flowers." Inevitably he goes on to plant pansies around the school.

Whilst writing the book, I had a memory that was remarkably prescient of what I do now. At our family home was a neglected garden, and I felt an inexplicable need to tidy it. There was a path by the side of the house with a border overgrown with weeds. I decided to remove these undesirable plants. Scuttling on my hands and knees, I remember pulling the plants out of the earth, occasionally being distracted by ground beetles and woodlice. I recall I saw a purple petal emerging from the undergrowth. It was a little violet. I continued to weed, preserving these little cousins of the pansy. When complete, there was a border lined with lilac, purple, and mauve. I felt a huge sense of pride at my achievement as the violets continued to grow during that spring, decades ago.

JO: Your work always begins with a simple statement: "I plant pansies at the site of homophobic abuse." From what I know about the beginning of *The Pansy Project,* you were living in Manchester at the time, and you were the brunt of homophobic abuse on three separate occasions in one day, one with a boyfriend at the time. When relaying this information to your shocked friends, you realized that many people were largely unaware that these were daily experiences for some. Although the project has undoubtedly expanded to address other kinds of gender-based and transphobic abuse, its origin is rooted in your personal experience and set in motion by an action—the planting of a pansy. How did you arrive at planting pansies as your response to homophobic abuse?

Paul Harfleet

Paul Harfleet getting ready to plant pansies at Spencer Museum of Art, Lawrence, Kansas, 2018. Photo: Nick Krug © Paul Harfleet

PH: Fifteen years ago, I graduated with an MA in Fine Art (Equivalent to a postgrad) in Manchester. My practice had developed away from painting to sculpture and installation. I was interested in *The Poetics of Space* by Gaston Bachelard, the notion of the uncanny, memory, and the domestic in general. I was drawn to the potential for horror and fear in mundane locations and wanted to make work that explored these themes.

I began collecting dead insects, particularly flies. I mounted a fly on a piece of paper on which I had previously typed with the word "flew," which was then framed. This small work was a punch line to a non-existent joke and appealed to my gallows sense of humour. This was my disposition at the time. These three homophobic attacks occurred in one day, and I believe it's my sense of humour that ultimately influenced my response.

I began thinking about how I remembered the locations of these incidences and how complex my emotions were when I walked past them. Monuments and public sculptures were of interest as they were designed to remember and are sanctioned by the local council. I was especially drawn to the guerrilla nature of roadside memorials and how each intervention inspired by grief altered its immediate environment in an emotional way. They're manifested by the grief-stricken, though they also serve the purpose of alerting authorities to potential road safety issues.

Paul Harfleet

Beaten. Jayhawk Motel, 1004 N 3rd St, Lawrence, Kansas, 2018 © Paul Harfleet

It wasn't long before I decided that planting a live flower at the site where I experienced the abuse. The nature of the flower was essential, and I remember immediately thinking of the pansy. I resisted this choice initially as I wanted the intervention to have more visual impact. A friend at the time reassured me that the pansy was the only choice. I settled on it, and I have come to love its multiple meaning as both the name of the plant and a term of homophobic abuse. In French, it translates to 'thought' or 'think' and was used in France as a 'wish you were here' emblem on postcards. This emphasised its meaning and highlighted how language evolves and shifts from place to place in an arbitrary way.

JO: This idea of the uncanny has me thinking about the Royal Horticultural Society gold medal you and your brother Tom Harfleet won for Best Conceptual Garden for *The Pansy Project Garden* at the Hampton Court Palace Flower Show in 2010. *The Guardian* newspaper called it "part installation, part guerrilla gardening project, part memorial." In some ways, it seems like a really radical reclaiming of the pansy epithet for the *Project* to garner an award for ornamental gardening. Your larger scale plantings often serve more as public awareness than specific memorializations. Can you speak to how larger, more designed installations are in conversation with the project as a whole or your broader artistic interests?

A friend at the time reassured me that the pansy was the only choice. I settled on it, and I have come to love its multiple meaning as both the name of the plant and a term of homophobic abuse. In French, it translates to 'thought' or 'think' and was used in France as a 'wish you were here' emblem on postcards.

PH: From the first incarnation of *The Pansy Project,* I have been invited to explore large installations, to a certain extent a result of the festival 'machine' desiring a large scale manifestation of *The Pansy Project,* something that is perhaps more visible than the small scale intervention the project is defined by. Each time I embraced these opportunities to highlight the project and promote it to wider audiences. However, I was keen to retain an artful response to these invitations.

This resulted in a defining moment in the history of the project. At the Manchester City Art Gallery in 2005, an installation had been arranged as part of the Queer Up North festival. Two thousand specially grown pink pansies arrived outside the gallery, with a group of volunteers expecting my instruction on how and where to place the flowers. I suggested positioning them in a rectangle on the paved area outside the gallery. When they were all in place, I was utterly underwhelmed; the flowers looked like a municipal planting scheme that could appear in any park.

I was defeated by the task and retreated home to understand the problem. The festival seemed concerned but supportive. I thought I'd made a terrible mistake and betrayed the conceptual integrity of the work. That night I dreamt of visceral military scenes. I saw blood-forming streams in battlefields and woke up with the phrase "thin pink line" in my head. I was vaguely aware of the phrase "thin red line" as a military term. After some research, I discovered it had originated from a British infantry regiment that fought during the Crimean War. The "red" referred to the colour of the British uniforms. This led to the similar "thin blue line" in reference to the police service. These poetic terms were an opportunity to overlay the meaning of the flower again and emphasise the activism of *The Pansy Project* and its battle to fight crime and injustice.

My dream had suggested a visual solution to the positioning of the flowers—a thin pink line of pansies delineating the gallery's architecture. I went to the gallery and discovered that the pansies perfectly fit around a key architectural feature of the building. This subverted the municipal mundaneness of the rectangle of flowers and transformed the plant into an anthropomorphic symbol of resistance. Each flower in the temporary installation would later go on to mark a site of homophobia. The idea of their potential was vital. The possibly twee nature of this anthropomorphism refers directly to the naming of the flower. After all, they are named pansies after 'pensées,' as it is their 'faces' that appear to bow as if in deep thought.

This became a system I would later adopt. I have made several large 'thin pink lines' of pansies, including in Liverpool in 2006 and at the London Lesbian and Gay Film Festival in 2007. The installations came to delineate the last routes people took toward the location of a fatal attack; the plants becoming temporary memorials to those that had died as a result of homophobia. The complexity and expense of these interventions had limited the exploration of them. However, in this context, my brother Tom Harfleet suggested we submit a garden design for the RHS Hampton Court Palace Flower Show in 2010.

At the time, the RHS wanted to explore the possibilities of gardening as an art-form. The conceptual garden category enabled us to access this

Paul Harfleet

The Pansy Project Garden. RHS Hampton Court Palace Flower Show, 2010 © Paul Harfleet

horticultural world in a way that I had not considered. The entire structure of a flower show is a theatrical device that asks the visitor to suspend their disbelief as they wander through the showground, viewing a tableau of a garden that only exists for a week.

The successful submission led to The Pansy Project Garden. It was intended to be read as sculptural intervention, rather than a garden, proper. A critical decision we made from the beginning is that we wanted the 'garden' to appear to be rising from the grounds as if the flower show itself had been interrupted or subverted by the 'earthquake' referencing structure we used as a symbol of homophobia. The pansies appeared to grow through the structure's cracks, which added to the temporal nature of the piece. The abstracted brutalist beauty of the work invited visitors to ask about the 'garden,' enabling us to tell the story of *The Pansy Project.*

At heart, The Pansy Project is a poetic and absurd response to often brutal and violent homophobia. Sometimes humour arises from this tragicomedy. I think it echoes a truth of LGBTQ+ experience.

Simply as an object, the uncanniness of *The Pansy Project Garden* in the garden show context was evident. The notion of the uncanny refers to the notion of the familiar made 'unfamiliar.' The mundane associations of the pansy as a hum-drum garden staple transformed into a symbol of activist work alters how this plant is viewed in the context of the flower show and in the unexpectedly sculptural artwork. As long as the viewer remembers the renewed meaning of the pansies, they may experience a sense of return when they see a pansy again in its 'usual' context, so I consider the larger-scale works to exist as part of the conversation.

JO: Your gesture of planting a pansy is poetic and also functions as a memorial, resistance, awareness, and activism. The tension between some of these functions makes your work very productive. How is an ephemeral act of resistance, for example, also a memorial? What tensions or overlaps in the work have seemed productive or surprising to you?

PH: While planting at sites where I'd experienced the abuse, I was surprised to find myself emotionally moved by the experience. I knew immediately that the act was both defiant and healing. I sensed that this work would evolve into an ongoing artwork, so I named it *The Pansy Project.* Titling it in this way invited the viewer to consider the scope of the work and the potential it has for activism and outreach. It's implicit within the title.

I believe the work can function in many different ways. The simple act of planting pansies at the site of homophobia becomes the mantra that infuses everything I do with *The Pansy Project.* I see this less as a tension and more as a harmonic note that emanates from the simple act of planting a flower at the site of hatred. The fact that the work can be seen simultaneously in many ways is something that helps spark conversation. When I travel, and people come across the work for the first time, they are invited into it. The contrast between the simplicity of the action and how the work can be interpreted is a constant surprise and is incredibly gratifying to me.

This also allows the work to be seen from different perspectives, from street art, guerrilla gardening, activism, anthropology, psychogeography, and queer art. It's been amazing to see the way *The Pansy Project* has been viewed through different lenses.

JO: There are different ways for people to encounter your work: the project as a whole as a public outreach and social justice campaign, street-level interventions, and the resulting series of images. I was aware of the project and images over a decade ago, but it was not until our work together in 2018 that I could experience the plantings firsthand. Prior to your visit, you sent us a document that was essentially a map of past hate crimes in our area. The first planting you

Paul Harfleet

Paul Harfleet photographing at Jayhawk Motel, 1004 N 3rd St, Lawrence, Kansas, 2018,
photo: Ryan Waggoner © Spencer Museum of Art

did was very early in the morning, and the police showed up. You were lying on the ground photographing the pansy, and apparently, several people driving by notified the police that there was a body on the side of the road. That image is *"Beaten." Jayhawk Motel, 1004 N 3rd St, Lawrence, Kansas.* The planting of the pansy does not take too long, but it takes longer for you to get the shot you want. Encountering the images and being present for the plantings are very different experiences. I spent a lot of time that day seeing you on the ground at the site of these incidents. You were carefully generous, responsive, and respectful of the stories you told and in your dealings with the participants. As hopeful as the project can seem, it can also feel very dark and overwhelming. Can you speak specifically to your intentions and experiences planning for and leading up to the plantings?

PH: At heart, *The Pansy Project* is a poetic and absurd response to often brutal and violent homophobia. Sometimes humour arises from this tragicomedy. I think it echoes a truth of LGBTQ+ experience: humour is a device that has the capacity to help us survive mentally in a world that has largely condemned us. This is something I bring to the experience of planting as part of a tour. I'm sensitive to the needs of the audience. We have moments of reflection when I've planted, and we then walk on to the next location. At this point, I've been lying belly down on the ground, so it's natural for me to make light of being covered

in dirt. This helps dilute the profound sense of despair the work can summon.

The hardest thing for me is the research I need to do before arriving at a location. I begin by finding well-known experiences of homophobia online. I find out as much as I can. The stories are harrowing and can have a massive impact on the survivors and worse, the families of those that have not survived. What helps me is that I know I'll be marking these locations with flowers, and I'll be engaging with communities that have been impacted by homophobia and transphobia. Ultimately, we all need to know that our experiences are heard and that our community matters.

Audiences fundamentally understand that *The Pansy Project* was born from my own experience. *The Pansy Project* allows us to come together in a way that is unique to art. It allows conversation, interaction, and the acknowledgement of shared experiences in the face of an ever more unjust and cruel world. It is this sense of solidarity that bolsters my sense of well being. I'm privileged to be in a position where I can facilitate a unique way of exploring our histories.

JO: Although planting happens at street level and is fleeting and ephemeral, the perspective you get while photographing the pansy from the ground makes it visually monumental in many of the resulting images. Can you give some insight into your own experiences making such formidable images of this garden flower? Could you also talk about your strategy for titling the images?

PH: As I said earlier, I initially resisted the pansy as I thought the flower lacked impact. The natural way for me to address this was to make the images I captured as monumental as possible. This also helps locate the planting in its geography. When I'm taking a photograph, I'm searching for street furniture or iconic architecture that can remain recognisable in the background whilst the pansy is crisp in the foreground.

Creating an image that transforms a little pansy into an iconic flower against a city skyline tends to give this small intervention significance. The image speaks to how these stories are marginalized and overlooked and is often in contrast to how the planting seems in the location. The pansies themselves become a version of a portrait. Each flower has a personality. Its position, condition, and colour add a narrative. Some look strong, others deflated. This process is where my aesthetic sense comes to the fore. I can often spend hours trying to get the composition correct. As the pansy rarely endures in its location, the photograph becomes a long-lasting memorial to the crime that occurred. Once the images are on my website or exhibited, the picture becomes assimilated into *The Pansy Project* as a body of work, the repetition of which contributes to the reading of the work as both anecdotal history and a fifteen-year record of activism.

JO: I've always understood that you plant the pansies in the closest available soil on the site, but I notice you have actually painted some of them at the base of exterior walls. What brought on this new strategy? Does it change the process for you? Is this a shift in the work we might see further developed in future projects?

PH: This was a pragmatic response to a situation at the Nuart Festival in Stavanger, Norway last year. For various reasons, we weren't able to get pansies in time for my appearance at the festival. As the time approached, I faced the reality of not having the one thing I needed to complete my work.

It seemed that my only option was to paint pansies at sites of homophobia rather than plant. As this was a street art festival, it felt like an appropriate context to explore. It was important to paint them life-size to reference the usual process and paint them close to locations of homophobia. I actually found the process invigorated something in the work. The street art festival audience was

Paul Harfleet

Top: *Jævla Homo!* Kvitsøygata, Stavanger Wall Painting part of Nuart Festival, Stavanger, Norway 2019
© Paul Harfleet

Below: *Homosexuals are perverts, they're a sickness, Palce du Molard, Geneva,* 2018
© Paul Harfleet

able to access the work more easily as 'art.' Lying on the ground in the location, painting certainly had a similar impact on the documentation of the plantings. I was still capturing a trace of an experience that was similarly emotive for me.

The delicate little paintings have a similar quality to the flower, and the diminutive size contrasted starkly with the larger murals that made up the festival. The paintings also last longer and speak a language of horticultural illustration that was appealing. I am continuing to explore painting in locations, as it offers an additional language to the concept and frees me from always relying on the plant's availability.

The efficiency of planting a pansy at the site of homophobia will always be the primary act. The simplicity of the concept anchors the occasional deviation from the core practice.

JO: I never knew the image of a pansy was used as a "wish you were here" emblem on postcards, as you described earlier. This reminds me of Richard Terdiman's work, in which he claims that the tension between the past and present prevents either from eclipsing the other. I feel like *The Pansy Project* does that, too. The pansy images mark your memory work, while the titles acknowledge the harm without erasing or overtaking it.

PH: I'm fascinated by how memory impacts our personal narratives and how this is relevant to the way LGBTQ+ history is captured. This was clearly demonstrated to me after my recent visit to New York. 2006 was the first time I visited the city to plant pansies at various sites, including one at the Stonewall Inn to mark the 1969 riots. When I returned home, I was frustrated to discover that my pictures of the Stonewall pansy were terrible. I vowed to one day go back. During the fiftieth anniversary year in 2019, I returned to re-plant and re-photograph the location with a newly planted pansy. This was the first time I'd felt it necessary to do this. I was driven by the need to have this site represented properly within *The Pansy Project*'s archive.

When I came to plant my pansy again, I was struck by the uncanny repetition of my own action. I was planting a pansy again, digging into the same ground where I once had dug, replacing a plant, long since lost. This experience became conceptually layered and complex, almost like an actor repeating the performance of a play in the same venue. I managed to capture a much more satisfying photograph and went on to plant more around the city. Since my trip, further research on the details of the stories that surround Stonewall have revealed conflicting details of the events. In their book *Art & Queer Culture*, Catherine Lord and Richard Meyer state:

> There is little agreement, however, on precisely what happened at the Stonewall riots, how many people were involved, how long the stand-off lasted, how many members of the tactical police force were called to the scene, and so forth. Adding to the event's unstable status within the historical record is the fact that no photographic images of the riots exist.

The photographic documentation is limited to some images taken after the riots captured by Village Voice photographer Fred W. McDarrah. Amongst them is an interior of broken furniture piled up inside the Stonewall Inn, a fascinating relic of a historical event that only tells part of the story. These once functional objects, broken and useless, speak of the violence that had just occurred.

When these photographs are viewed together, the images refer to, but do not depict, the Stonewall riots. These are both 'photographic memorials' to violence that began in June 1969 and continue to have significance today. Neither show the protagonists involved, nor do they share details that a historical record would demand. Without context, these images lose their power. With context, they become a visualisation of a 'discussion' between objects separated by a few feet and fifty years.

This speaks to the fallibility and mystery of our memories and how the history we create is often problematic and can fail to represent a definitive truth of events. *The Pansy Project* does not need to tell every detail of a story. It implies a violent event through the title of the picture. The intervention acts as a symbol of a story, not always revealed, and suggests that a place of trauma can be acknowledged and transformed into a location of healing and activism.

JO: I noticed the picture you took in front of the White House during your visit to D.C., *"Don't ask that guy – he wants to hang them all!" – President Trump comments on the Vice President's views on gay rights. White House, Washington D.C.*, is in conversation with some of your other messaging on social media in response to events and policies resulting from rising nationalism across the world. I wonder if you might comment on *The Pansy Project* in this specific moment and also the future of the project and how you see it developing.

PH: Fifteen years ago, I would not have predicted that violence against us would continue and even escalate. Work like mine tells the story of the battle of prejudice against us that many believe was won years ago. There's no doubt there is currently a rise of the right-wing. Our human rights are being challenged, and violence continues. Queer culture is one success story. From *RuPaul's Drag Race* to the Oscar-winning *Moonlight,* we must continue to create a complex and rich queer culture that shares our stories with the heteronormative masses and brings our communities together to ensure our hard-fought for rights are preserved.

The Pansy Project is a small contribution to this. I will continue to develop, explore, and evolve my work. I'm currently making my photographs ready for exhibition. I'm keen for my pictures to access the gallery and museum. There I can share our experiences of being queer on the streets with the world.

Paul Harfleet is a London, UK based artist, who founded *The Pansy Project* in 2005. Over the last fifteen years his work has been included in numerous exhibitions and festivals. *The Pansy Project* has been included in multiple publications including *Trespass: A History of Uncommissioned Urban Art*, published by Taschen. *Pansy Boy,* a book he wrote and illustrated was published by Barbican Press in 2017 and was short-listed for the Polari First Book Prize in 2018. During the pandemic of 2020 his work shifted to explore a queer reading of ornithology in a project called *Birds Can Fly.*

Joey Orr is the Andrew W. Mellon Curator for Research at the Spencer Museum of Art where he directs the Integrated Arts Research Initiative. He previously served as the Andrew W. Mellon Postdoctoral Curatorial Fellow at the MCA Chicago, as associate editor for the *Journal for Artistic Research,* and as special issue co-editor of the *Journal of American Studies* (Cambridge University Press) and *Visual Methodologies.* His writing has appeared in publications including *Art Journal Open; Art in the Public Sphere; Art Papers; BOMB; Emotion, Space & Society; Hyperallergic; Images; Journal of American Studies; QED; Sculpture; and Visual Methodologies.*

Ebony G. Patterson
...a pale horse weeps in silence...for those who bear/bare witness, 2018 (detail) Courtesy of the artist and Monique Meloche Gallery, Chicago. © Ebony G Patterson

Ebony G. Patterson: Botanicals of social justice

In her work, Jamaica-born mixed-media artist Ebony G. Patterson recontextualizes gender norms and explores Jamaican dancehall culture. Patterson represents the transformations of gender and body politics by blending tapestry, beading, sequins, crochet, and Internet-sourced images of violent murders. In this interview with curator, editor, and writer Caroline Picard, Patterson talks about the role plants and flowers play in her practice.

interviewee **Ebony G. Patterson**
interviewer **Caroline Picard**

Ebony G. Patterson is a painter and mixed media artist originally born in Jamaica and currently based in Chicago and Kingston, Jamaica. Patterson creates large-scale, "maximalist" installations that often include wallpaper, tapestries, layered fabrics, additional brocading, and dollar store elements that blend beauty, foliage, and concealed figures to meditate on the relationship between violence and materialism. An expert at disturbing expectations of surface, she creates entire environments that implicate audiences in our quest for aesthetic pleasure in a post-colonial world. In the following interview, we focus primarily on Patterson's use of plants and how they participate and amplify some of these themes. Patterson has had solo exhibitions at many US institutions, including Pérez Art Museum Miami, Baltimore Museum of Art, The Studio Museum in Harlem, Atlanta Center for Contemporary Art, SCAD Museum of Art, GA, and the Museum of Arts and Design.

Carline Picard: What compels you to use plants so regularly in your work?

Ebony G. Patterson: Using plants is a formal way of playing with the figure's position between foreground and background. I also think about the way people use dress as a point of embellishment. So, putting a body that is already highly patterned in highly patterned clothing, placing that body on a surface that's also highly patterned creates a way of simultaneously dealing with space and dealing with that person's form.

CP: Do you use "foliage" and "figure" synonymously in your work?

EGP: I started thinking about the body as it relates to the garden it sits in. And I'm not talking about a utilitarian garden. I'm talking about a garden with "Victorian sensibilities": it's all about its showy-ness; the clothing that sits on these bodies is also about showy-ness. An important moment occurred when I recognized I could play with the viewer's attempts to distinguish patterns and the environment, which happened when I started addressing the work in narrative terms.

CP: How did you shift from working on the floor to the wall? I'm asking partly because there's something so intuitive in a way, about plants growing from the ground, maybe also this idea that a dead body is usually discovered on the ground too...

EGP: I went from works on paper to the tapestries on the floor. And I was thinking about the viewer's relationship to these dead bodies and kind of recontextualizing what that meant. At the Museum of Art and Design in New York (MAD), I had the opportunity to do a project in their vitrines. That was the first time I actually worked with plants as sculptural elements and then thinking physically about what that means, like building out that environment instead of an illusion of that environment.

CP: How did that project change the way you were thinking?

EGP: In 2016, Shannon Stratton had just assumed her role as MAD's curator; she saw my show at the John Michael Kohler Arts Center (2015). Karen Patterson curated that iteration of *Dead Treez,* and it was the first time I had shown these floor-based works. We showed two other works—a kind of pseudo-memorialization of my father's passing, *The Passing (Dead Daddi)* (2011-13). The other one comprised about fourteen mannequins all clad up, *Swag Swag Krew* (from the *Out and Bad Series*) (2011-2014).

I thought what an interesting idea, the possibility of beauty also being dangerous. I then also started to think about working-class spaces in relation to gardens.

CP: You also used floral wallpaper in the *Swag Swag Krew* installation, and weren't there also flowers hanging from the ceiling? I was reading about the show recently. It felt like you were presenting these highly stylized mannequin male figures wearing watches and very elaborate, lush fabrics, patterns, hats—all of it, but the figures themselves remain anonymous somehow. Almost like memorializing these desirable objects.

EGP: The *Swag Swag Krew* was in the show because that was the first time I started to remove the skin, you know, like the color of skin or the flesh. The earliest iteration of that work only had five figures, and it was when I had a show at the National Gallery of Bermuda (2012). In the show *Dead Treez* at the Kholer, before it had traveled to MAD, I had this larger version of *Swag Swag Krew* as well as five other tapestries, and in all of those works, the presence of flesh was totally absent; you just had the clothing. Shannon invited the Kholer to bring the show to MAD. She thought it would be an interesting way of pushing the conversation around craft at the MAD. At the time, they also had this project going with artists to curate a selection of objects in their Tiffany Gallery vitrines, and so that's how the vitrine installations came about.

CP: It almost feels like you enter this incredibly serene but hyper-colored space of glass framed by white vitrines. The installation feels eerie. You can't tell if you are inside a fishbowl looking out through plants or whether you outside, surrounded by these glass plastic gardens. It also has a commercial feel to it. Like the vitrines could almost be in a department store...

EGP: I wanted to see what would it be like to take what was happening in the floor-based tapestries and have a tableau within the vitrine? Every object that I had chosen from the MAD jewelry collection was a clue about a 'person'. There was a person or a body that was resting within this overgrowth.

CP: I still feel like there is an almost inverse relationship between the bodies and the growth of plants in your work. Like the plants are always engulfing the person who was there before.

Ebony G. Patterson
...moments we cannot bury..., 2018 (installation view and detail). Courtesy the artist and Pérez Art Museum Miami. Photo by Oriol Tarridas. Courtesy the artist and Monique Meloche Gallery, Chicago. © Ebony G Patterson

Ebony G. Patterson

...to be..., 2019. Digital print on hand-cut, archival watercolor paper with hand-cut paper elements, poster board, acrylic gel medium, hot glue, plastic letters, feathered butterflies. 96 x 106 x 2 1/4 in. (243.8 x 269.2 x 5.7 cm) Courtesy of the artist and Monique Meloche Gallery, Chicago and Hales Gallery, New York/London © Ebony G. Patterson

Ebony G. Patterson

...could..., 2019. Digital print on hand-cut, archival watercolor paper with hand-cut paper elements, poster board, acrylic gel medium, hot glue, plastic letters, feathered butterflies 95 1/2 x 107 x 2 in. (242.6 x 271.8 x 5.1 cm) Courtesy of the artist and Monique Meloche Gallery, Chicago and Hales Gallery, New York/London © Ebony G. Patterson

EGP: After seeing some of the works on paper from the *Dead Treez Series,* someone introduced me to Olive Senior's work. She wrote this incredible suite of poems called *Gardening in the Tropics,* and there was this one poem, "Brief Life," and much of what I was trying to do in the work, visually, Olive gave me the words for them. The poems are about violence on the land, in the land, and from the land… "Brief Lives" talks about this woman who has a kitchen garden. She comes across the body of a young man who came from a rural community but had come to the city seeking opportunities but had lost his life because he got caught in a turf war. The line is "I bury him again so he can carry on growing". So here you're met with two very different classes of people, but irrespective of the gardener's class, she recognizes the value of this person's body even in death. And that person is also clearly a working-class person because of what we are told about them. So she buries him in her humble kitchen garden so that his life can continue. And then it acknowledges a Don in a working-class community that has died and that people have shown up in a fancy dress to honor his passing and that there is 21 gun salute. The last line is something like "young girls famed for their vivacity and style" so we get a sense for the grandiosity that is happening around the Don's body but the kind of respect that people pay through dress. And yes, he's a Don, he's a figure of power, but he also comes from a working-class circumstances, and people turn up to honor him in the same way that one turns up to honor the passing of someone royal or a government figure.

I thought about that. Then I came across information about the Alnwick Garden in Northumberland England—within the garden, was a poisonous section with all poisonous plants. I thought what an interesting idea, the possibility of beauty also being dangerous. I then also started to think about working-class spaces in relation to gardens. They often have names that harken back to colonialized spaces or the grandness of land, so it's estates, gardens, pastures, etc.

CP: It's striking that you connected with a British garden, much less a garden specializing in poisonous plants. That amplifies a colonial context, maybe especially if you consider the relationship between Jamaica and Britain?

EGP: I started thinking about poisonous plants when I made the work for MAD. After the *Dead Treez* works, I developed a series called *Beyond the Blades*—referencing both blades of grass and the blades of knives. So often, bodies are dumped or concealed in foliage. As though the foliage somehow holds the secrets of something that's gone horribly wrong to a body, a body that had to deal additionally with horrible things in its life. So I started looking at poisonous plants, and a lot of the poisonous plants are also prevalent and used in domestic spaces, so like the hydrangeas—for instance, the poppy, the calla lily, anthuriums, and then the bird of paradise. It's funny, but I've always stayed away from Tropicalia for all of the obvious reasons…

CP: What was the installation like?

EGP: In the MAD vitrines, you would come across a couple of objects, and within that, you'd come across a body that had fallen, within these poisonous plants, along with other symbols of death like a cockroach, garden snakes, a rooster in one—I also used metaphors associated biblical narratives….and they were all sprayed white! I had a couple of ravens, too. These elements created a sensory overload surrounding three different figures, each contained in a different vitrine.

CP: The relationship between plants and violence seems significant. Sometimes you apply these plants in a kind of funerary or memorial capacity, which seems to call attention to a missing life or a life that's been lost. But then I also feel like the

Ebony G. Patterson

"Called Up" 2018. Swope Park, Open Spaces Kansas City. Photo: EG Schempf. Image courtesy of the artist and Monique Meloche Gallery, Chicago © Ebony G. Patterson

foliage is actively concealing or flattening the figures.

EGP: I'm referencing all of it. Acts of mourning often involve flowers, and employing flowers becomes a device, like a clue or a cue. And then, there are the formal considerations, thinking about how the foliage I create operates or begins to interact with the bodies. In my 2018 show at Monique Meloche Gallery, there was this one work that said, "in loving memory, for those who bear/bare witness," for example. It had a wreath, and then the environment just seemed to break away and then you had this one figure facing from behind. I was interested in the way I could use the wreath to play with space, break up the tapestry's flatness, or meet all of the other elements in that it also flattened this very dimensional thing and kind of causes you to question where things begin and end.

CP: In your show at Monique Meloche Gallery, *…for those who bear/bare witness…* (2018) you again included elaborate tapestries full of plants, but there I believe the human figure is always incomplete. Can you talk about that work for a minute?

EGP: The tapestry images are all based on photographs that I took in the studio in Jamaica; I wanted to focus on mourners instead of the dead. Previously, I'd depicted images of bodies on the ground through these floor-based works at the

Ebony G. Patterson

Untitled (Among the weeds, plants, and peacock feathers), 2015/2018 © Ebony G. Patterson

Ebony G. Patterson

where we found them, 2014 (detail). Courtesy of the artist and Monique Meloche Gallery, Chicago © Ebony G. Patterson

Kohler Arts Center and MAD. Those installations were all informed by found photographs that I sourced online while searching for dead bodies in public spaces. After that series, I started working on the imagery of mourners; I wanted to look at the figures surrounding the spaces where those original bodies had fallen.

CP: Is that shift in attention significant for you?

EGP: By extracting and reproducing images of these dead bodies, I am exercising a subsequent moment of violence, again upon bodies who have already experienced trauma. I wanted to shift my focus, to capture the impact of violence as it reverberated through witnesses, loved ones, space. And to also suggest that the photographing of them in these incredibly vulnerable moments of grief is also an act of violence

CP: You also created and installed wallpaper in that show with a poisonous plant motif. How does that cohere with the tapestries and the way you're thinking about space?

EGP: I am interested in making things physically difficult for people. There is the difficulty in looking, differentiating foreground and background, a figure from pattern... but there is an additional difficulty in choosing to purchase and live with the objects I make. I'm also interested in the difficulty that emerges after I leave a given exhibition space; what will be the viewer's experience by the mark of the memory of those things—bodies, gardens, environments—having been there. Can you un-see what has happened? Can you un-see the experiences or the encounters that I am also referencing?

CP: I feel like you go back to this idea of the commodity at that point, even calling out the chain of production that goes into the work. There is something especially unsettling about that, given the subject matter of what you produce and its opulence. Maybe this recalls Victorian gardens also; they are somehow opulent while naturalizing colonial trade routes, by installing exotic plants in foreign sites of leisure.

EGP: But what if you can un-see the preceding exhibit? Un-see the figures and violence, then what does that also mean about how we engage or are engaging with people who are experiencing trauma? I was reading Michael Pollen's *The Botany of Desire: A Plant's-Eye View of the World*, and there is this line where he talks about how cannabis functions. There is a chemical within cannabis that our brain naturally produces. He asked a scientist, "If our body naturally produces this thing, why then does it amp up and cause us to forget when we take it?" And the researcher answered, "Would you be able to handle everything in your life?" Not remembering is also a way of surviving. That it becomes the brain's way of coping mechanisms. Forgetting is not a defect; it's actually a reflex.

CP: It's interesting to associate forgetting with a transition between exhibitions—walls being demolished, rebuilt, repainted. This might be a stretch, but I was thinking of the Olive Senior poem you referenced where the body is buried in the garden, as though that death and the act of burial can be generative. Because humans consider themselves, ourselves, so rational all the time, so aware of everything, versus plants, which are supposedly passive. But there is a way that human memory functions ambivalently. There is a desire to be more—to be better, better citizens, to be better at taking care of one another, and yet there is this constant falling short. And then you don't know where to put that falling short. How do you change that? As you say, what is our capacity to have a memory of architectural space, even?

EGP: How do we talk about what it is about us that causes us to dismiss the information, or remove the information, even if there is something about it all that becomes so palpable? Voluntarily or involuntarily. What causes us to not engage with that at all? Maybe we need to forget. But how much we choose to forget is also a problem; because it continues the cyclical issues or problem of never addressing something. Just because you dismiss something doesn't mean it goes away, clearly. The crucial thing that happens in the poem you reference is acknowledgment; without that, things are bound to repeat themselves.

CP: Something else I'm interested in is this idea of authenticity vs. artificiality in your work—like, you often incorporate fake flowers.

EGP: I would love to use real plants and then allow them to die on-site in the exhibition. But whenever that comes up, the museum sees that as a problem. Because that's going to mean bugs, and we have a collection. I've used fakes that are really good quality, deceptive fakes. It's not until third glance that you realize they aren't real.

CP: Have you ever made a real garden?

EGP: When I was at the Crystal Bridges Museum in Spring 2019, I was in residence with the Momentary; I started a test site with real plants. One of the things that I've wanted to do for a long time is actually building a garden using the same kinds of-plants that I've been referencing with poisonous properties. So, I built out a test site that was about six by eight or so feet big with about seventy plants that we planted. They were a combination of plants with poisonous properties and plants with wound healing properties, as a metaphor for post-colonial space.

We planted the garden in their north forest. A wide range of flowering and non-flowering plants would grow typically in warmer conditions and plants that require cool environments; I thought it would be interesting to see how these things fared in an alternate environment.

Can you un-see what has happened? Can you un-see the experiences or the encounters that I am also referencing?

CP: Were there animals too?

EGP: I was told there was an active deer population in the forest and there are other wildlife — I was interested in how the garden could become a point of nourishment for these animals but then at the same time find ways to discourage them so that the entire thing wouldn't be done in a week because they eat fast.

In the end, the first planting was from June to about November when it was done. I went back in mid-September for two weeks to just observe plants. Interestingly, the plants with poisonous properties were not doing very well, but the wound healing plants were thriving very nicely. So I thought that was really interesting metaphorically.

CP: What kind of plants grew?

EGP: I had squash because it's part of the nightshade family and that plant—while the leaves are poisonous, parts of the squash are also great to cure ulcers. It's the same thing with pumpkin and eggplant. There were also marigolds. There were hot read pokers since I couldn't find a torch ginger. The bamboo, which we were most worried about because it's so invasive, actually did not catch at all. It was the first to die. And then the other thing that started to happen — other things that were naturally in the environment, just started to grow in the garden as well. I was making that garden at the same time that I was working on works on paper in the studio. So it was kind of nice to think about a physical space, the literal garden, in relation to "gardened" spaces I was making in the studio.

CP: What do you mean?

EGP: In the show at Monique Meloche Gallery, there was one work on paper that was like the last, and it had the text dignity at the bottom.

CP: In the last room?

EGP: Yes. That was one of these works. While developing the tapestries, I started making these works on paper; I always find that I'll be looking at the photograph and think, oh my god, that's so great! But then something changes. Then I started thinking about how the image as a photograph also has the same kind of richness as the tapestry when it becomes embellished. That maybe I should think of the photograph as the shine, which then brought me to my next challenge, which was that I was not allowed to use any glitter at all.

CP: Really? You just instated a rule? Absolutely no glitter.

Ebony G. Patterson

Ebony G. Patterson, …among the blades between the flowers…while the horse watches…for those who bear/bare witness, 2018. Mixed media, 130 x 175 in. Courtesy the artist and Monique Meloche Gallery, Chicago © Ebony G. Patterson

EGP: Really. Absolutely not. So that same word dignity — there were two other words that we'd shown during Chicago Art EXPO, and nobody actually realized that there wasn't any glitter, but I still allowed myself one embellishment. That's when I applied the fake butterflies and the idea of the monarch metaphorically standing for the bodies that I am referencing since the monarch is an endangered species.

CP: It's interesting to think about the butterfly concerning plants—they're so present in gardens…

EGP: In the last two, I started playing around with a Madagascar sunset moth specimen. I was interested in using the moth because of its reference to death. In many cultures, the sighting of a moth is like sighting a spirit or an ancestor. Still, both the sunset moth and the monarch both feed on poisonous plants, which contributes to its coloring, so I was also thinking, what happens when the garden becomes a site of survival, your evolution.

Ebony G. Patterson is a Jamaican-born visual artist and educator. She is known for her large and colorful tapestries created our of various materials such as, glitter, sequins, fabric, toys, beads, faux flowers, jewelry, and other embellishments, her "Gangstas for Life series" of dancehall portraits, and her garden-inspired installations. She has taught at the University of Virginia, Edna Manley College School of Visual and Performing Arts and is a tenured Associate Professor in Painting and Mixed Media at the University of Kentucky.

Caroline Picard is a writer, publisher, and curator. Her writing has appeared in *Artslant, ArtForum* (critics picks), *Flash Art International*, and *Paper Monument*, among others. Fiction and comics appear under the name Coco Picard. Her first graphic novel, *The Chronicles of Fortune*, was published by Radiator Comics in 2017. Short fiction and comics have been published additionally in places like *Hyperallergic, Necessary Fiction, The Paris Review,* and *Tupelo Quarterly*. She is the Executive Director of the Green Lantern Press—a nonprofit publishing house and art producer in operation since 2005.

Visible/Invisible:
In the Luscious Garden with D. Denenge Duyst-Akpem

The Osanyin Commemorative Portrait Series *and* The Camo Coat Collection *comprise a two-part project based on depictions of the Yoruba orisa Osanyin, god of healing and forest wisdom, as half-tree, half-human. Portraits of 2014 NEH Fellows at the Institute for Black Aesthetics and Sacred Systems on Emory University campus commemorated collaborative representation and site as archive. The collection explores camouflage within everyday life and ritual from an Afro-Futurist perspective, highlighting methodologies of conceptual, spiritual, and physical protection in pattern and textile. With Chicago-specific prints,* The Camo Coat Collection *considers what it means to survive and thrive in the urban landscape.*

images and text by **D. Denenge Duyst-Akpem**

Interlude: Harmattan / Dry Season
Daylight breaks. Calls to prayer echo dreamily through city-tops over the rumble of trucks spewing our toxic deaths. Cluck-cluck rustlings sound as a rooster crows in someone's backyard. We feast at break on fried plantain wrapped in newsprint, greasy and red-peppery hot.

The white-yellow ball of sun sets with filmy orange streaks across a dust-filled sky. In this dusky grey light, mysteries reveal themselves. I feel like a star, bewitching. At 5:45 p.m., the time of my birth when I feel most alive, languid sunset shadows obscure; anything is possible.

We park down near water's edge in the moonlight casting its alien shadows across red earth formations, traversing million-year-old dormant volcanoes, soil aged a brilliant ochre, wind blowing across the waves of sun-stripped land. Memories return of cool harmattan nights, our backs leaning against a boulder while low muted voices carry from across the way, a kerosene lamp flickering. Someone spits loudly at a wall. Cricket symphonies vibrate through every pore, a faint tantalizing aroma lilts through the air from a nearby suya stand, and naked electric bulbs and candle lights flicker, dotted amongst the market stalls under expanses of night-blue, star-filled skies so vast, so vast.

In the dark distance a motorbike sputters up the dusty hill. You know the bumps and curves of the road by heart; by sound, you can tell where the bike navigates next. And later, you witness a night more alive with sound than the day, birds crying like rusty swings creaking shrilly back and forth in the heavy air.

D. Denenge Duyst-Akpem
Wan Chuku and the Mystical Yam Farm
Still from performance video
2015 © OSUMA and Casey Pankey

Osanyin Commemorative Portrait Series* and *The Camo Coat Collection

The Osanyin Commemorative Portrait Series and *The Camo Coat Collection* comprise a two-part project taking its cue from the Yoruba *orisa* Osanyin, god of healing, leaves, and forest wisdom, often depicted as half-tree, half-human.

The first stage of the project began at the 2014 NEH Institute for Black Aesthetics and Sacred Systems. The portraits of NEH Fellows were taken on the Emory University campus in Atlanta, GA, commemorating the historic institute and documenting collaborative representation and site as archive. Here, I developed leaf drawings later transformed into printed textile now included in the capsule collection.

This multifaceted project explores uses of camouflage in everyday life and within formalized ritual practice from an Afro-Futurist perspective, highlighting methodologies of conceptual, spiritual, and physical protection in pattern and textile. With Chicago-specific prints, *The Camo Coat Collection* considers what it means to survive and thrive in the urban landscape,[1] addressing self-presentation, garment-based strategies to confront the consumption by the (white) gaze, invisibility and hyper-visibility, and pattern as signifier. The body is one vessel of liberation[2] which can be mobilized to effect shape-shifting transformation with garment as device in an alchemic dance of body and landscape.

The Camo Coat Collection, launched on the portal date 02.02.2020 with my first monograph *AFRIFUTURI 02022020,*[3] was conceived over the last two years as a timely, site-specific, textile- and garment-based engagement with environmental, political, and social concerns, influenced by Chicago's AFRICOBRA co-founder Jae Jarrell and her iconic *Revolutionary Suit*, ready for boardroom and for revolution. Highlighted in the collection's design from past exhibition and performance is *a'nger* (pronounced "ahn gair"), Tiv-Nigerian traditional striped loom-woven textile which represents being clothed in the essence of Tiv. A visual connection is also made to the black-and-white stripe of military dazzle camouflage as protection for ships, and to the broadside as the side of a ship from which weapons are discharged with poetry broadsides used to inexpensively and accessibly convey Black Arts Movement word force.

The collection includes Scottish tartans, linked to *a'nger* as culturally-specific textiles. Historically, when tartan was made of organic vegetable dyes, a cloth could be "read" by those experienced to recognize the intricate plants and sites represented in the pattern, whether lighter as closer to the misty sea or darker greens indicating organic sources deeper in the forest. This reading, the word, the "speaking" of a textile reflects Yoruba aesthetics of *àṣẹ*, "catalytic life force" as discussed by African art historian Dr. Rowland Abiodun, with foundations in the power of art to listen and to speak. *The Camo Coat Collection* rises from the existing environment and responds with an array of possibilities, offering protection on multiple levels and celebrating the role of art and design within the African Diaspora.

A selection of 16 portraits out of over 40 original images was featured as part of the first public presentation of the *Osanyin Commemorative Portrait Series* installed with *The Camo Coat Collection* at the Fashion Windows at Columbia College Chicago, 618 South Michigan Avenue from February 11-March 1, 2020.

D. Denenge Duyst-Akpem

Snow Camo Coat at Osaka Garden of the Phoenix, Jackson Park, Chicago

Still from collection promotional video by Jonathan Woods

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D. Denenge Duyst-Akpem
Camo Coat Collection: Original Camo Coat and Osanyin Leaf Cape with Strass Crystal
Mixed media: garment, ensemble
2020, Photo by Jonathan Woods
© D. Denenge Duyst-Akpem

p. 220-221
Camo Coat Collection: Tartan with Chicken Kilt Ensemble and Chicago Camo Coat
Mixed media: garment, ensemble
2020, Photo by Jonathan Woods
© D. Denenge Duyst-Akpem

p.222-223
Camo Coat Collection: Caddis Fly Ikarem Camo Coat and Tartan Camo Cape
Mixed media: garment, ensemble
2020, Photo by Jonathan Woods
© D. Denenge Duyst-Akpem

p.224-225
Camo Coat Collection: Bulletproof Shipwrecked Sailor Camo and Flounce Camo Coat
Mixed media: garment, ensemble
2020, Photo by Jonathan Woods
© D. Denenge Duyst-Akpem

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Camo Coat Collection in Fashion Windows, Michigan Avenue, Chicago, with Osanyin Commemorative Portrait of Derrais Carter and Maurita Poole
Mixed media installation with Wan Chuku trees and Gold Nuggets For Us All
2020 © D. Denenge Duyst-Akpem

Left
Camo Coat Collection in Fashion Windows, Michigan Avenue, Chicago, with Osanyin Commemorative Portraits of Rev. Theophus Smith and Kali-Ahset Amen Strayhorn
Mixed media installation with Wan Chuku trees and Gold Nuggets For Us All
2020 © D. Denenge Duyst-Akpem

Endnotes

[1] Excerpt from the essay "Visible/Invisible: Healing and Protection in the Urban Landscape" in *AFRIFUTURI 02022020*, the author's first monograph, published and launched as a limited edition hologram-enhanced version with *The Camo Coat Collection* at Blanc Gallery in historic Bronzeville, Chicago, IL.

[2] This is inspired, in part, by architect and visionary Amanda Williams' term "thrival," a combination of survival and thriving, which speaks directly to the Black experience and Black Radical Imagination traditions presented through sculptural form in *Thrival Geographies (In My Mind I See A Line)* with Andres Hernandez and Shani Crowe for the 2018 Venice Architecture Biennale.

[3] Vessels of liberation is a concept I introduced in "Afro-Futurism: Pathways to Black Liberation" courses—the first multi-disciplinary course on Afro-Futurism rooted specifically in Black Arts Movement tenets—which investigates the activation of site, environment, and body through installation, material, and performed gesture. This is further developed in "Afro-Futurist Ecologies"—the title of a new course offered in Fall 2019 as part of Knowledge Lab, SAIC Sculpture Department, and a book proposal in development for *Art after Nature* series.

This theory of Afro-Futurist Ecologies re-orients "the center" outside of marginalization in resistance of the label "under-represented," works to decolonize the canon, and privileges African aesthetic systems rooted in the explication of internally derived frameworks as called for by African art historican Dr. Rowland Abiodun in the "Preface" to *A History of Art in Africa*. Afro-Futurist Ecology also foregrounds the role of site in the creation of liberatory systems, focusing primarily on works by global African artists who employ nature-based practices that problematize contested histories and who shape-shift across intersections of art and nature, laying the groundwork for a radical reimagining of site, ecologies, the activated vessel, mnemonics, and lieux de mémoire as detailed by Richard Noggle in "Waking the Dead: History and Memory in August Wilson's *Ma Rainey's Black Bottom*, *Joe Turner's Come and Gone* and *The Piano Lesson*," *New England Theatre Journal*, 19a (2008): 63. Article was originated for University of Maryland Interdisciplinary Conference on August Wilson.

These works are portals, traveling tributaries threading past-present-future in a Black Quantum Futurist refiguring of space-time—a term coined and utilized in performance by Rasheedah Phillips—as an expression of Black Radical Imagination as detailed by Robin D.G. Kelley, *Freedom Dreams: Black Radical Imagination* (Boston: Beacon Press, 2003).

[4] *AFRIFUTURI 02022020* charts almost twenty years of my work in the field of Afro-Futurism with eight essays and corresponding costume/performance works including a ritual and even a recipe for fried flying ants, a favorite snack from childhood, offered here with some levity as a survival strategy inspired by my 2018 course based on the prophetic novel *Parable of the Sower,* "Take Root Among the Stars: The Legacy of Octavia Butler, Surviving the 21st Century & Beyond". The book and collection utilize the number "8", a long-time signifier in my work, and numerological activator for luck and infinity.

D. Denenge Duyst-Akpem is a space sculptor whose award-winning teaching, performance-installations, and writing bridge disciplines of ritual, design, ecology, and Afrofuturity. She is Associate Professor, Adjunct, at School of the Art Institute of Chicago and Founder of Denenge Design and In The Luscious Garden, focused on holistic and conceptual approaches to human-centered design. Features: ICA London with *Black Quantum Futurism*; *Corpus Meum,* Arts Club of Chicago; Kunsthaus Zürich; *Afro.Futures,* Kunstgewerbemuseum Berlin; U.S. Library of Congress (NASA/Blumberg); Schomburg Center for Research in Black Culture; NEH Fellowship; AGO; MCA; essay on AFRICOBRA co-founder Jae Jarrell, Kavi Gupta Gallery for 58th Venice Biennale.

Alex Israel: Plants and other clichés

Alex Israel lives and works in Los Angeles. Deeply entwined with his home town, Israel's art explores the iconography of L.A. and Hollywood, and the cult of celebrity. It posits L.A. as central to an understanding of American culture and the American dream. His Trompe l'oeil paintings of L.A.-typical plants and other recognizable urban markers pose questions about the important of "minor landmarks" in our construction of identity.

interviewee **Alex Israel**
interviewer **Giovanni Aloi**

Based in Los Angeles, Alex Israel engages with the particular culture of the local film and media industries. Mining the "food chain" of show business, he interrogates and confounds the fine line between "talent" and "raw material" while reframing and re-presenting manufactured items whose formal and auratic properties are often overlooked. For Israel, the American Dream, as embodied by the Los Angeles mythos, remains affecting and potent. Channeling celebrity culture as well as the slick appearance and aspirations of the entertainment capital, Israel approaches his hometown with an uncanny coupling of local familiarity and anthropological curiosity. His work alludes to both California cool and calculated brand creation, embracing clichés and styles that exude the hygienic optimism endemic to the local scene.

Giovanni Aloi: Your work is concerned with the American Dream as embodied by the Los Angeles mythos, celebrity culture, and the sleek aesthetics that result from the life-philosophies that make the city so fascinating. How has L.A. changed over time?

Alex Israel: L.A. seems to have become a lot more popular over the past decade. Its undeniable importance as a cultural hub, a nucleus-city for so many fields from entertainment to art to tech, seems to have finally been accepted and recognized internationally. The traffic has gotten a bit worse, but the amount of development, growth, and improvement we've seen across the landscape certainly makes it all worthwhile. On a sad, simultaneous note, the homeless population of Los Angeles has also grown dramatically.

GA: You have more the once been described as an "art anthropologist" because of your ability to keenly observe and re-present the customarily overlooked aspects of everyday life. Where does your interest in the "overlooked" come from, and what role does it play in your work?

AI: It's funny because, in my work, I think I often gravitate towards the representation of clichés—ubiquitous subjects, the opposite of overlooked. But maybe there's something to examining the obvious that can be; I don't know, a little less expected? Or maybe people take clichés for granted until they're forced to slow down, re-examine them, and rediscover their meanings with a fresh perspective?

GA: Many of your earlier paintings displayed an overt "pop sensitivity"— they capitalized on bold colors, abstraction, and stylization of form. But your *Valet Parking* mural unveiled at the Marciano Foundation proposes a resolutely hyperrealist approach. Can you tell us how the idea for *Valet Parking* developed and why you decided to tackle the subject through hyperrealism?

AI: *Valet Parking* was initially conceived for a gallery at Le Consortium Museum in Dijon, France. This specific gallery was central to my exhibition there, opened up to a courtyard, and existed as a kind of indoor-outdoor space. The architecture prompted me to think about landscape, cyclical-panoramic landscape painting, and French narrative wallpaper murals. Ultimately I decided to paint a mural of L.A. "in-the-round," all along the gallery's perimeter. *Valet Parking* is meant to approximate an abstracted car-window view of L.A. by depicting isolated glimpses of the things one sees along the sidewalk.

I do most of my thinking about my work in the car while driving around the city, listening to the radio and looking out the window. So, there was a way in which the mural might bring viewers closer to that particular headspace I go

Alex Israel
p.127 and right: Detail of *Valet Parking,* 2013
Mural installed at the Marciano Art Foundation, Los Angeles

Alex Israel

above and right: Detail of *Valet Parking,* 2013. Mural installed at the Marciano Art Foundation, Los Angeles

to, and out of which, much of my work is born. In Dijon, the work was exhibited with a soundtrack I created—a fictitious radio station based on my favorite long-running L.A. radio show: *Love Songs on the Coast*, with DJ Karen Sharp. In Los Angeles, at the Marciano Foundation, the pieces were expanded to fill the larger space of the building's mezzanine.

GA: In 2009, you struck a collaboration with Warner Brother's scenic painter Andrew Pike who's the executor of the mural work – how do the two of you work together?

AI: Andrew is fluent in the art of scenic painting and has been able to help me realize so much of my work in this indigenous, Hollywood style. We work together very closely, and he now has a real intuitive sense of what I like and want. He paints from studies that I provide, which I make on the computer. When a work is almost done, I'll talk him through any notes or changes, and he'll make adjustments in real-time until the work is complete.

GA: *Valet Parking* features a number of what I would call "L.A. minor-landmarks"—everyday cultural objects we give for granted, urban-scape reference points that nonetheless capture a vital essence of the city and its unique identity. Why are plants so prominent in this mural?

AI: Plant-life has played a large role in the development of L.A.'s identity. The city's

indoor-outdoor culture and design sensibility align with its unique coast-to-desert landscape and sunny, temperate climate.

GA: What criteria guided your plant selection for *Valet Parking*, and what do they represent within the context of the work?

AI: The plants I chose to represent in the mural are all real, existing specimens that I spotted on my drives around the city. They really do represent markers along my routes, to and from the studio, and around my neighborhood.

GA: Were the plants painted from real varieties?

AI: Yes, they were painted from photographs that I took of each specimen in the landscape. I isolated the plant specimens and other objects from their backgrounds in photoshop and then pasted each into a collage-composite that ultimately evolved into the study for the mural.

GA: Plants also took center stage in *Amalfi Dr.,* 2017 – another mural work in which Pike painted, among other varieties, a life-size *Strelitzia Nicolai*, or giant white bird of paradise plant, originally situated at the entrance of the Le Sirenuse's Champagne & Oyster Bar. What interested you about this plant?

AI: Yes, so this particular plant species, which can be found all over Los Angeles and was famously patterned as wallpaper that lines the Beverly Hills Hotel, can also be found in large pots in the stairwell space at Le Sirenuse—the space which I was invited to paint. I loved the idea of the real, potted Nicolai sharing the space with life-sized, illusionistic representations of the same species painted on the wall and the surreal, uncanny effect this play of plants in two and three dimensions might create for hotel visitors.

GA: What's your personal relationship with plants in your everyday life?

AI: In my family, on my father's side, I have quite a few relatives who are in the flower business in L.A. Three or four of my cousins have owned flower shops, and my dad used to set up a flower stand on key holidays, selling bouquets on the street cornerback when he was a teenager. Needless to say, flowers and plants have always been important to my family and me.

Alex Israel is an internationally acclaimed American multimedia artist, writer, and eyewear designer from Los Angeles. His work includes large, colorful airbrushed paintings of abstract gradients and Los Angeles skies, his self-portraits, painted on shaped fiberglass panels, and multimedia installations constructed from movie-house props.

Cactus Store

The Cactus Store in L.A.'s Echo Park is a unique gem in which one can find some of the rarest cacti in the world. The store subscribes to an ethical philosophy that subverts our aesthetic appreciation of these plants. Defects, scars, and marks are seen as evidence of a cactus's lived life, a distinctive identity, rather than a defect that devalues the plant, as it often is the case on box-chain stores and other mass-production environments.

interviewee **Max Martin and Carlos Morera**
interviewer **Giovanni Aloi**

If you find yourself in Los Angeles—just off Sunset Boulevard in Echo Park, make sure to visit the Cactus Store, a unique shop in which cacti are one of a kind, individual vegetal beings with histories and identities. The shop is filled to the rafters with containers housing some fo the most curious varieties. Even the terracotta pots don't match. Nothing here is mass produced, and much of the charm involves talking to the owners to find out about the beloved plants that shape their lives.

Giovanni Aloi: Cactus Store is located in Echo Park, Los Angeles, CA, and specializes in rare cacti varieties. You also run a seasonal greenhouse on the lower east side of Manhattan. Can you tell us how the business came about and what its philosophy is?

Cactus Store: Well, most people know us from our store, but Cactus Store is not *just* a store. We're a botanically minded creative collective dressed up like a store. We work in the cracks between disciplines on projects that emphasize relationships between humans and plants that extend beyond symbiosis into more difficult areas to measure like friendship, aesthetics, and love. From designing botanical spaces to our book *Xerophile: Cactus Photographs From Expeditions of The Obsessed* to curated programming at our Lower East Side location in New York, we function more like relationship brokers between people and the plants they love than we do a traditional store. Early on, we chose the idea of a "store" as a sort of carrier wave for reaching a broad audience. A store also has the added benefit of helping itself sustain.

GA: How are plants sourced?

CS: Young and common plants are sourced from commercial growers and horticultural operations. Old and rare plants come from private botanical collections and conservatories. Sometimes we are contacted by older collectors who can no longer care for their plants. It's a peculiar honor to receive such a call. In the desert where resources are scarce, plants often adapt by growing very slowly, living to ages that dwarf a single human lifespan. It's not uncommon for desert plants in cultivation to out-survive their owners and to become orphans later in life.

Cactus Store

View of the Cactus Store location in L.A., Echo Park, 2014 © Cactus Store

We were bequeathed one such collection in 2016. It belonged to a man who spent his life as a plumber but lived a double life as a rare plant collector. This collection comprised some of the rarest desert plants on Earth. Instead of selling off his collection, we decided to raise funds to build a greenhouse where these plants could live out the remainder of their lives with dignity.

Currently, we are working on a larger plant orphans greenhouse in an industrial area of Los Angeles. This will be a by-appointment-only non-commercial plant conservatory where folks can come to simply commune with these magnificent silent beings.

GA: What's so special about cacti and our preconceived ideas of beauty?

CS: That's a tough one. I suspect some people relate to the plight of a cactus—aspiring to thrive and bloom where survival is all but guaranteed. At first glance, a cactus is incredibly hardy accepting the punishments of its habitat with poise. In reality, however, cacti are quite vulnerable. Ask anyone who has ever tried to care for one. They don't like too much water but can quickly die of thirst. They don't like shade but can sunburn quite easily. They can freeze and rot in the cold and can cook in the late afternoon sun, be ravaged by parasites, sandblasted in sandstorms, and uprooted from monsoon rains. A single cactus might produce

hundreds of thousands of seeds during its lifetime, but statistically, this is true for all stable plant populations. It will only produce one offspring that survives long enough to reproduce. In reality, a cactus, like a human, is a very unlikely creature. When I look at a cactus, I don't see a durable, aggressive survivor so much as a renunciant hermit monk and a vow of poverty.

GA: Since 2016, millennials have accounted for more than 30% of houseplant purchases. Some claim the reason might be economical. This demographic group has more college debt than their predecessors. They rent rather than own, and houseplants make things homey at a budget. A growing wellness-minded attitude might also be at play: plants invite calm and harmony.

For others, the green-thumb boom is a response to the relentless digitalization of life and growing preoccupation with environmental deterioration. Surrounded by news of irreparably compromised nature, we find in plants a temporary remedy from a relentlessly growing sense of alienation—they keep us grounded. What's the place of cacti in this context?

CS: Yes, *Forbes Magazine* and a handful of other publications are convinced that millennials' plant-related spending habits are an important issue. We couldn't care less. Calling a plant, a trend is like calling oxygen a trend. Without them, there is no us. There is, however, something different about our current crop of young people. More and more humans are refusing to take their eco-citizenship sitting down. Today we're having to live with the effects of previous generations treating our planet as an object to exploit, extract-from, and use. For many young people, reconnection with the natural world is a priority. This means resolving their objectification of nature with a subjective relationship. Being in balance with nature means being in balance with human nature. It's okay to anthropomorphize your plant. Using emotions, we can re-learn to empathize with green beings in a lucid and nurtured way. Having empathy for the natural world might be our first step toward saving it.

GA: What is the strangest cactus you've had in the store?

CS: I don't know about the *strangest*, but the rarest plant in our collection is a critically endangered cactus from Peru called *Haageocereus tenuis* (not for sale). We acquired this plant from a researcher who spent the majority of his 40-year career studying rare Opuntias in South America. Due to many anthropogenic stressors, there are less than 150 individuals of *H. tenuis* left in its habitat, and their numbers are shrinking. It's a fascinating plant, but without financial incentive, very little has been done to conserve it. To further complicate the issue, in the wild, these plants reproduce clonally, which means they rarely, if ever, produce seeds.

What does someone do when they're given a plant like this? We ended up calling our friend Kelly Griffin--known for his work cultivating rare succulent species. He told us about a similarly threatened cliff dwelling Agave that is currently suffering under the pressure of poachers. Kelly is now working to boost this Agave's population by growing them from plant stem cells in his lab. Kelly's goal is to de-incentivize poaching by making this plant common in the plant trade.

Hopefully, by using the same process, we will be able to talk *Haageocereus tenuis* off the ledge of extinction. There are some hurdles, but we can theoretically save the plant if we successfully surmount these challenges. It's a long shot, but we've got our green fingers crossed.

GA: How did the idea for *Xerophile: Cactus Photographs from Expeditions of the Obsessed* come about?

Cactus Store

Above: *Ferocactus hybrid, variegated* © Cactus Store

Right: Cactus Store in NYC, 2017 © Cactus Store

CS: We essentially made the book we always wanted to see, something that reads more like a love letter to plants and their habitats than a field guide or coffee table book. By profession, only a few of the contributors to Xerophile are credentialed, biologists. None of them are professional photographers. All of them share an obsession with traveling into remote habitats to commune with plants.

One such contributor is Woody Minnich, an old Cactus Explorer who lives in the mountains above Albuquerque. Entering his home, you get confronted with

shelves crammed with plant themed books, and a rather large 40 year old *Pachycormus discolor* bonsai — the impression is that of being in the study of a 19th-century naturalist.

In his guest bedroom, stacked floor to ceiling, hundreds of dusty old slide carousels are meticulously cataloged by year, geographical location, and plant species. It was a long week that we spent there looking through slides, and we barely scratched the surface.

Eighteen such souls contributed to *Xerophile,* and many more that we didn't include because we were limited by space. We have enough material for several volumes if we find the time and opportunity to do it. The excerpt below is from an interview that we did with one of the contributors, John Lavranos, who recently died at the age of 97.

Cactus Store: Did you ever shed a tear at the sight of a plant?

John Lavranos: At the beginning of my adventures, I was often overcome with excitement. I'll never forget when I found two specimens of Whitesloanea. It's a four-angled cube, about seven inches tall, totally spineless. When I found it, I literally almost fell over. I was on my way to take a crap, if I may be excused, in the early morning. Suddenly I was confronted with this incredible plant! I wasn't looking for it; I was looking for a place to lay an egg.

Cactus Store: How do you reflect on your life in the field with these plants?

John Lavranos: I can tell you one thing: it's been an absolutely marvelous life. You interact with these things, and, after so many years—we're talking sixty years—you feel at one with them.

GA: Do you have a private collection of cacti beyond the ones in the store?

CS: Of course we do. Our plants are our family.

GA: Do you have a favourite cactus variety?

CS: We all have favorites. My own attention to certain plants often follows the seasons. For instance, I might discover a whole new appreciation for Adromischus or Tylecodon during Winter. Also, tastes evolve and change. Maybe I'll go into next spring with new excitement for Northeastern African succulents that until now only registered to me as finicky whithered sticks.

Max Martin and Carlos Morera opened their Echo Park outpost in 2014 to sell potted cactuses and succulents for new-school home decor and landscaping, and inadvertently became interested in an old-school cactus collecting culture. As they explain: "Since the 1930s, Southern California has been home to a rich network of cactus and succulent clubs, societies and shows. Evidence of this history is stored away all over the Southland — go to a longtime cactus collector's garage, and you'll likely find shoe boxes stuffed full of old succulent newsletters and magazines, stacked up next to the Christmas decorations and boogie boards".

The stately pleasure domes of the Anthropocene

Glasshouses as venues for the display of exotic plants, continue to be popular and loved destinations. A new generation of glasshouses is being built that are utilising new technologies to create spectacular exhibits beyond the temperate world. In large part these much-loved exhibits make little reference to the ongoing climate and biodiversity emergencies-they are operating as Holocene facilities. An opportunity exists to utilise these huge carbon investments as arenas to help forge a better Anthropocene, to directly link the exhibits to global challenges and possibilities. Fundamental to this is an increased engagement with contemporary artists.

text by **Mike Maunder**

We have a long-standing obsession with squeezing biodiversity into glass boxes. We pack the living and the dead into glass containers, stretching in scale from the terrarium and taxidermy case through museum dioramas, aquaria to monumental glasshouses. You could argue that at no other point in human history, society had such easy access to such a diverse sample of packaged biodiversity. Yet this is happening at a time when our relationship with biodiversity is deeply troubled, and when the sustainability and symbolism of these collections should be questioned.

The glasshouse is in resurgence. The names vary-they may be called palm houses, tropical houses, conservatories, winter gardens, or biomes, but they are all fundamentally a semi-transparent box designed to exhibit exotic plants. In contrast to the museum gallery, the public is invited into the vitrine, into the diorama. They are pleasure domes-a destination to delight a visiting and often paying public.

The early glasshouses were an extension of the Cabinet of Curiosities, housing collections of living exotics that needed protection against cold. The great imperial glasshouses were designed as showcases of architectural splendour and the plants of the empire, a mix of tropical botanical curiosities and the plants of colonial industry (the jingoistic and imperial jungle). As epitomised by the Palm House at Kew and the contemporary structures, such as the Eden Project in Cornwall, these nineteenth-century structures are being joined by a new generation of glasshouses unparalleled in their size and complexity. The new glasshouses being built largely in Asia and the Middle East are creating exhibits on a scale that was unimaginable a few years ago and are calling into question the role of these glazed pleasure domes in a time of environmental crisis and cultural turbulence. In the tropics, the glasshouse may offer an airconditioned experience of the Mediterranean (Gardens by the Bay in Singapore), or cool mountain tops (Oman Botanic Garden). At the same time, new tropical exhibits are being built in climates as extreme as Dubai, where Green Planet exhibits the biodiversity of the rainforest canopy.

Each generation of glasshouse from Georgian orangeries and Victorian palm houses to today's high-tech domes, reflects our persistent fascination with the exotic and our recurring need to create magical places for escape and recreation. In Victorian days they asserted Europe's perceived status as the centre of the world and showcased a distant world of adventure and plant-based commerce. Glasshouses, as extraordinary structures, are designed to impress; they exude an institutional or national confidence often accompanied by a whiff of bombast.

Yet there is a fundamental paradox to these buildings, the idealised landscapes they display are at odds with the disappearing tropical ecosystems. The very structures of the glasshouses are manufactured from glass, iron, plastic, steel, and concrete, the atmosphere heated or cooled by fossil fuels-they are an embodiment of the carbon hungry industrial age that spawned, and subsequently accelerated, the Anthropocene.

I suggest that today's glasshouses, in large part, represent a last "picture house" for a vision of the tropics nurtured in the nineteenth century, the benign tropics, as epitomised by the writings of Humboldt. The naturalist wrote of the emotional impact of tropical vegetation, it acting " on our imagination by its mass, the contour of its forms and the glow of its colours"; and the epic canvases of artists such as Martin Johnson Heade and Frederic Edwin Church. Importantly these visions are largely devoid of people. This is a vision profoundly out of step with the reality of today's tropics, a world of extraordinary cultural diversity and innovation tackling the contemporary challenges of fire, erosion, extinction, climate change, and cultural dislocation. While the technology and architecture have profoundly changed, we are still filling our glasshouses with fundamentally traditional exhibits-crudely summarised as palms, waterfalls, and orchids.

These magnificent structures draw in millions of visitors across the world. They are cherished architectural icons for both institutions and cities, and above all, offer an intimate, and often joyful, brush with lush samples of biodiversity. If we accept that these loved but incredibly expensive edifices are an integral part of our heritage and entertainment economy, then it behoves us to squeeze the maximum value out of these assets, specifically as inspiring agents of a regenerative future in contrast to the economy of their origins, the carbon squandering Anthropocene.

The experience of visiting a glasshouse can be intense and inspiring. They can be places of wonder and sometimes awe. The tropical glasshouse experience is an extraordinary historical continuum. You cross, as you did when the Palm House at Kew opened in the 1840s, a threshold into a steamy mass of vegetation, an aromatic world, rich with big leaves and glowing flowers. There may be a winding path, rocks, cascades, and lookouts, there may be palms, orchids, birds, or butterflies. There may be a pool with the giant Amazon waterlily. There may be a titan arum, the term statue of the tropical glasshouse, simultaneously priapic and rambunctious. These beautiful icons of the tropical world have shown remarkable longevity in their ability to charm and excite over the last 150 years.

I have childhood memories of opening the heavy metal doors of the Palm House at Kew and stepping from dull winter into the steamy tropics. My two formative experiences of the tropics were both glass-boxed, the old tropical house at Paignton Zoo (tropical plants plus crocodiles, the ideal inspiration for the 12-year-old), and the now vanished Rowland Ward African dioramas at the Natural History Museum, London. These were temples, looming architecture, navigated through successive antechambers and corridors, with glass cased inner sanctums.

The plant collections (South African ericas, palms, aroids, orchids, cacti, and succulents) have waxed and waned, reflecting an insatiable appetite for the exotic and the novel. Much of the planting is ephemeral, with a few specimens surviving over decades or generations. However, the survivors can be of extraordinary importance. For example, the ancient cycad *Encephalartos altensteninii* brought to RBG Kew in 1775 from South Africa. Another is the beautiful *Erica verticillata,* an

Pp.140-141
Tropical glasshouses portals to a distant ecology. Traditionally an opportunity to explore a stylised and ornamental interpretation of tropical forests.
Right: The exhibitions within tropical glasshouse, such as the Winter Garden at Antwerp Zoo, represent a long history based on the delivery of delight and wonder rather than an exploration of the Anthropocene.

other rarity from South Africa. In 1786 the Emperor Joseph II of Austria sent two horticulturists, Francis Boos, and George Scholl, to the tropics to collect plants for the royal glasshouses in Vienna. The initial consignment included ten chests of plants, two zebras, and 11 monkeys. Included in the consignments were seeds from *Erica verticillata*. Those plants grew in Vienna. Shortages of coal during World War II meant glasshouses were not heated; however, courageous horticulturists worked to keep the collections alive in the extreme cold. Subsequently, plants from Vienna were repatriated to South Africa. After a two-hundred-year period in cultivation and after the extinction of the last wild plants in the early twentieth century, this species is now regenerating in the wild near Cape Town.

Today, we see a homogenisation of tropical glasshouse planting. Except for the science-based institutions, most of the planting within public display glasshouses is obtained from commercial nurseries, with palms and succulents sourced from Florida, Thailand, or the Canary Islands. The result is that most tropical glasshouses exhibit a very similar set of plants-the ubiquitous glasshouse flora. It is the architectural and theatrical setting that makes the experience and not necessarily the unique or rare plants. This is the acknowledged by The Eden Project, where rather than housing a collection, the glasshouses (biomes) are a spectacular arena for narrative and theatre, with the plant assemblage, flexible in its composition, serving educational and entertainment needs.

It is the architectural and theatrical setting that makes the experience and not necessarily the unique or rare plants.

As a society, we have unwittingly crossed the threshold from the Holocene into a new age, the Anthropocene. Perhaps now it is time to reflect on the future of the glasshouses as we prepare for a future characterised by the disruption of planetary systems, where the thrill of the exotic is supplemented by an imperative to restore both ecology and society.

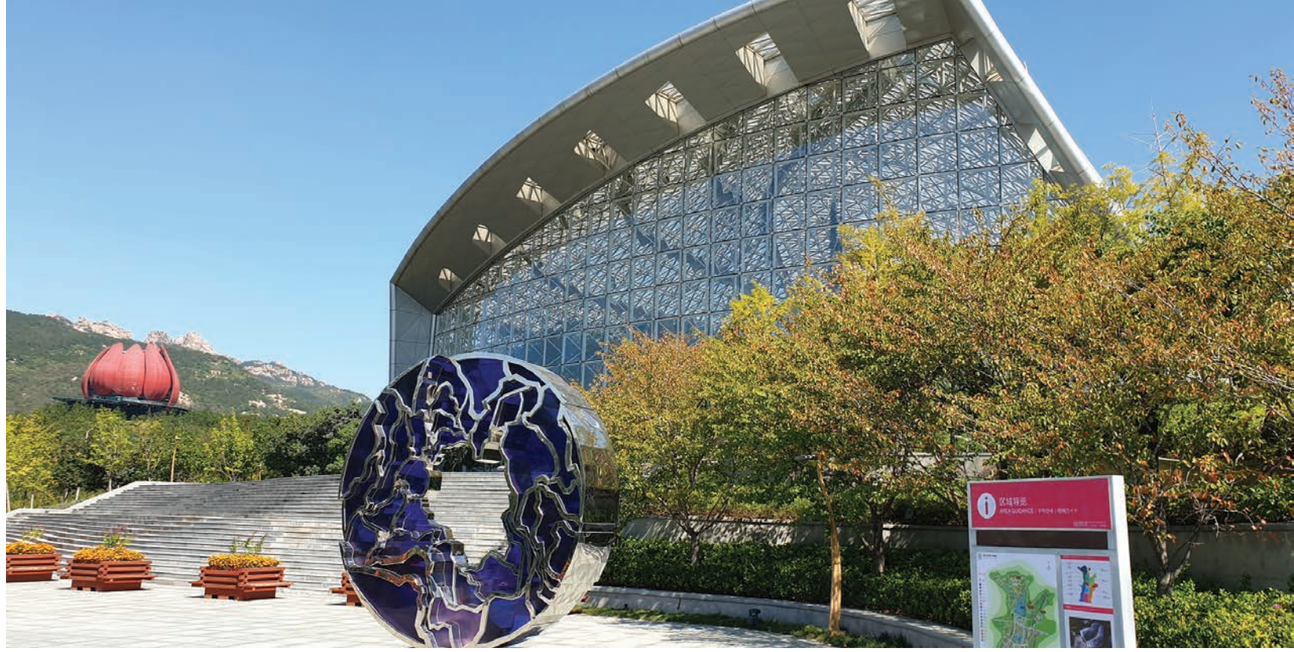
The old glasshouse exhibits, while undeniably beautiful, are reductionist, driven by the curatorial tradition of collecting-an accumulation of survivors. Yet these collections are often exhibited with little real interpretation of their history, their origins mostly invisible to the visiting public. Unlike species in a natural history museum, these are not individuals, they are part of the mass. The new generation of Anthropocene glasshouses may be less about the specimen and more about ecological and planetary processes, debating and reflecting the societal trends that have created the current crisis and catalysing actions that may salvage our future. This means shifting perspective from aggregations of plants to looking at microbiological processes at one scale and planetary systems at another.

The theming is evolving-with a trend away from exhibiting a non-specific simulacrum of the tropics, we see glasshouses that reflect a specific ecosystem (for instance, The Masoala Rainforest at Zoo Zurich) or a particular theme (rainforests and climate change at The Eden Project), and planned facilities such as Qingdao Eden Project in China exploring the culture and sustainability of water or the proposed Aldin Biomes in Iceland that in addition to a tropical biome will explore issues of human wellbeing and food security.

The glasshouse of the Anthropocene will recognise that while it is a place of exhibit, an attraction or destination, that through its operations and activities, it moves society closer to sustainability. It needs to demonstrate a regenerative approach to resources and foster debate and action for the future. The traditional deferential "education by stealth" model is being slowly replaced with more emphatic and relevant messaging as the botanical display institutions are gaining their collective confidence and placing their environmental responsibilities at the heart of their exhibits.

However, there is a deep dilemma here. A fierce and timely environmental mission can easily be compromised by the nervousness of commercial management, worried about sharing contentious issues with a paying public who came to be delighted rather distressed. It is a thin and flexing line, and collectively the botanical display institutions are constantly calibrating these ambiguous positions.

The tropical plants and landscapes held within the vitrine of a glasshouse

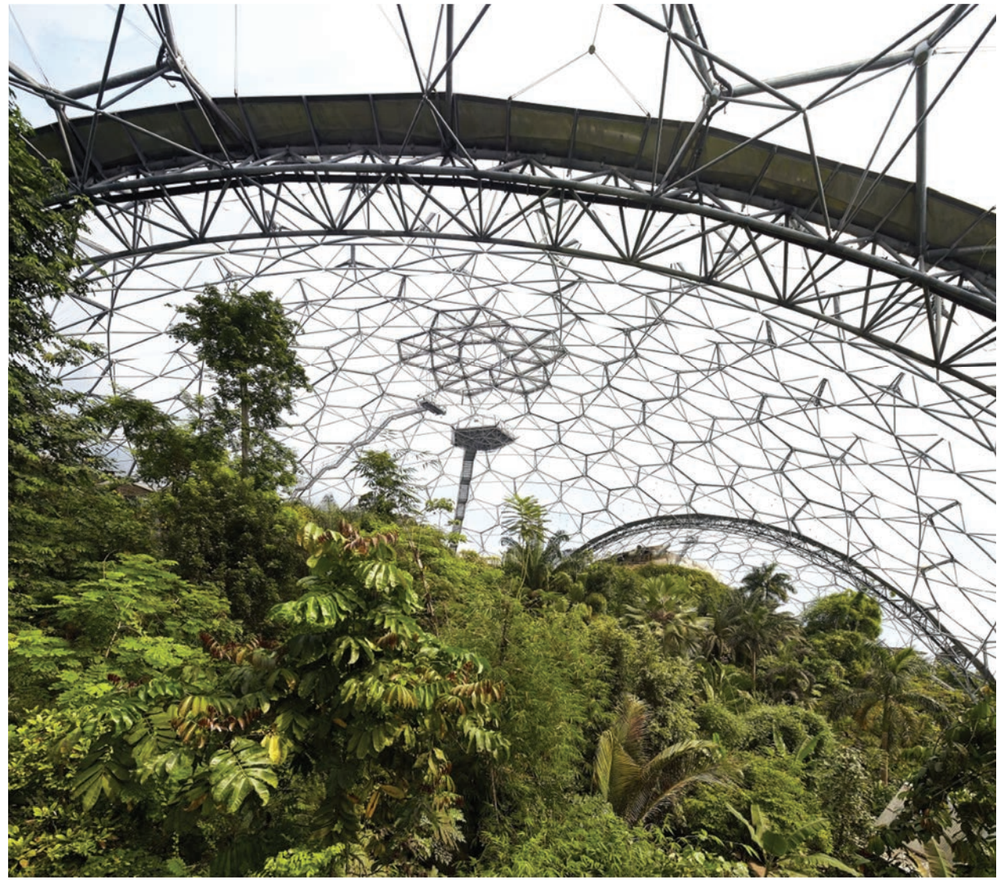


Vast new glasshouses are being built in Asia and the Middle East. The Botanic Pavilion glasshouse at the Qingdao Horticultural Expo covers 22,750 square meters, was opened in 2014. By contrast, the Temperate House at RBG Kew is 4880 sq metres in size.

have a lot in common with the biodiversity imagery of that domestic glass box, the television. The vast proportion of tropical plant exhibits are venues designed to deliver a theatrical representation of the tropical world. In common with many television wildlife documentaries, they do not portray the realities of the tropical world. The tropical glasshouse is an idealised tropical landscape without wood smoke, roaring chainsaws, or a roadside bush meat stand. Perhaps more importantly, they do not portray the extraordinary work of many frontline rainforest conservation groups working to conserve their forests.

A few facilities step more lightly and celebrate a subversive nature and indicate a way towards a good Anthropocene. One such example of a quirky take on the glasshouse is Koen Vannemechelen's *Labiomista* in Belgium. Ironically, the recognised guardians of plant diversity, the botanic gardens, have been nervous about exploring the Anthropocene issues (notably extinction). Mark Dion's *Neukom Vivarium* (2006) is a greenhouse containing the carcass of an old hemlock tree; the glasshouse is a hybrid space, a *memento mori* to a dead tree, an exhibit, a lab, and a celebration of the ecological processes of decay and regeneration. Working with the latest DNA technology, Daisy Ginsberg has recreated the scent of extinct plant species in her installation, *Resurrecting the Sublime*. These exhibits are in art institutions, not botanic gardens.

Contemporary art allows us to reinstate the mysterious and symbolic into the glasshouse experience. There is an urgent need to reinvigorate the glasshouse exhibit-to amplify the sense of wonder through new experiences with plants. Artists such as Team Lab with their suspended flower exhibits or Makoto Azuma's flowers in ice blocks or floating islands of flowers all point to new ways of engaging our public. Groups such as Marshmallow Laser Feast blend installation, performance, and virtual reality to explore nature-for instance, the *TreeHugger* installation at the Odunpazari Modern Museum (2019) explores the ecology of a giant redwood tree.



Left: Technology has allowed new tropical exhibits to be built in new venues. An example is the Green Planet in Dubai; a climate controlled rainforest exhibit.

Above: Inside the Tropical Biome of the Eden Project, a pioneering ETFE structure that houses a theatrical interpretation of the rainforest.

The glasshouse of the Anthropocene can build on the long-established "steamy plant experience" and enhance it with new tools. Partnerships with contemporary artists are key to this, and so is a willingness to explore new display techniques such as enhanced and virtual reality. There is also a moral responsibility-if you are exhibiting tropical biodiversity as part of your business or educational venture; it is no longer enough to say you may have inspired guests to possibly take some undefined environmental action. Our guests are looking for us to take institutional action and will increasingly ask what is your institution doing to actively deliver a successful Anthropocene?

Here several opportunities arise. Firstly, the recognition that most of the great glasshouses interpret other people's biodiversity and, through partnerships with front line institutions, they need to explore the realities and aspirations of the rainforest nations and their conservationists. Secondly, we pack the glasshouses with green masses of anonymous plant material. Even abundant glasshouse species have extraordinary stories about their origins, discovery, and conservation. For instance, a study of the ubiquitous swiss cheese plant can take you into the

history of Art Deco design, modernist architecture, and the decline of central American rainforests. As display venues for biodiversity and often as icons for conservation institutions, the environmental cost of the glasshouses structures needs to be minimised and the conservation impact maximised, a challenge pioneered by the Phipps Conservatory in Pittsburgh.

Ultimately the challenge is to use these glorious structures to stop extinctions. Can we convert a beautiful glazed box filled with plants, visited by perhaps a million visitors, into conservation gain, perhaps large secure and regenerating conservation landscapes in the tropics? To achieve the above, we need to up our game in innovative design, in science and culture-based interpretation while reinstating awe, mystery and wonder as part of the glasshouse experience.

The monumental Carl Akeley gallery at the American Museum of Natural History was designed as "an everlasting monument to the Africa that was" the tropical glasshouses can be an ever-dynamic arena for exploring the tropics that can be.

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Mike Maunder is a tropical conservationist and botanist who enjoys working in the hybrid zones between art and science. An expert in botanic garden policy, operation and design he has been working on botanic garden and glasshouse design for over 25 years. Mike is a Strategic Advisor to Eden Project International, a visiting professor in biodiversity, Centre for Ecology and Conservation, and a research fellow at the Global Systems Institute both at the University of Exeter, UK. Since his student days at RBG Kew he has been fascinated by these glazed cabinets of biodiversity.

Dor Guez:
Lilies of the valley

Dor Guez produces photography and video installations that explore the relationship between art, narrative, and memory, interrogating personal and official accounts of the past. His practice raises questions on contemporary art's role in narrating unwritten histories and in re-contextualizing visual and written documents.

interviewee **Dor Guez**

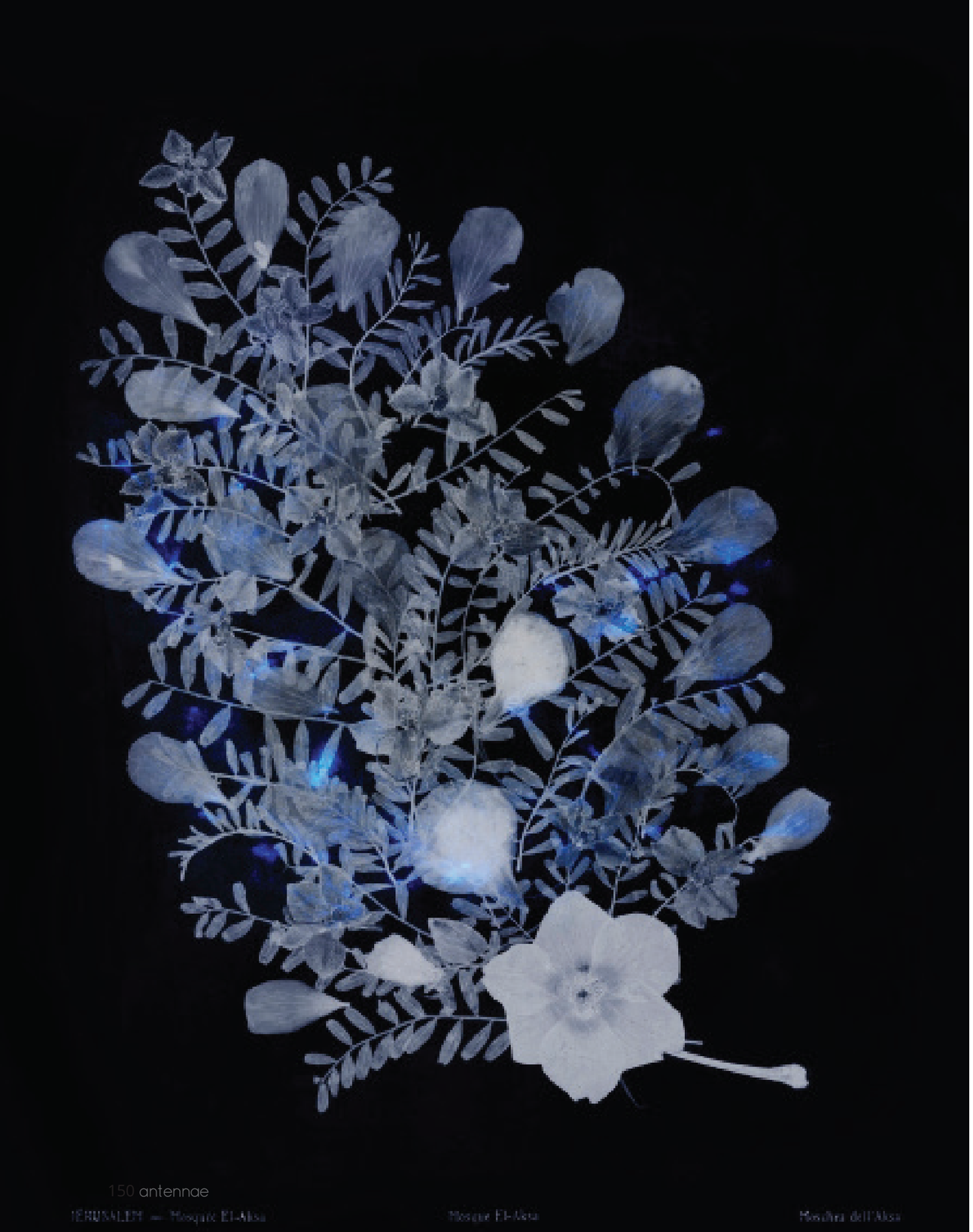
interviewer **Giovanni Aloi**

Dor Guez's photography, video, mixed media, and essays explore the relationship between art, narrative, and memory. Interrogating personal and official accounts of the past, Guez raises questions about contemporary art's role in narrating unwritten histories and re-contextualizing visual and written documents. Since 2006, his ongoing research focuses on archival materials of the region. To date, eight catalogues have been published internationally about Guez's practice. Publishers include Distanz, New England University Press, and A.M Qattan Foundation. Guez's work has been displayed in over 40 solo exhibitions worldwide, and numerous group exhibitions and biennials. Guez was born into a Palestinian and Jewish family in Jerusalem, and now lives and works in Jaffa.

Giovanni Aloi: Your work challenges prevailing narratives of East and West division, Jewish and Arabic cultures, religion and secularism, and Israeli and Palestinian identity. How did you become interested in this subject?

Dor Guez: I was born into a Palestinian and Tunisian-Jewish family in Jerusalem. On my father's side, I am the grandson of a Holocaust survivor, and on my mother's side, the son of a Palestinian-Christian family from Lydda. They were among the 2% of the city population that remained in Lydda after the 1948 war when the State of Israel was established. Narratives that are not supposed to reconcile with each other have influenced the way I act as an artist and as a scholar and may also have created a sense of commitment to how these narratives are told and understood.

About 12 years ago, I visited the Pinchas Lavon Institute for Labour Movement Research in Tel Aviv for the first time. Established in 1932, the Levon Institute is a historical and official archive of the Jewish labor movement and served as the source of my Ph.D. research on Orientalist style photography in Zionist archives. A few years later, I started working with archival footage as a visual artist. In 2009, I found a suitcase under my grandparents' bed, packed with plastic bags filled with photographs and other documents from the first half of the 20th century. I had never seen these materials before, and I remember wondering why they were not organized in family albums as is the habit with these sorts of photographs (weddings, baptisms, studio photographs for Christmas, etc.) With my grandparents' permission, I took on the task of gathering them into albums. I tried to build the conventional narratives of family albums and to organize them accordingly. As the family's unofficial historian, and maybe also as the eldest



grandson, my grandparents let me deal with these materials. I found myself editing our histories repeatedly in various versions and possibilities, but I failed with the primary task of making family albums. I realized what my grandmother understood all along: it is an impossible mission. She gave me time to reach that conclusion on my own and to fail on my own, as she had in the past.

This accidental encounter with a single suitcase was the starting point of the *Christian-Palestinian Archive* project (CPA), which is the only archive today dedicated to the Christian-Palestinian diaspora. The CPA was also a turning point in my artistic practice, and it provides the basis for many of my installations.

GA: Where does nature fit in your engagement with raising questions about history, nationality, ethnicity, and personal identity?

DG: One of the first bodies of work to emerge from the archives I am building dealt with the massive afforestation of my homeland by Zionist organizations, such as *The Nation's Groves* ("Mataei Hauma"). This body was a government-owned agricultural company that served in the 1950s as a branch of the Zionist enterprise, managing and maintaining the various groves, vineyards, and lands nationalized following the establishment of the state of Israel. It operated concurrent with the Custodian of Absentees' Assets, with Jewish and Palestinian laborers, until it was incorporated within the Jewish National Fund in 1960.

The first works included in this body of work are scanned materials that originated from my archive, "scanograms" in which you can see workers of the nation's groves in the field. The cognitive dissonance articulated by this series may be construed only through their historical-factual context provided by the works' titles. At first sight, the photographs appear similar to other photographs of Jewish pioneers and settlers. The Jewish-Israeli viewer is familiar with such images from national history and heritage lessons: men dressed in khaki clothes and work undershirts staged for a "group photo": planted in the landscape, in a grove or a field, close to the soil, leaning against one another or against their trucks. This vision becomes an absurd drama as one realizes that the images in these photographs were pulled from the photo album of a Christian-Palestinian who, like many others, was forced to rehabilitate his life in a state established after his own property, occupation, and the land was expropriated. The company's name, The Nation's Groves, like the title of the series, contains this incomprehensible dissonance: the groves of the new state are no other than the plundered groves of its "absentee" Palestinian inhabitants.

I revisited the forests in a typological series that systematically traces the wooden structures erected as playgrounds within the forests for the welfare of vacationers and their children. Each photograph is centered on a typical structure, simulating a house or a tower standing on wooden stilts, intended for children's amusement: sliding and climbing. Similar in appearance, these structures are akin to variations on a subject. The eye of the Jewish-Israeli viewer immediately notices their remarkable resemblance to the model underlying the "Tower and Stockade" settlement points erected overnight throughout the country between 1936-1939 to introduce a fait accompli and expand the boundaries of Jewish settlement. The likeness is surprising and ironic considering the so very different purpose, location, and time of the playgrounds, which thus transform, whether consciously or not, from areas of play into a metaphor for dispossession and appropriation.

Pine forests abound in Israel and are usually perceived as part of the country's "natural" landscape. The Jewish National Fund planted millions of pine trees across thousands of acres, dramatically modifying the terrain, especially after the foundation of the State of Israel in 1948. In a series of panoramic views of Ben Shemen Forest, one of the country's largest national parks, I expose the agricultural terraces and ruins of the Arab villages covered by the pine forests. One of the panoramic images includes two barely discernible Palestinians on horseback.

This body of work focused on the Israeli forestation project and the work of *The Nation's Groves,* while combining historical ethos with individual tales. The work presented a structural, formal, and contextual tension between the artificial and the natural, between imitation and origin: a tension between a culture struggling over its Jewish identity and a culture rehabilitating itself in the shadow of plastic Christmas trees.

Dor Guez

Lilies of the Field #1, Jerusalem, Mosque El-Aksa, 2019, archival inkjet print, 112 x 145 cm , edition of 3 + 1 AP © Dor Guez

GA: Over the past couple of years, you have developed the project *Lilies of the Field*, which focuses on 19th-century souvenir albums of pressed flowers made for tourists and pilgrims visiting the Holy Land from countries in Europe and North America. How did you come about discovering these albums, and why did they attract your attention?

Dor Guez

Lilies of the Field #1, Jerusalem, Rachel's tomb, 2019, archival ink-jet print, 112 x 145 cm , edition of 3 + 1 AP © Dor Guez

DG: As my work reflects on the relationship between language and displacement, and the entanglement of nature with perceptions of home and identity, I found myself looking at few local archives over the years- one of them was The American Colony Archives in Jerusalem. The archive includes photo albums, some of which are even hand-painted, made by the photography department of the American Colony, and they include documentation of the "Holy Land" from the point of view of the members of the colony. For them, this is not "Palestine" or the "Land of Israel", and the cross between these materials and those in the Zionist or Palestinian archives caught my attention.

Formed in the aftermath of the Great Chicago Fire in 1871, the American Colony's initial pilgrimage to Jerusalem precedes waves of Jewish immigration to Palestine leading up to 1948. A mission of Christian-Americans who left Chicago for Jerusalem in 1881, members of the American Colony became active in charitable work to help local communities.

It was in this archive that I came across an album whose cover is made of olive wood with dried flowers inside. Between the late 19th and early 20th century, albums of pressed flowers were among the most popular souvenirs on offer for tourists and pilgrims visiting the Holy Land from Europe and North America. Typically comprising of dried petals and additional plants placed in flower-shaped arrangements, the albums noted the places where specimens had been collected and preserved in resin: "Jerusalem," "Jericho," "Tiberias," and more. Corresponding to the cities and biblical sites already familiar to the Western tourist, such categorizations were informed by a distinctly romantic and religious view of the area.

As with some of my previous projects focused on local landscape and vegetation, like The Nation's Groves, the new series named Lilies of the Field unpacks how a landscape, explicitly or implicitly, is subjugated to Orientalist precepts and made to conform to a Western eye, style and taste. As later examination I did has shown, plants in the albums do not necessarily correspond to the locations cited below. They are sometimes cultured species unrelated to their purported local botanical landscape. In addition, botanical denominations are frequently replaced by literary ones – as with the anemone, which the albums identify as the 'Lillie of the field,' known from the Bible. An examination of the color hues in the flower arrangements shows variations in both the durability and frequency of certain pigments. Anthocyanin, for example, a pigment present in hues of red, purple, and blue, occurs more frequently and shows greater durability over time, while carotenoid, a pigment responsible for yellow and orange, had all but faded, disintegrating and transferring to the protective sheet of wax paper. My research spawned two photographic series based on the pressed flower album I found in the archive of the American Colony.

GA: Can you describe for us the photographic process involved in the making of the final image?

DG: Yes, tracing the remnants of the yellow pigment, I photographed the front side of each flower arrangement, then of the backside of its overlaying sheet, which over a period of some 100 years, had absorbed most of the carotenoid pigment. Neatly aligning both images – that of the flowers, ostensibly the series' subject matter, with that of the pigmented protective layer – I re-conceptualizes the image with respect to the time dimension.

This process resulted in two photographic series, both in negative. The first, based on the flowers themselves, simulates a photogram of the flowers on a scale of 1:1. In contrast, the second, by converting the yellow to its complementary shade on the color spectrum, simulates large-scale cyanotypes. In the latter, blank areas indicate the anthocyanin-pigmented flowers of the original arrangement, which appear to fade under yellow pigment residue. With attention given predominantly to the pigment shed by the flowers rather than to the flowers themselves, I try to undermine the hierarchy between what is perceived as authentic as opposed to fabricated.

GA: It seems to me that, beyond its religious connotation, *Lilies of the Field* is steeped in the history of photograms, indexicality, and memory. How does the photographic process contribute to the conceptual dimension of the work?

DG: In many ways, the invention of photography in the 19th century is closely related to the reinvention of the "Holy Land" as a concept. The first photographers came to Jerusalem and documented the place for Western eyes who had a deep curiosity and interest in these images. At the time, these were "reliable" and "accurate" photographs, which in practice reflected what they wanted to see and not the challenging and complex reality of the place. My treatment of the *Lilies of the Field* series arouses the gaze from a supposedly reliable

reflection of nature "as is." I focused on the remnants of time (the yellow pigment) and not on the object itself (the dried flower). The result reflects a mirror image - a photographic negative. *Lilies of the Field* correspond intellectuals with the charged history of photography, but also attract other worlds of content and visual readings; They look like an underwater photograph in dark conditions, like a medical X-ray, or maybe a photograph designed to decipher a crime scene. Alongside the aesthetic dimensions, there are latent, albeit, politically charged historical aspects of nature's representation and the ownership of it.

GA: The compositions are over 100 years old. Have you discovered anything interesting about the plants featured in these works?

DG: As I mentioned earlier, while mapping the various plants and flowers, I found that there is no connection between the indicated location in the album— holy places in the north, the beach area in the south- and the real natural habitat of the flower itself. In fact, they were all harvested at the place where the pilgrims came to and where the album was composed - Jerusalem.

GA: Plants have the ability to powerfully harness identity constructs – is this the case with the plants included in Lilies of the Field?

DG: Definitely. The flower albums lack botanical-scientific accuracy. They serve the romantic concept of the period and faithfully reflect a place that only exists in our imagination - "The Holy Land". The purchase of these albums, similar to the purchase of romantic postcards, for example, were a part of a subtle colonial mechanism of an ongoing process of "acquisition" and ownership of this land. It was symbolised via an object that summed it up - in this case - the summary of biblical nature that the buyer re-own as a part of his religious identity and "rights".

GA: What are you currently working on?

DG: I am currently working on a project that bears a close connection to the representation of nature, its documentation in photography, and its metaphorical significance.

For the last three years, in parallel to the work I did with the prodded flowers album, I was working on a three-channel video installation related to an album that documented the locust plague in the Middle East 100 years ago. The images derived from the archives of the American Colony in Jerusalem and from the National Library of Congress in DC. The name of the project is Colony, and it deals with an epidemic.

Colony explores the connection between photography and colonialism through images taken by some of the first photographers in Palestine. The video installation underscores the striking similarities between the appearances of Western colonialism in the middle east to the neo-colonialist reality in the age of the Anthropocene. Colony is narrated by an official anchor typical of a National Geographic or Discovery Channel. The text's content is twofold: on the one hand, it sounds like a text about the animal kingdom and the formation of swarms, while on the other, it deals with the formation of colonies throughout history. There is no direct reference to locusts or humans. This ambiguity charges the narrative and allows parallel readings of ecological, political, and social meanings. Finally, Colony also deals with the individual's place within the group, as well as the conditions under which the colony emerges and its economic and territorial aspirations.

Dor Guez

Lilies of the field #1, Nazareth, General vue, 2018, archival inkjet print, 112x145cm, edition of 3+1AP © Dor Guez

Dor Guez's work has been displayed in over thirty solo exhibitions worldwide; MAN Museum, Nuoro (2018); DEPO, Istanbul (2017); the Museum for Islamic Art, Jerusalem (2017); the Museum of Contemporary Art, Detroit (2016); the Institute of Contemporary Arts, London (2015); the Center for Contemporary Art, Tel Aviv (2015); the Rose Art Museum, Brandeis University, Massachusetts (2013); Artpace, San Antonio (2013); the Mosaic Rooms, Centre for Contemporary Arab Culture & Art, London (2013); the KW Institute for Contemporary Art, Berlin (2010); and Petach Tikva Museum of Art, (2009). He has participated in numerous group exhibitions, including shows at the Buenos Aires Museum of Modern Art (2016); the North Coast Art Triennial, Denmark (2016); Weatherspoon Art Museum, Greensboro, North Carolina (2015); the 17th, 18th, and 19th International Contemporary Art Festival Videobrasil, São Paulo (2011, 2013, 2015); the 8th Berlin Biennale for Contemporary Art (2014); Cleveland Institute of Art (2014); Triennale Museum, Milan (2014); Centre of Contemporary Art, Torun (2014); Tokyo Metropolitan Museum of Photography (2014); Maxxi Museum, Rome (2013); Palais de Tokyo, Paris (2012); the 12th Istanbul Biennial (2011); and the Museum of Modern Art, Ljubljana (2010).

Melissa Oresky

Finder, pp. 2, Artist's Book, Three-color silkscreen, 2020, Melissa Oresky © Melissa Oresky

Composting in the herbarium

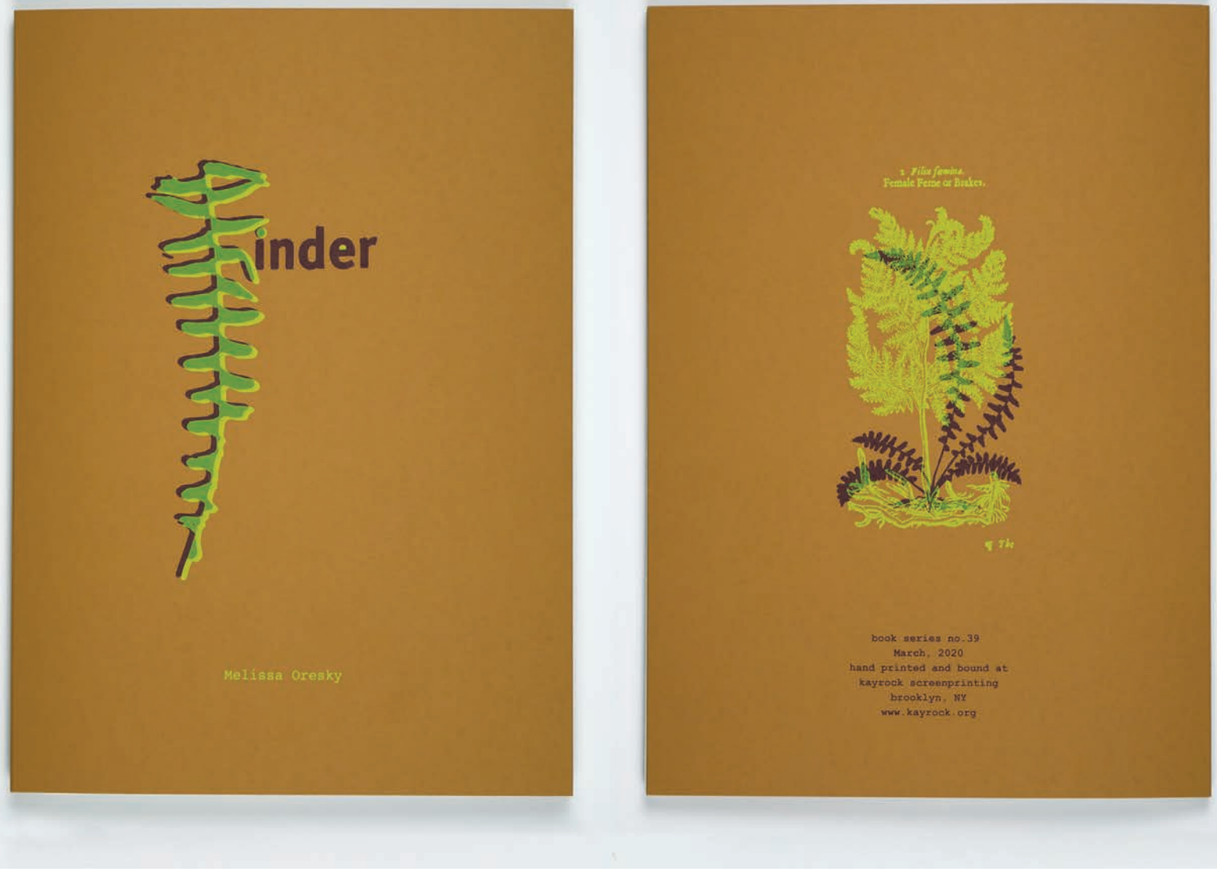
Since the early modern period, European and Euro-American botanists and natural historians have used printed books and herbarium specimens to teach practitioners how to see plants. These scientific modes of vision, however, obscured other ways of knowing and looking. This essay, which emerged from a series of conversations between a painter (Melissa Oresky) and a historian (Keith Pluymers) about the pasts of and potential futures for these visual materials and Oresky's production of an artist's book Finder *(2020), argues that we might begin to reimagine these materials without forgetting their histories through the process of composting.*

text by **Keith Pluymers and Melissa Oresky**
images by **Melissa Oresky**

Since their emergence in the early modern period, European and Euro-American botany and natural history have been visual enterprises. For practitioners, learning to see like a naturalist was essential. To serve this purpose, European naturalists developed a series of technologies—the herbal, the herbarium, the research garden—designed to train new practitioners' eyes and to allow trained naturalists to engage in the visual comparisons that would allow them to classify and categorize.[1] From these beginnings, European visual culture and the pursuit of natural philosophy and natural history examinations were enmeshed—the techniques of printers, painters, engravers, and artisans helped define modes of "scientific" communication as well as the nature of facts in this period.[2] From these new modes of seeing emerged practices of collecting, categorization, and communication that continue to shape botanical study and practice to this day.

These technologies and tools for seeing, however, also obscured other ways of knowing plants. In both Europe and its plantations and colonies, naturalistic and later scientific ways of seeing treated the plant knowledges of women, Native peoples, and people of African descent as, at best, local curiosities requiring verification and translation by trained experts and, at worst, threats to religious, political, and sexual order. Efforts to see and visually communicate information about plants served European efforts to create commodities for global markets and exert colonial control.[3] Even as many contemporary scientists have sought to distance themselves from their disciplines' colonial pasts, tensions between ways of knowing remain. As enrolled member of the Citizen Potawatomi Nation and environmental biologist Robin Wall Kimmerer writes, "To name and describe you must first see, and science polishes the gift of seeing … [but] beneath the richness of its vocabulary and its descriptive power, something is missing, the same something that swells around you and in you when you listen to the world".[4] Kimmerer describes her own experience of scientific training as a shock that left her initially convinced that science "didn't seem to leave much room for a person who thought the way I did".[5]

For Kimmerer, science's past and present limitations do not require that it be abandoned but rather that we develop practices to learn the truths it cannot tell, particularly those bound up with ways of knowing and seeing developed by Native peoples. By developing intimacy with plants, we can learn new ways of seeing that may draw on the tools of science, but that depend upon our ability to hear plants speak their own names.[6] This is an embodied, future-oriented practice that demands the measurable knowledges of science learn to coexist with the experiential knowledge



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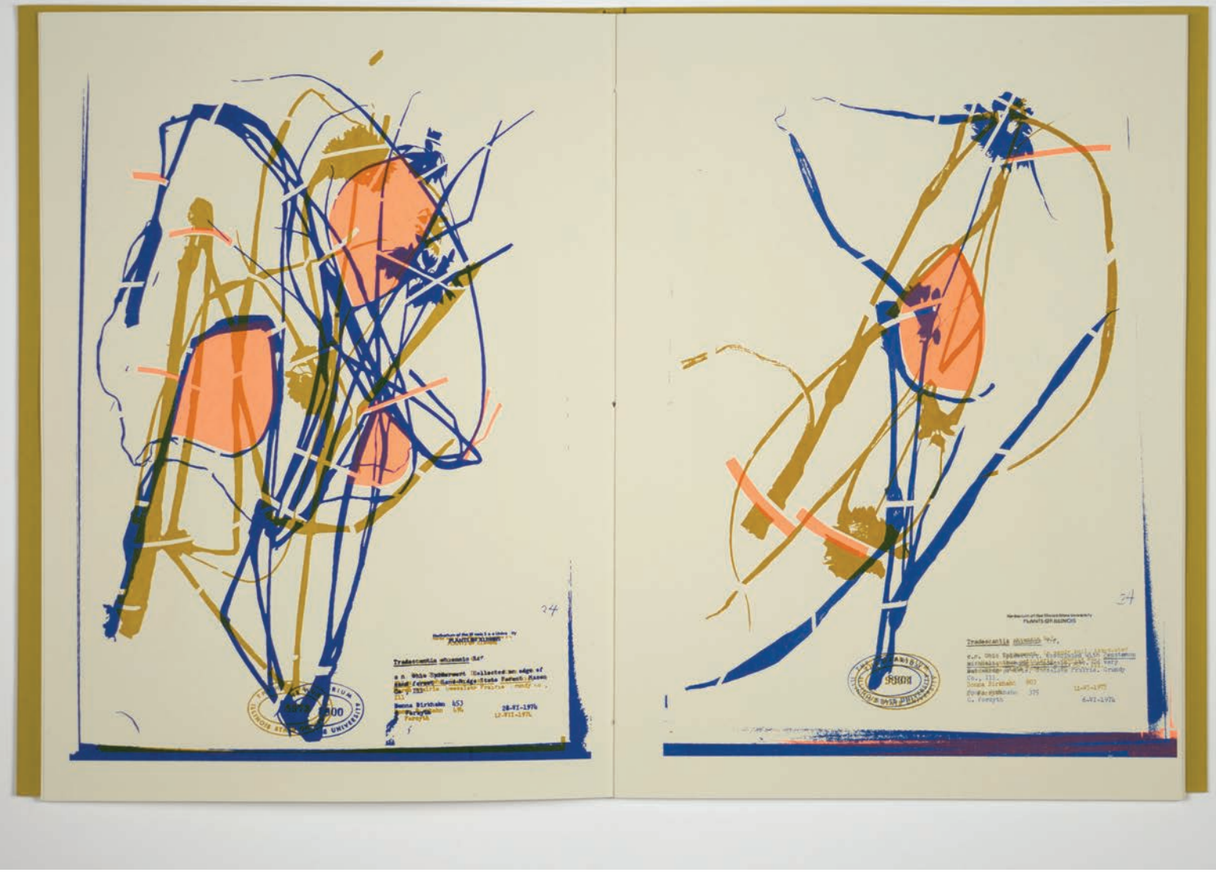
Finder, front and back, Artist's Book, Three-color silkscreen, 2020 © Melissa Oresky



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Ghosts, pp. 3-4, Artist's Book, Three-color silkscreen, 2016 © Melissa Oresky

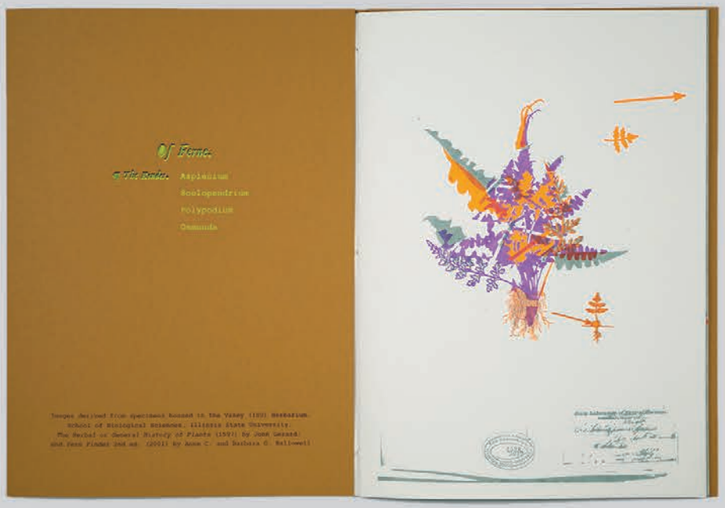
born of long, careful observation and deep intimacy that characterizes traditional ecological knowledge.[7] Yet what of the objects that defined the European naturalistic and scientific ways of seeing—the disembodied illustrations in herbals and field guides or the detached specimens preserved between sheets of paper in herbaria? Can we not only locate them within the contexts that produced them but begin to reimagine them by listening for the surviving whispers of plants' own language? Can we use these objects to create what feminist science scholar Donna Haraway calls "inhabitable narratives" that neither deny the "ravages" of past scientific and naturalistic practices nor reduce them to simplistic stories of good and evil?[8]

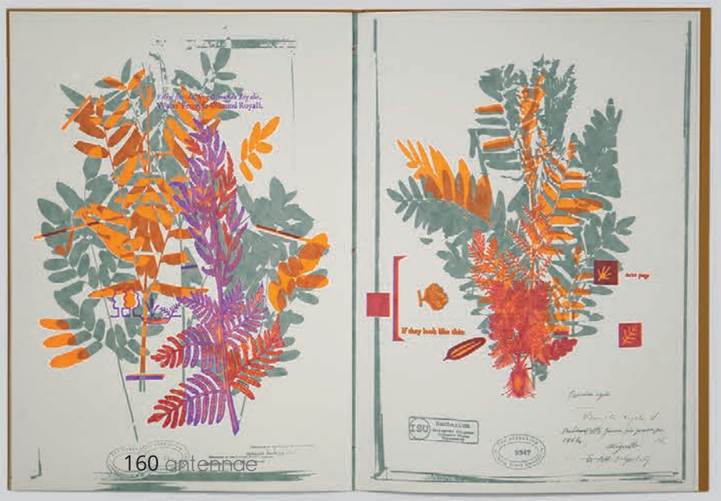
This essay chronicles an attempt to do so through collaborative conversations between a historian (Keith Pluymers) and a painter (Melissa Oresky) and the production of an artist's book, *Finder* (2020), from them. The conversations and the resulting work seek to create, as Haraway would say, an "encounter that transmutes and reconstitutes" these naturalistic and scientific images and objects through a process of creative composting.[9] To make compost, we have explored how processes of layering, accretion, and decay enable new forms of historical storytelling.

Doing so has required engagement with the freedoms and limits of our respective disciplines and practices. As historian and visual artist Nell Irvin Painter commented, there is a tension between the practices of history and visual art, though each offers insights into narrative of the past, chronology, and temporality. "When writing history," she offers, "I feel a responsibility to historical truth that doesn't allow my imagination free reign. In the studio, in contrast, I make fictions according to the wanderings of my visual imagination." For Painter, these constraints/freedoms stem from her relationship to the archive. The historian must be "respectful of the archives" while the artist is allowed to treat them "disrespectfully" or, at least, "self-indulgently".[10]

Adopting composting in historical and artistic practice creates space to explore the specificity and context of the archive and the freedom to see truths that cannot be contained within it, and, in doing so, creates space to reimagine historical storytelling. As literary historian Steve Mentz writes, "A composting model of historical change recognizes multiple presences in multiple states of decay at all times." Multiple temporalities and contexts coexist in our narratives of the past and the present and in the objects that shape these stories. To allow them into our thinking risks being overwhelming while opening new possibilities. To make compost of history is to dive into "a productive and disorienting swirl".[11]

Our conversations began in August of 2019, when we found ourselves brought together as part of "Pressing Plants," an exhibition at Illinois State University's Milner Library highlighting materials related to plants from faculty artists and





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Finder, interior pages, Artist's Book, Three-color silkscreen, 2020 © Melissa Oresky

Polypodium Falcatum and Osmunda Regalis Linn, Specimens from the George S. Vasey Herbarium, Illinois State University. © Photographed by Melissa Oresky Courtesy from Joe Armstrong, Herbarium curator.

from the library Special Collections department. In planning the exhibition and moving through the space, our contributions, a display of rare books on early modern European botany, gardening, and agriculture and an artist book, *Ghosts* (2016), respectively, we began to discuss the links between our scholarly and artistic interests in how to think with plants. Spiderworts (genus: *Tradescantia*) brought us together.

At the lower right corner of a two-page spread of prints drawn from *Tradescantia ohiensis* in *Ghosts*, partially legible layered collection information appears to indicate the images' connection to specimens collected from both sandy and "very wet marsh" sections of "Gooselake Prairie" in Grundy County, Illinois in 1974 and 1975, part of the "Plants of Illinois" collection at the George Vasey Herbarium at Illinois State University.[12] At first glance, these are local images with local ghosts—the plants suspended in states of slowed decay within the herbarium cabinets or the prairie landscapes that provided Illinois its sobriquet but that exist only in small surviving patches described as "remnant" like portions of Goose Lake State Natural Area or as reanimations approximating past places.[13]

Yet the genus name, *Tradescantia*, invites other specters. The genus name derives from John Tradescant the elder, one of the most prominent gardeners in early modern England, who served as gardener for the nobility and as an expert sericulturalist for King James I. In the seventeenth century, contemporary English naturalists and gardeners had already begun applying Tradescant's name to the Virginia Spiderwort, noting that "the Christian world is indebted unto that painfull industrious searcher, and lover of all natures varieties, John Tradescant" for having introduced it to English gardens and

It is the architectural and theatrical setting that makes the experience and not necessarily the unique or rare plants.

gardeners. According to one contemporary, John Parkinson, author of the contemporary gardening guide *Paradisi in Sole Paradisus Terrestris* (1629) and a notable gardener himself, Tradescant had first received the plant from a "friend that brought it out of Virginia" who had believed it to be "Silke Grasse," which Virginia colonists and English merchants had (erroneously) hoped might provide an alternative to imported silks.[14]

The name stamped at the bottom of the herbarium specimens reflected a history that defined North American spiderworts through the horticultural skill of early modern gardeners who successfully cultivated them in London as aesthetically pleasing flowering plants that might, if the Ancient Greek physician Dioscorides was correct, "drunk in wine, prevaile against the bitings of Scorpions," not as components in grasslands to be reduced to remnants by the plow or as a food or medicine embedded in knowledges of Native peoples of North America.[15] Plants, writes Kimmerer, "have their own names, which were theirs long before Linneas," but also long before John Tradescant.[16] Shapes abstracted from the plants' forms and the inclusion of collection information and the historically freighted scientific name engage in a complex interplay, invoking the authority of text to define and discipline shape in some places while characters decayed into illegibility become abstractions rendering plant silhouettes comparatively concrete. By destabilizing these visual markers of authority, *Ghosts* asks us to listen for whispers from the preserved plants.

The silkscreened prints in *Ghosts* invite historical thinking and questions about what narratives of nature and our past leave out through their combination of visual nods to the materiality and archival character of the herbarium specimens and abstract engagement with the preserved plant forms. *Finder* (2020) builds from *Ghosts* and our conversations to further explore the historical, archival, and material aspects of the preserved plant specimens while situating them alongside materials from two printed books, John Gerard's *Herball*, a foundational text for English botany (despite contemporary allegations of plagiarism) originally printed in 1597, revised 1636, and remaining in print to the present, and Anne C. Hallowell and Barbara G. Hallowell's *Fern Finder* (2001), a "choose-your-own-adventure" guide to fern identification aimed at amateur naturalists.[17] This combination of preserved specimens and printed plant material allows for an engagement with the critical resources for historical botanical practice. Additionally, prior to creating of the prints, we spent time matching ferns depicted and described in Gerard's *Herball* with those preserved in Illinois State University's George Vasey Herbarium to explore what insights might emerge by playing with the methods of finding, pairing, and tracing used by both botanists and historians.

In doing so, we have added new layers into our compost. The herbarium that now bears Vasey's name reflects his connections to the state, where, he served as President of the Illinois Natural History Society founded in Bloomington, IL in 1858 and acted briefly as curator of the Natural History Museum at the State Normal University of Illinois (now Illinois State University) for a brief period between his (somewhat abridged) participation in fellow Natural History Society member John Wesley Powell's expedition to map the Colorado River in 1868 and taking up a more prominent national role as Botanist of the Department of Agriculture and Curator of the US National Herbarium in 1872, where he served until his death in 1893.[18] At their inception, the Illinois Natural History Society headquartered in Bloomington and their collections at the Natural History Museum in neighboring Normal were bound up with collectors, one whose actions would shape the practice of botanical science in the United States and the other who would be celebrated as an early prophet of American environmentalism whose vision for the landscapes of the US West continues to define the region. For each, collecting, particularly of plants was essential in their paths to prominence and each saw science as a nationally significant endeavor, although Powell would argue against federal funding for botany, believing it was not useful enough a science.[19]

In more recent years, however, herbaria as centers for biological study and

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Finder, pp.10-11, Artist's Book, Three-color silkscreen, 2020 © Melissa Oresky

practice and the Vasey Herbarium in particular have been in decline as biologists and other scientists question whether the fields of study depending upon them have become "passé" and should "be properly relegated to the past".[20] The Vasey Herbarium's current curator, Dr. Joseph Armstrong, who manages the collections despite having retired from the university, writes that he came into the position because "no one else was interested." Herbaria are critically important, he argues, for conservation biology, and the Vasey Herbarium, which houses some of the oldest plant collections for Central Illinois provides an essential resource for ecological restoration efforts in the region. Yet he worries, "I think it might get given away or thrown away if I were not here to object, and I won't be here forever".[21]

Vasey Herbarium and its contents are the perfect site for compost history. The specimens exist in states of controlled decay, preserved through the skill of the mounter, acid-free archival paper and folders, and cabinets that block out light. Even so, they shed constantly. Organization by genus and species means that within a single folder the records of multiple past landscapes and of past collectors coexist—fresh specimens still bearing the pigments of life and marked with typescript collection information lie stacked with browned plants bearing handwritten notes attesting their provenance from Powell's Colorado expedition. Here botany as imperial science mustered in the effort to map, codify, and describe an "unknown" interior and to render it (and the peoples to whom it had long been known) governable to an expansionist

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Finder, pp.12-13, Artist's Book, Three-color silkscreen, 2020 © Melissa Oresky

US state and botany as an effort to catalog, preserve, and aid in the protection of species and landscapes plowed under as a part of those same efforts coexist. The palpable sense of precarity—that, if not for the efforts of its curator, the herbarium might be abandoned as an unaffordable luxury at a non-flagship state university bearing its share of the scars from decades of austerity—and irony—that the nightmarish maturation of Powell's injunction that state-supported science must practical and profitable may doom a collection he helped create—add to the swirl of pasts and presents comingling as they change form.[22]

The typical historical impulse is to trace a path, to order the archive, and offer an interpretation that, however partial and tentative, gestures towards a story of change over time that when coupled and contrasted with other interpretations might yield a narrative of the past and present. *Finder* plays with and subverts this impulse, using disaggregated, flipped, and resized directional arrows and habitat symbols meant to guide the reader to successful identification in *Fern Finder* and allowing fern forms from photographs of herbarium specimens or from the engravings in Gerard's *Herball* to "point" the viewer but following neither scientific nor historical logics. Following directions in *Finder* is not chronological, nor does it move the viewer towards visual identification.

Finder likewise challenges this historical impulse by making the Vasey Herbarium not only a source for materials but a subject. The book uses the blue-grey

of archival boxes, the mustard of archival folders, and the dark blues and purples of pen ink as one of two dominant color motifs throughout. Although these colors sometimes serve as background for the prints, they are never mere backdrop. These visual references to the material and institutional repositories of knowledge shift from field to form and from foreground to background through regular inversions, demanding that the materials and institutions from which we produce certain kinds of knowledge and tell certain types of stories be a part of those stories, echoing demands from scholars of Native peoples and people of African descent to explicitly discuss the processes of archival formation and the forced silences they produce rather than allow them to become unheard context in complete-feeling tales.[23] Given the herbarium's current state of precarity, the situated, materially embodied aspects of these institutional spaces also create an atmosphere of obsolescence alongside the powerful seduction of authoritative knowledge. These colors and materials make the feeling of the archive—the conjunction of past epistemological power and present decay—palpable.

Finder explicitly explores the historical context behind the creation of the Vasey Herbarium. In one set of prints, the arrowlike bodies of *Polypodium* and arrows from *Fern Finder* direct the viewer across the two pages. To the left, large *Polypodium* shapes are arranged in a roughly circular form. The visible presence of sori (clusters of spore cases housing the cells which ferns use in sexual reproduction) and the inclusion of a small *Polypodium* form appearing to grow from a larger form at the middle right playfully evoke cycles of reproduction and the cyclical temporality of seasonal cycles in particular places.[24] On the next page, the character of directionality and its implied geographies and temporalities begin to change. A large frond outlined in blue and fluorescent yellow appears to point to a clearly legible specimen marker announcing that this *Polypodium vulgare* (Common polypody) was collected during "Powell's Colorado Exploring Expedition." This is the most sparsely populated page in *Finder* with relatively diminutive fern forms arranged with directional arrows to form a meandering, almost riparian path through mostly blank space populated only by bits of visual debris.[25] The ferns appear to be exploring "untouched" and "unknown" wilderness, rhetoric used by both Powell and his allies, alongside claims that such lands constituted blank space, to garner support for his travels and the colonial project to follow in their wake and that has since been deployed regularly to define the boundaries between nature and humanity in North American environmentalism.[26] In this image, the fern life cycle depicted in *Fern Finder* is broken. Rather than "the wordless voice of longing that resonates within us, the longing to continue, to participate in the sacred life of the world" that for Kimmerer animates annual cycles embedded in place, the attenuated circle of reproduction here is the colonial drive to expand and conquer, the manifestation of unquenchable want and disastrous positive feedback loops that she identifies with the Anishinaabe monster Windigo.[27] Setting this scene of plant exploration atop the mustard hue of an archival folder carries a warning about how we define the unknown when depending upon the knowledge-keeping technologies of the archive.

And yet by centering the ferns themselves another reading becomes possible. Plants engage in migration, taking up residence in new spaces in response to climatic shifts, disturbances, and other factors. Increasingly, in a world shaped by climatic shifts prompting plants to move themselves or as they find themselves moved through human and novel other-than-human animal factors, we might begin to question ideas of plants rooted in place.[28] It is possible to render plant movement in colonialist terms, to speak of "invasion" and "pioneer colonists."[29] And yet we might also, as Kimmerer does, treat succession as a process of healing, to imagine the fern as finder not seeking domination but inaugurating a process by which moving plants begin to bring life back to "a desolate place that everyone wanted to cover in garbage." This too is "pioneering." The archive and the herbarium present many choices, to follow the path "soft and green with new grass" or to follow the course "scorched black, hard." How, Kimmerer asks, do we know which path to follow; "how

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Finder, p. 8 Artist's Book, Three-color silkscreen, 2020 © Melissa Oresky

we recognize what we should reclaim?"[30] Perhaps, it is to follow the fern and let it serve as finder.

Following the fern's path requires that we take care when dealing with the known. A two page spread of *Osmunda regalis* incorporates visual wayfinding symbols and text from *Fern Finder*—"If they look like this..." and "next page"—as well as the symbol indicating the habitats in which this species is found. These appear to offer a logic to the layered image—follow the instructions and identification will follow but they chart a meandering path embedded in the practice of reading *Fern Finder*. Some elements match exactly: The habitat symbol corresponds with the habitats where *Fern Finder* indicates royal ferns grow. Finding the symbols depicted here is more challenging and requires working backwards through two decision trees from the page describing the Royal fern (*Osmunda regalis*), choosing correctly how to move backwards at each point.[31]

Additionally, *Finder* uses the layering process of silkscreen to explore this uncertainty. A layer of orange pigment fails to align with the purple outline of a reference line drawing of variations of a fern part (pinna) from *Fern Finder*. These misalignments create visible gaps between layers and a halo effect as colors appear to float atop each other evoking a sense of offset motion or a temporal blip. Setting the deliberately mis-layered line drawings directly against precisely aligned fragments of purple and orange in Gerard's visually dense "Wall Ferne" exposes the processes through which knowledge—whether visual, historical, or scientific—is constructed.[32] In doing so it invites the viewer to wrestle with a longing for alignment, the desire to order the moment of visual chaos and arrange history's layers into narrative discipline or to dive into the cracks that misalignment creates without knowing whether they contain paths to other ways of knowing or blind alleys.

These elements of playful misdirection and uncertainty evoke the frictions involved in pairing specimens.

These elements of playful misdirection and uncertainty evoke the frictions involved in pairing specimens. Gerard and other early modern European natural historians and botanists used naming conventions that often feel strikingly similar to the Linnean taxonomic conventions used by modern scientists. Text atop the image of the royal fern from the *Herball* in *Finder* carries a Latinate name "Osmunda Regalis". Yet it also lists alternatives, "Water-Ferne, or Osmund Royall".[33] Naming conventions and modes of categorization were inconsistent, reflecting the distinctive project of what historian Brian Ogilvie calls "Renaissance Folkbiology".[34] Finding exact taxonomic matches between herbarium specimens, Gerard's *Herball*, and *Fern Finder* often proved impossible due to Gerard's modes of classification and his limited access to North American specimens or *Fern Finder*'s focus on the central and northeastern United States and eastern Canada.

As a result, botanical knowledge and textual tracing provide only partial insights into *Finder*. Instead, it depends upon "search image". As Kimmerer writes, the brain creates categories by differentiating complex visual data by identifying patterns through experience, creating a stored image that can be used to identify visual phenomena. Without the requisite experiences and the correct search image, what is visible to an experienced observer will remain invisible.[35] *Finder* invites the viewer to imagine unique and subjective visual experiences, to seek the search image that prompted pairings where historical and taxonomic uncertainty or aesthetic logic disrupted the categorizing process and to engage in their own project of close looking, allowing their experiences to locate and categorize with and against the grain of formal taxonomy or historical fidelity.

Finder, however, is not solely a story of limits. After all, making compost is a future-oriented exercise. The processes of decay and the recombination of past forms creates the material with which we can nourish future plants. Heat, the work of biological organisms, and the processes of chemical reactions convert life-giving necessities fixed in inert pasts into the stuff of living futures. Fluorescent yellow and orange, part of a category of colors defined by their luminescent visibility which alone among pigments allow human eyes to see ultraviolet light, intrude into the musty institutional palette derived from acid-free paper products and bal-

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Finder, p. 2 Artist's Book, Three-color silkscreen, 2020 © Melissa Oresky

lpoint pens. In the archive and herbarium, light constitutes a threat, exposure to which must be reduced only to moments of knowledge making. But synthetic fluorescent color allows us to imagine a form of plant seeing and to explore a chemical process of converting and transforming light.[36] Green, the color most associated with human visual experience of growing ferns, only appears rarely in *Finder* in brief flashes at moments of layered synthesis where the imagination of plant knowledge in fluorescent yellow and the archival palette of mustard and deep blue overlap. Here emerge the first shoots from the compost.

Through the combination of photographic material, reproduced printed images, and abstracted shapes derived from fern forms and the embodied sense-memory of light filtering onto ferns in the forest, *Finder* challenges a distinction between abstraction and naturalism. For the novelist and climate writer Amitav Ghosh, the move towards abstraction in visual arts and towards interiority in literature were a turn against the nonhuman and against an enchanted nature, a process by which "human consciousness, agency, and identity came to be placed at the center of every kind of aesthetic enterprise". Ghosh asks, pointedly, whether these forms of expression "adopted [what was] actually, from the perspective of the Anthropocene, a form of collusion?" Does abstraction produce blindness to the forces that have led to our interlocking crises of anthropogenic climate change and mass extinction?[37]

Finder treats abstraction as a process to re-naturalize rather than to de-naturalize. In doing so, it explores Kimmerer's distinction between the practice of science and the scientific worldview. Practicing science, she writes, "brings the questioner into an unparalleled intimacy with nature fraught with wonder and creativity as we try to comprehend the mysteries of the more-than-human world". In contrast, the scientific worldview creates a "lens" showing "the illusion of dominance and control, the separation of knowledge from responsibility".[38] Even if Ghosh's judgment on the character of twentieth-century abstract artists were correct, it makes sense to distinguish between an anthropocentric worldview aestheticized through abstraction and abstraction as a process born of deep observation and intimacy with the material world. Indeed, Kimmerer notes that her own intimate moments with mosses under a microscope stripped away the expected visual markers of plant-ness and instead felt "like wandering through an art gallery of unexpected forms and colors". Viewing mosses in this way—seeing them as forms and colors radically distinct from those perceived without magnification—helped to create "an intimacy with the plant that speaks of careful observation".[39]

Two pages of *Asplenium* prints capture this sense of shifting scales, refracted light, and unanticipated form by layering engravings, illustrations, and photographed herbarium specimens with fern-like abstract shapes and sweeping lines. Multiple layers of text coexist in the image with plant labels, page numbers, and headers from Gerard's *Herball* and printed and handwritten markings from herbarium sheets in the prints.[40] The visual presence of the archive and a foundational text for Anglophone botanical science speak to totalizing systems of knowledge through which nature could be put to use. Using abstracted shape to mimic the embodied experience of perceiving light and shadow from plants in the forest or using the assertively artificial fluorescent pigments to create brief moments of naturalistic color creates cracks within this epistemological edifice by making its knowledge less absolute, allowing space for other modes of being and ways of knowing through.

Since the rise of natural history in the early modern period, the herbal, the herbarium, and the garden have been at the core of the European scientific enterprise in seeing, describing, and categorizing the other-than-human world of plants. They enabled a universalizing of local knowledge and created new disciplines and enabled information about plants to spread widely.[41] Yet over the past two decades, scientists have increasingly lamented "plant blindness" in those societies most shaped by these scientific endeavors.[42] Efforts to combat it through citizen science such as lessons for students involving the iNaturalist app seek to connect users with scientific modes of identification, maintaining a distinction between scientists and users.[43] But learning to see in urgent times requires more than technology and science, it requires that we relearn how to remember as we imagine new futures.[44] Kimmerer writes that we must "walk back along the ancestral road and pick up what was left behind," but in doing so, she asks, "How do we recognize what we should reclaim and what is dangerous refuse?"[45] To return to the world of the herbal and the herbarium and to exclusively scientific modes of seeing risks again instrumentalizing the local, the embodied, and the experiential. Instead, we must learn to see them anew while remembering what they were and what they are. By creating compost, we can begin to develop new ways of finding.

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[26] Worster: *A River Running West*, p. 124; Cronon, William. “The Trouble with Wilderness: Or, Getting Back to the Wrong Nature” in *Environmental History* 1:1 (January 1996), pp. 7–28.
[27] Hallowell and Hallowell: *Fern Finder*, p. 6; Kimmerer: *Gathering Moss*, p. 29; Kimmerer: *Braiding Sweetgrass*, pp. 303–309.
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[29] Sauer: *Plant Migration*, 59.
[30] Kimmerer: *Gathering Moss*, pp. 50–51; Kimmerer: *Braiding Sweetgrass*, pp. 368, 371.
[31] Oresky: *Finder*, pp. 12–13; Hallowell and Hallowell: *Fern Finder*, pp. 7, 22, 40.
[32] Oresky: *Finder*, p. 8.
[33] Oresky: *Finder*, p. 12.
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[39] Kimmerer: *Gathering Moss*, p. 12.
[40] Oresky: *Finder*, pp. 2–3.
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[45]Kimmerer: *Braiding Sweetgrass*, p. 371.

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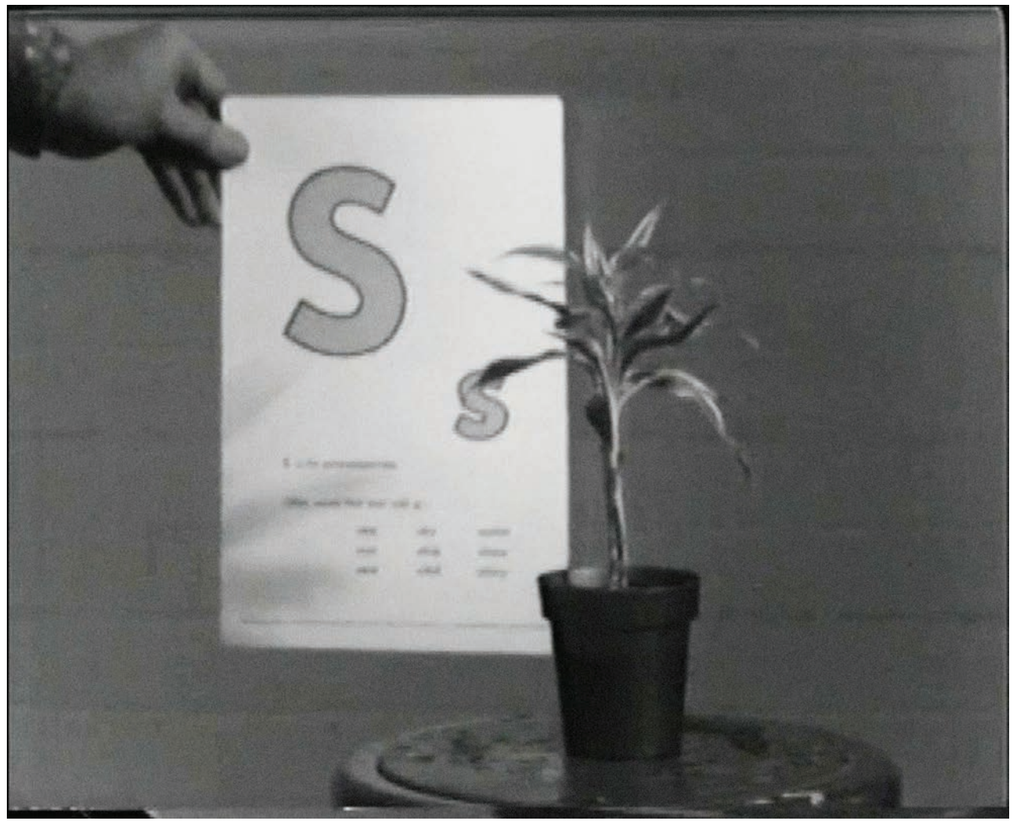
The 1970s plant craze

In the early 1970s, a general plant craze caught on in visual and popular culture alike. Against the background of New Age spirituality and the flourishing of ecological thinking, the 1970s plant mania came as an eccentric blow to the belief that sentience and intelligence are a human prerogative. It also relied massively on the cybernetic paradigm: envisaged as self-regulating biological systems, plants were recognized as communication systems in themselves. In this essay, I sketch a brief portrait of this complex cultural moment, as visual culture, and in particular film, came to be permeated by references to plant communication, plant sentience and plant intelligence.

text by **Teresa Castro**

In his 1972 video *Teaching a Plant the Alphabet*, the late John Baldessari holds up a succession of children’s alphabet cards, repeating each letter to a potted banana plant until he has completed the alphabet. Made for presentation at one of his classes at Cal Arts, *Teaching a Plant the Alphabet* is often quoted as a conceptual art parody, a reference to Joseph Beuys’s influential performance *How to Explain Pictures to a Dead Hare* (1965). Both points are fair: in his own words, Baldessari found conceptual art of that time “too pedantic” and Beuys’s performance was indeed one of the artist’s most famous. But as Baldessari himself recalls, “*Teaching a Plant the Alphabet* was done during the hippy times. There were books about how to communicate with your plants. I thought, okay, I guess I’ll start with the alphabet, and then we’ll talk...”.[1]

Indeed, the early 1970s were “hippy times”, even if the zeitgeist of hippie culture was slowly beginning to wane, and a conservative revolution loomed on the horizon. By 1981, the flower power of the flower children had withered: daffodils and dandelion chains proved harmless against Reagan’s doctrine. In the meantime, the seeds of our current infatuation with plant intelligence were sown, for Baldessari’s recollection is accurate: in the early 1970s, the belief that plants were sentient and intelligent entities, capable of reacting to human’s thoughts and emotions (as well as to animals’ pain or music) became widespread, nurturing popular culture’s flirtation with vegetal beings. Magazine articles on the extraordinary powers of plants were literally everywhere, from the pages of *The Ladies’ Home Journal* to those of *Electrotechnology*.[2] As the diktats of interior decoration stipulated it was in good taste to fill one’s residence with rattan furniture and all sorts of leafy creatures cascading gracefully from macramé hangers, it became natural to play music to your houseplants. One certain Mrs. Hashimoto took Baldessari’s satirical venture seriously, setting herself to teach the Japanese alphabet to a cactus. As a *New Scientist* 1973 article observed, not only “every art school diploma has its share of vegetable sculptures (...), but also several artists are following in the footsteps of scientists by conducting their own experiments with plants and treating these activities as works of art”. [3] Echoing other previous fads – tulipomania in the 17th century; the fern fever of Victorian times; etc. –, a general *plant craze* emerged in the late 1960s, catching on in visual and popular culture alike. Unlike those earlier fads, which fundamentally cut down the vegetal to the ornamental, the 1970s plant mania came as an eccentric blow to the belief that sentience and intelligence are a human prerogative. Against the background of “hippy times”, which celebrated its first Earth Day in the



John Baldessari

Teaching a Plant the Alphabet, single-channel video, black and white, 1972 © Estate of John Baldessari

spring of 1970, a different form of relationship between humans and "nature" was slowly taking shape.

The plethora of articles, books, vinyl records, artworks, and films on the subject of plant communication cannot fully be explained by hippie counterculture's love of nature, weed, magic mushrooms, and other mind-altering substances – even though these were important. Cold-war paranoia, New-Age spirituality and, more importantly, the flourishing of ecological thinking played their role in an entangled web of sometimes paradoxical tendencies where the zucchini seed that germinates faster to the sound of Mozart and the philodendron that thrives to Indian flutes are as much the proof of plants' mind-blowing sentience as the tacit evidence of rock music's fundamental evilness.[4] Moreover, the 1970s plant craze relied massively on the cybernetic paradigm, systems theory, and electronics. Envisaged as self-regulating biological systems, plants were recognized not only as being able to communicate but as communication systems in themselves. Their electrical and chemical responses to the environment and other stimuli (such as telepathic stimuli) were now understood in terms of inputs and outputs that generated feedbacks. Their intelligence resides in the capacity to learn and self-correct in response to feedback, mirroring the intelligence of other larger and more complex natural systems, among which Gaia itself, as famously advocated by James Lovelock and Lynn Margulis in 1975. In what might appear as a surprise to those who presumed that "plant communication" was merely about hippies hugging trees or passing through the chemical doors of perception, the 1970s plant craze was eminently *technophilic*: even eco-mystical quests to reach the plant-other often depended on the interfacing of electronic extensions, i.e., on "bio-sensing" (conversely, psychedelic experiences were sometimes explained with the language of cybernetics). Perhaps more than ever, the intermediation of different machines proved essential to the plant intelligence argument: *the communicative, sentient plant is a mediated plant*. As a matter of course, the history of science and pseudoscience's encounter with plants' awareness of other plants and of their surroundings has relied, from the 19th century onwards, on the mediation of visual and other technologies. Without this visual and audio scaffolding that allows us to tune into the so-many unanticipated possibilities and aspects of vegetal life, our conception of the plant-other in sensitive, intentional, and ultimately intelligent terms would not be the same. In the following pages, I wish to sketch a brief portrait of this complex cultural moment, as visual culture, and in particular film, came to be permeated by references to plant communication, plant sentience, and plant intelligence.

Perhaps more than ever, the intermediation of different machines proved essential to the plant intelligence argument: the communicative, sentient plant is a mediated plant.

The Secret Life of Plants

1959. Reverend Franklin Loehr published a book on *The Power of Prayer in Plants*.[5] Based on 700 "experiments" implicating 150 people and 27,000 seeds, the book illustrates how McCarthyism and its deep-rooted fright of communist atheism stirred American piety: in the 1950s, as many as "94% of Americans believ[ed] in the power of prayer".[6] Scientists quickly dismissed Loehr's book, but the idea that the mind could somehow have its way over (vegetal) matter continued to make progress. "Psychic research", whose potential for military and domestic intelligence was apparently evident for more than just the odd science-fiction writer, was to gain momentum from the 1950s onwards, on both sides of the Iron Curtain.[7] A quick search on the CIA's online archives returns an interesting number of declassified reports on the study of "psychic phenomena", sometimes in relation to plants, which the military, in their perpetual war against "the enemy", dreamt of turning into organic-sensors, bio-invaders, green spies.[8]

In 1966, and against all reasonable odds, an inconspicuous event was to shake the very-serious world of botanical knowledge. A polygraph expert working for the CIA, Cleve Backster (1924-2013), decided on a whim to hook one of his machines to the leaf of a dracaena. He wanted to see how the plant reacted to being watered. To his astonishment, after a minute or so, the galvanometer registered a surge of electrical activity in the plant, similar to that of an emotional stimulus in a human subject. Backster was intrigued and decided to proceed with his "experiment" by dunking a leaf of the plant in a cup of hot coffee. No reaction. What if he burnt it? And there it happened: as he imagined the dracaena being set on fire, the needles of the polygraph rouse again as if the plant could read his mind. As his hagiographers put it, this was Backster's Eureka moment: he "felt like running into the street and shouting to the world, "Plants can think!"[9] In the years to come, he and his collaborators multiplied the experiments, plugging dozens of plants and vegetables into lie detectors and concluding that lettuces, onions, oranges, bananas, and a multitude of ordinary houseplants could perceive and respond telepathically to human thoughts and emotions. As incredible as it sounds, and much to science's dismay, Backster's theses on plants' extrasensory perception and their astounding emotional capacities, shared by the author in the Winter 1968 issue of the *International Journal of Parapsychology*, were to quickly spread worldwide.[10] How was this possible?

"Hippy times" helped. As two concerned scientists were to bitterly acknowledge in the pages of *American Scientist* in 1979: In the troubled years of the late 1960s, a wave of antiintellectualism swept the United States, accompanied by an antiscientism that still persists in some measure. (...) Critics were quick to equate science with anti-

humanism and call for the reliance on alternate ways of arriving at an understanding of the universe about us. This appeal found receptive ears in a world worried about pollution, overpopulation, unemployment, growing crime, and – perhaps most important – a nasty and persistent war in which technology played a major role.[11]

More than "anti-intellectualism", "anti-scientism," or "anti-humanism", it's the "reliance on alternate ways of arriving at an understanding of the universe about us" that interests me. As we will see, the hippie desire to heal the crisis in human/nature relationships overinvested (and sometimes romanticized) the communicative, systemic model behind Backster's theses, according to which "mind" can extend beyond the body into its surroundings. Regarding his theories, they would've probably remained confidential if not for the flare of journalist (and former OSS spy) Peter Tompkins, the author of such celebrated New Age classics as *Secrets of the Great Pyramid* (1971) and *Mysteries of Mexican Pyramids* (1976). With the help of botanist and science vulgarizer Christopher Bird, Tompkins wrote *The Secret Life of Plants*, mainstreaming Backster's findings and rediscovering, along the way, a number of forgotten plant-intelligence champions, such as Bengali biologist Jagadish Chandra Bose. Propelled by a lavish advertising campaign, including a partial pre-publication with a catchy title in the pages of *Harper's Magazine* – "Love Among the Cabbages: Sense and Sensibility in the Realm of Plants"[12] – the book became a bestseller and was quickly translated into many different languages. Taking advantage of the volume's worldwide success, producer Michael Brown adapted it for the screen in 1978: directed by Walon Green, *The Secret Life of Plants* included an original soundtrack by none other than Stevie Wonder.

But *The Secret Life of Plants* was not the only book to get the most out of the untapped powers of plant sensibility and communication. The same year, Dorothy Retallack's *The Sound of Music and Plants* was also to sell well.[13] Like Backster (and Loehr before him), Retallack, a "doctor's wife, housekeeper, bookkeeper, mother, [and] grandmother to fifteen"[14], had conducted a number of "experiments" in the late 1960s, using the "biotronic control chambers" available at Temple Buell College, Denver. Her thesis: rock music was harmful to plants (and, therefore, to humans too). Retallack was not the first to investigate the effects of classical music on plants' growth rate; she was the first, however, to expose them to a tape of Led Zeppelin, Vanilla Fudge, and Jimi Hendrix. According to her findings, plants seemed to like Bach and Ravi Shankar; much to Retallack's surprise, they even gave positive evidence of enjoying jazz. However, when it came to rock, they leaned away from the music source, displaying smaller leaves and eventually dying. "Some of those plants look like the people who attend rock festivals", confided an appalled Retallack to the pages of the *New York Times*.[15]

However, when it came to rock, they leaned away from the music source, displaying smaller leaves and eventually dying.

Despite Retallack's old-school moral panic about rock, the idea that plants were sensitive to music's soothing capacities resonated with New Age's beliefs in the healing energies of musical melodies. In October 1970, CBS aired "a Rock-versus-Shankar experiment" involving plants (and significantly filmed with time-lapse cameras): Retallack's name became known all-across the US. Albums of "music to grow plants" were then making their appearance in record shops, such as the one that Dr. George Milstein produced exactly the same year, complete with a booklet and a packet of coleus seeds.[16] During the 1970s, a few plant music discs were released. Some of them simply compiled chamber and classical music hits; others, such as Baroque Bouquet's *Plant Music* (1975) or Roger Roger's *De la musique et des secrets pour enchanter vos plantes* (1978), offered original compositions for their green audiences.[17] Among these, Mort Garson's *Plantasia* (1976), with its percolating Moog rhythms, acquired a legendary status.[18] One album, in particular, Molly Roth's *Plant Talk/Sound Advice* (1976), evokes Baldessari's parody, as spoken word artist Roth talks to ivies, ferns, and other plants, wondering if they understand English.[19] At the same time, a few artists became interested in bio-sensing and plant-generative music, among which John Cage who used "amplified plant materials" (i.e. cacti) as musical instruments in pieces like *Child of Tree* (1975) and *Branches* (1976). Others, such as eco-feminist Annea Lockwood, explored the effect of plant growth on musical instruments. But what about film? What role did it play in this peculiar plant craze?

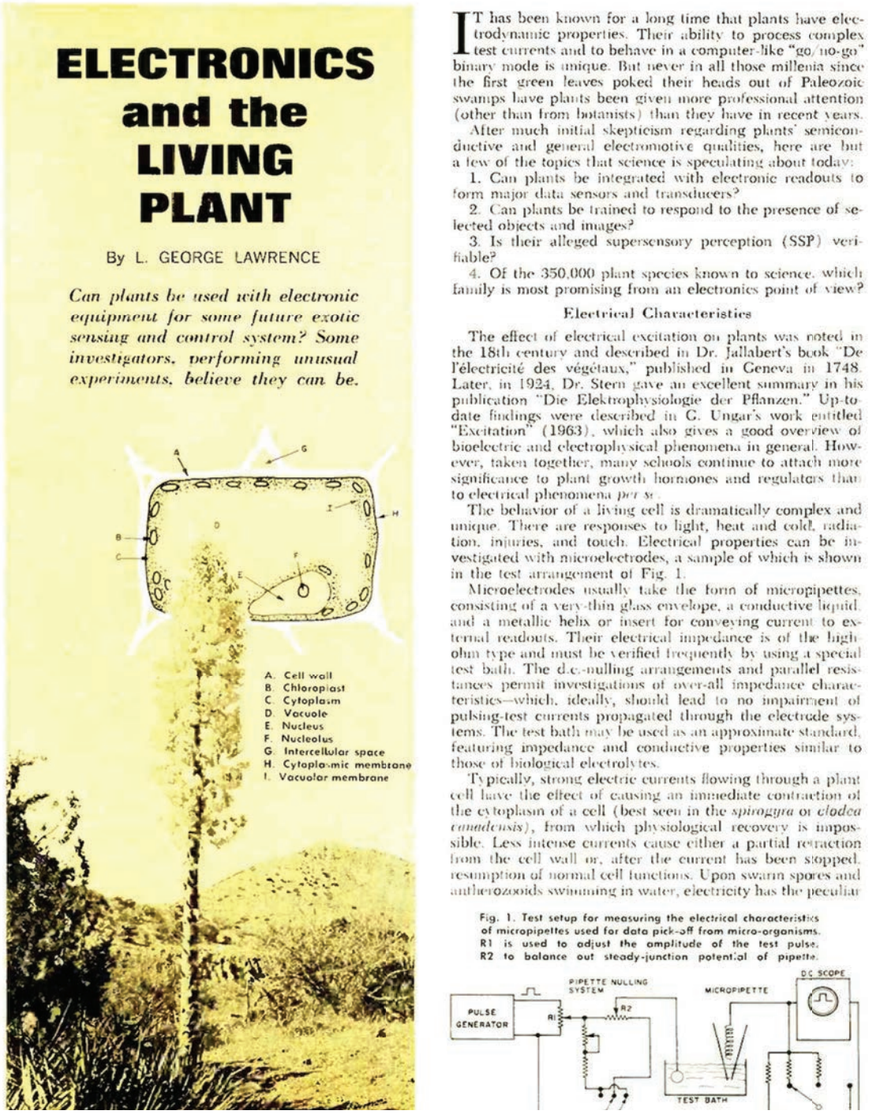
Wired Plants and Cybernetics

Film, I believe, played an important role – and not only during "hippie times". As I've previously hinted at, the mediation of graphic technologies seems to have been a decisive element in the scientific (or para/pseudoscientific) exploration of the richness and complexity of plant life; a sort of epistemological scaffolding opening up theoretical horizons around plants' agency and their potential "awareness", "sentience", "thinking" or even "intelligence".[20] I've argued elsewhere that the sentient plant is in many ways a *mediated plant*: the 1970s plant craze illustrates this remarkably well since it relied massively on polygraph machines' methodical scribblings, photographs of vegetal "energy auras", electronic renditions of plants' signals and films of all sorts.[21] Indeed, if cinema's powers are unique (and I believe they are), when it comes to the mediated plant, film should first of all be placed in the larger landscape of (graphic) technologies allowing for the perception of plants' behavior. Among these, the 20th-century representatives of the more ancient graphic method – polygraphs such as Backster's iconic "lie detector", simpler galvanometers, spectrographs, etc. – are vital. Without these recording apparatuses, the secret life of plants would've remained concealed, imperceptible to the naked eye – and the naked ear. These machines transform plants' electrical and chemical signals into a nonverbal, iconic language: the language of graphs, diagrams, and, ultimately, mathematical formulas. Endowed with an aura of scientificity, these images extend vision into previously unseen (if not unknown) realms (as plant bioacoustics expands audition further). Despite scientists' immediate and continual insistence on Backster's "uncontrolled experiments, random observations, and anecdotal reports"[22], the theses on plants' extrasensory perception and their astounding emotional capacities progressed, partially pushed by scientific imagery, in particular as embodied by graphs of jagged lines drawn on strips of white scrolling paper. Articles, books, films, and even records' sleeves and booklets all include images of plants wired to these apparatuses as they meticulously generate their machinic self-portrait, giving us access to their inner, secret lives.

Of course, "plants writing themselves" was not a new idea. For the highly influential *The Power of Movement in Plants* (1880), Charles and his son Francis Darwin generated an astounding amount of images, conceived with ingenious devices involving smoked glass plates and beads of wax on glass needles and allowing for plants to record their own motion.[23] Even more suggestively, in 1927, physicist and plant physiologist Sir Jagadish Chandra Bose (1858-1937) published the exquisitely illustrated *Plant Autographs and their Revelations*.[24] Bose was an important pioneer in the study of radio and electromagnetic waves, who later turned his attention towards the movements and electrical responses in plants. In the context of his research, he designed several innovative instruments, such as the "photosynthesis recorder", the "magnetic crescograph" (registering plant growth), the "oscillating recorder" (documenting the ascent of sap), or the "automatic recorder" (recording leaf movements as well as variations of temperature in plants). As Bose puts it in *Plant Autographs*:

> I have been able to make the dumb plant the most eloquent chronicler of its inner life and experiences by making it write down its own history. The self-made records this made show that there is no life-reaction in even the highest animal, which has not been foreshadowed in the life of the plant.[25]

Bose's enterprise encapsulates modern science's aspiration to mechanical objectivity, aptly described by science historians Lorraine Daston and Peter Galison as the "insistent drive to repress the willful intervention of the artist-author, and to put in its stead a set of procedures that would, as it were, move nature to the page through a strict protocol, if not automatically".[26] But when the proud inventor refers to his machines as "artificial organs of extraordinary sensitiveness",[27] Bose also comes very close to some of Norbert Wiener's famous views. Believing that engineering theories of control and communication could explain behavior in humans, animals, and machines, Wiener



ELECTRONICS and the LIVING PLANT

By L. GEORGE LAWRENCE

Can plants be used with electronic equipment for some future exotic sensing and control system? Some investigators, performing unusual experiments, believe they can be.

IT has been known for a long time that plants have electrodynamic properties. Their ability to process complex test currents and to behave in a computer-like "go/no-go" binary mode is unique. But never in all those millenia since the first green leaves poked their heads out of Paleozoic swamps have plants been given more professional attention (other than from botanists) than they have in recent years.

After much initial skepticism regarding plants' semiconductive and general electromotive qualities, here are but a few of the topics that science is speculating about today:

1. Can plants be integrated with electronic readouts to form major data sensors and transducers?
2. Can plants be trained to respond to the presence of selected objects and images?
3. Is their alleged supersensory perception (SSP) verifiable?
4. Of the 350,000 plant species known to science, which family is most promising from an electronics point of view?

Electrical Characteristics

The effect of electrical excitation on plants was noted in the 18th century and described in Dr. Jallabert's book "De l'électricité des végétaux," published in Geneva in 1748. Later, in 1924, Dr. Stern gave an excellent summary in his publication "Die Elektrophysiologie der Pflanzen." Up-to-date findings were described in G. Ungar's work entitled "Excitation" (1963), which also gives a good overview of bioelectric and electrophysical phenomena in general. However, taken together, many schools continue to attach more significance to plant growth hormones and regulators than to electrical phenomena *per se*.

The behavior of a living cell is dramatically complex and unique. There are responses to light, heat and cold, radiation, injuries, and touch. Electrical properties can be investigated with microelectrodes, a sample of which is shown in the test arrangement of Fig. 1.

Microelectrodes usually take the form of micropipettes, consisting of a very-thin glass envelope, a conductive liquid, and a metallic helix or insert for conveying current to external readouts. Their electrical impedance is of the high-ohm type and must be verified frequently by using a special test bath. The d.c.-nulling arrangements and parallel resistances permit investigations of over-all impedance characteristics—which, ideally, should lead to no impairment of pulsing-test currents propagated through the electrode systems. The test bath may be used as an approximate standard, featuring impedance and conductive properties similar to those of biological electrolytes.

Typically, strong electric currents flowing through a plant cell have the effect of causing an immediate contraction of the cytoplasm of a cell (best seen in the *spirogyra* or *elodea canadensis*), from which physiological recovery is impossible. Less intense currents cause either a partial retraction from the cell wall or, after the current has been stopped, resumption of normal cell functions. Upon swarm spores and antherozooids swimming in water, electricity has the peculiar

Fig. 1. Test setup for measuring the electrical characteristics of micropipettes used for data pick-off from micro-organisms. R1 is used to adjust the amplitude of the test pulse. R2 to balance out steady-junction potential of pipette.

George Lawrence

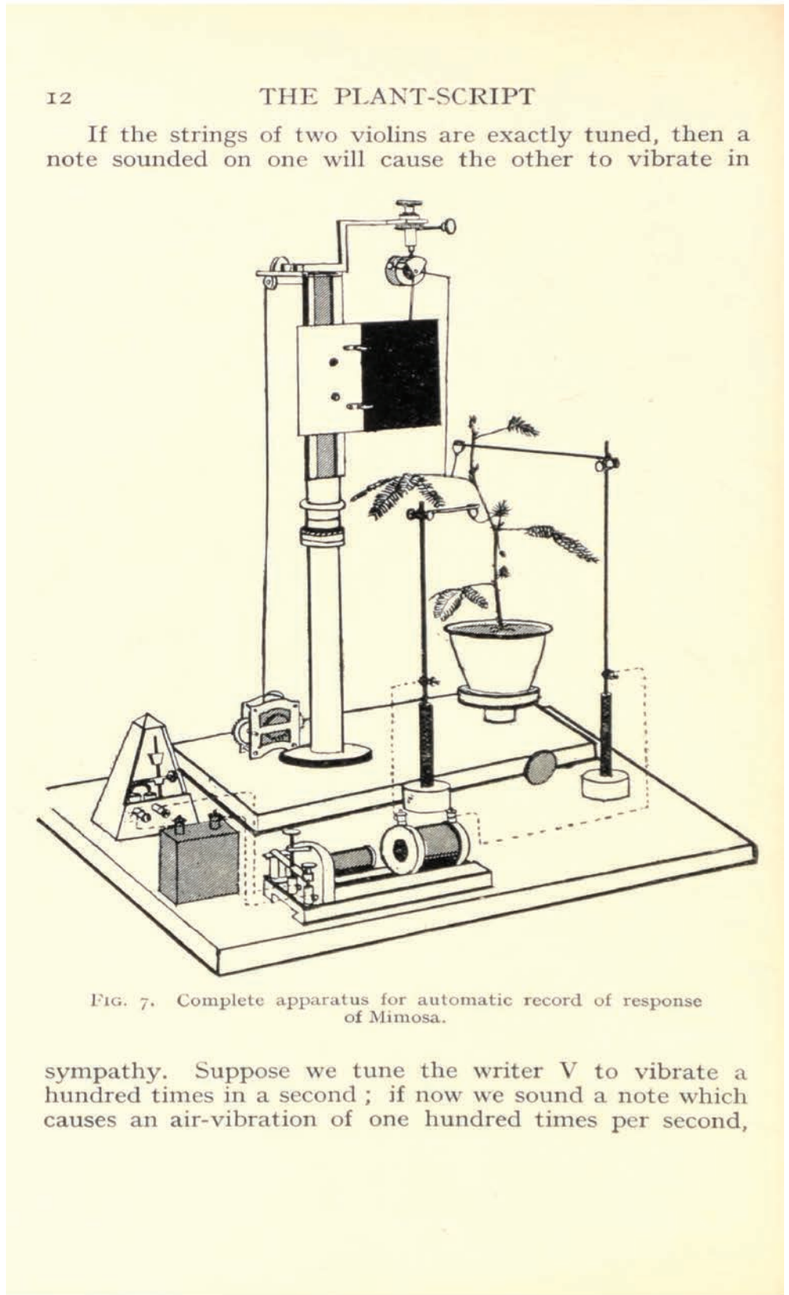
"Electronics and the Living Plant", in *Electronics World,* journal article, 1969 © Electronics World

coined the term "cybernetics" in 1948, laying the foundations of a new interdisciplinary field that was to become extremely influential during the Cold War.[28] In his attempt to find common elements in the functioning of the human nervous system and automatic machines, Wiener suggested that "every instrument in the repertory of the scientific-instrument maker is a possible sense organ".[29]

Bose's links to cybernetics are not limited to his understanding of rendering apparatuses as artificial sense organs or human sense organs as "antennae, radiating in various directions and picking up messages of many kinds".[30] His insights on vegetal beings as communicating systems that respond to stimulation through electric signaling also foreshadow some of the tenets of the cybernetic model. Bose's devotion to decrypting what he calls the "plant script" is instructive, particularly when he discusses the pulsing movements of the *Desmodium gyrans*, today known as *Codariocalyx motorius*. On this remarkable species, a tropical shrub known for the gyratory self-movements of its leaves, he writes: "the small leaflets move up and down like the semaphore formerly employed for telegraphic signaling", concluding that "there is an evident similarity between the automatic pulsation of the leaflet of the Telegraph-plant and that of the animal heart."[31] Although Bose was by no means the first to refer to this specimen as the "telegraph plant"[32], the media metaphor is worth stressing. The telegraph in the plant's name refers to the optical semaphore telegraphs made of movable wooden arms which became a privileged means of military communication in Europe in the late 18th century and early 19th century (in India, semaphore telegraphs were introduced in 1810 and went out of service in 1880). In *Plant Autographs*, Bose refers to the optical telegraph, after which the *Desmodium gyrans* was effectively named but, symptomatically, his discussion of the electromechanical pulses of plants evokes the mechanisms of electrical telegraphy, which uses the coded pulses of electric current to transmit messages. To think about communication in terms of electrical signaling is a portentous affair since the former is no longer thought of in exclusionary, human-centered ways.

Cybernetics was to flourish in the URSS, permeating not only the discourse but also the imagery around plant science, as evidenced by two soviet documentaries shot by the Tsentrnauchfilm (the Moscow Studio of Science Films), *The Voice of Plants* (T. Iovleva, *Golos rastenija*, 1968) and *Are plants sentient?* (Leonid A. Panishkin, *Čuvstvujut li rastenija?* 1970).[33] The films' iconography is clearly marked by the overwhelming presence of recording apparatuses, such as the polygraph and their simple, stark graphs, or other electronic instruments. Plant communication was taken very seriously in the Soviet Union, where, by the end of the 1960s, it had become a subject worth studying in the best-equipped science labs. *The Voice of Plants* starts with several shots of three researchers in white coats, gathered around a long strip of scribbled paper: their expert-eye can decipher what the machines themselves have already decoded. The film alternates exterior views of prairies and forests with lab shots, crosscutting the customary time-lapse sequences of flowers blooming and plants spiraling around their tutors. However, the lab shots are more numerous and significant: the quest to hear and understand "the voice" of plants (which Soviet scientists hope will open up perspectives in terms of plant breeding in artificial climates) is presented as an eminently technical enterprise. Superimpositions of plants and polygraph machines, foregrounded against a dark background, rank among the films' most striking images. As a small electronic chip is carefully grafted onto a plant's stem, the cybernetic paradigm becomes evident. Reports in the Soviet press mention transforming plants into "a live electric relay"[34]: already in 1959, the director of the Laboratory of Biocybernetics of the Institute of Agrophysics, Vladimir Grigorievich Karamanov, had published a report on "The Application of Automation and Cybernetics to Plant Husbandry".[35] In the US, the October 1969 number of *Electronics World* includes an article on "Electronics and the Living Plant": inspired by Backster's findings, the author describes the former as an "exceptionally promising field".[36]

Are Plants Sentient?, another Soviet science-propaganda film, evokes the experiments led by Professor Ivan Isidorovich Gunar, head of the Plant Physiology Department at the Timiryazev Academy of Agricultural Sciences in Moscow. The film (which



12 THE PLANT-SCRIPT

If the strings of two violins are exactly tuned, then a note sounded on one will cause the other to vibrate in

FIG. 7. Complete apparatus for automatic record of response of Mimosa.

sympathy. Suppose we tune the writer V to vibrate a hundred times in a second ; if now we sound a note which causes an air-vibration of one hundred times per second,

Sir Jagadish Chandra Bose

"Complete apparatus for the automatic record of response of Mimosa", in *Plant Autographs and their Revelations*, illustration, 1927 © Estate of Sir Jagadish Chandra Bose

includes a sequence recalling Bose's pioneer experiments) insists massively on the electronic apparatuses available at the Academy. *Are Plants Sentient?* is mentioned by Tompkins and Bird in *The Secret Life of Plants*: shot by Gunar's chief assistant, Leonid A. Panishkin, it was shown to an American delegation in the summer of 1971. According to Tompkins and Bird, one of the American envoys

> stated in his report that the movie's intriguing part was the method used to record the data. Time-lapse photography made the plants seem to dance as they grew. Flowers opened and closed with the coming of darkness as if they were creatures living in a different time zone. All injury-induced changes were recorded by a sensitive polygraph attached to the plants.[37]

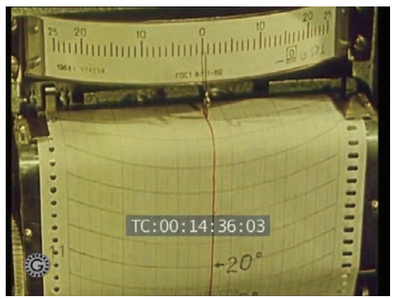
The American delegate's reaction is surprising since time-lapse cinematography was used from at least 1898 onwards to study plant-motion.[38] However, his visual ignorance didn't prevent him from hinting at the exact point raised by film's capacity to manipulate time scale: motion pictures can negotiate a transition from the plant-as-object into the plant-as-subject – what is more, into a subject with intentional movements. By reconciling the temporality of plant life with the temporality of human life, film potentially overturns the basic subject-object dualism, rearranging the frontiers of the living, extending intentionality to a multitude of nonhuman subjects, sensing other sentiences, and exposing different modes of being alive. As French writer Colette wrote in 1924:

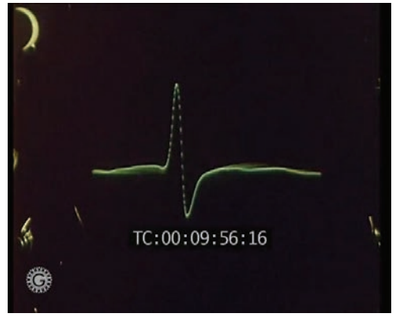
> A time-lapse film documented the germination of a bean… At the revelation of the intentional and intelligent movement of the plant, I saw children get up, imitate the extraordinary ascent of the plant climbing in a spiral, avoiding an obstacle, groping over its trellis: "It's looking for something! It's looking for something!" cried a little boy, profoundly affected. He dreamt of a plant that night, and so did I.[39]

As film critics and theoreticians remarked very early on, cinema seems to be "animism's chief apostle"[40]: instead of disenchanting the world, film re-enchanted it, by imputing interiorities to animals, objects, machines and, naturally, plants. By virtue of cinema's expressive resources (time lapse, the close-up, editing, etc.), films on plant motion seemed to resuscitate what botanical herbaria dried and flattened between their yellowish sheets of paper.[41]

Perfectly illustrating New Age's penchant for enlivening perceptions of nature, the picture takes plant sentience and intelligence as a cue to think about the systemic interconnectedness of all life.

Rekindling with a world full of non-human intentionalities was not, however, the Soviets' goal, even though a reporter from *Pravda* remarked that Professor Gunnar not only "talked about plants as he would about people" as he "appear[ed] to converse with them".[42] Marxist cybernetic science was more preoccupied with discovering computable truths allowing for an even more objective and efficient instrumentalization of the world (in short, with epistemic objectives of prediction and control). While hegemonic, this program had little in common with the New Age agenda of the American screen adaption of Tompkins and Bird's book. Like *The Voice of Plants* and *Are Plants Sentient? The Secret Life of Plants* (1978) features prominently all sorts of recording and sensing instruments; unlike them, however, the film is much more daring in its equally technophilic envisioning of plant beings. Perfectly illustrating New Age's penchant for enlivening perceptions of nature, the picture takes plant sentience and intelligence as a cue to think about the systemic interconnectedness of all life. Towards the end of the film, footage referring to the Dogon's ancient cultural beliefs is crosscut with images from a modern telescope pointed at Sirius, as Stevie Wonder sings, "a seed is a star".[43] Not surprisingly, *The Secret Life of Plants* also makes abundant use of macro-photography and time-lapse sequences: as French filmmaker and theorist Jean Epstein summed up in 1935, "fast motion reveal[s] a world where the kingdoms of nature know no boundaries. Everything lives".[44]





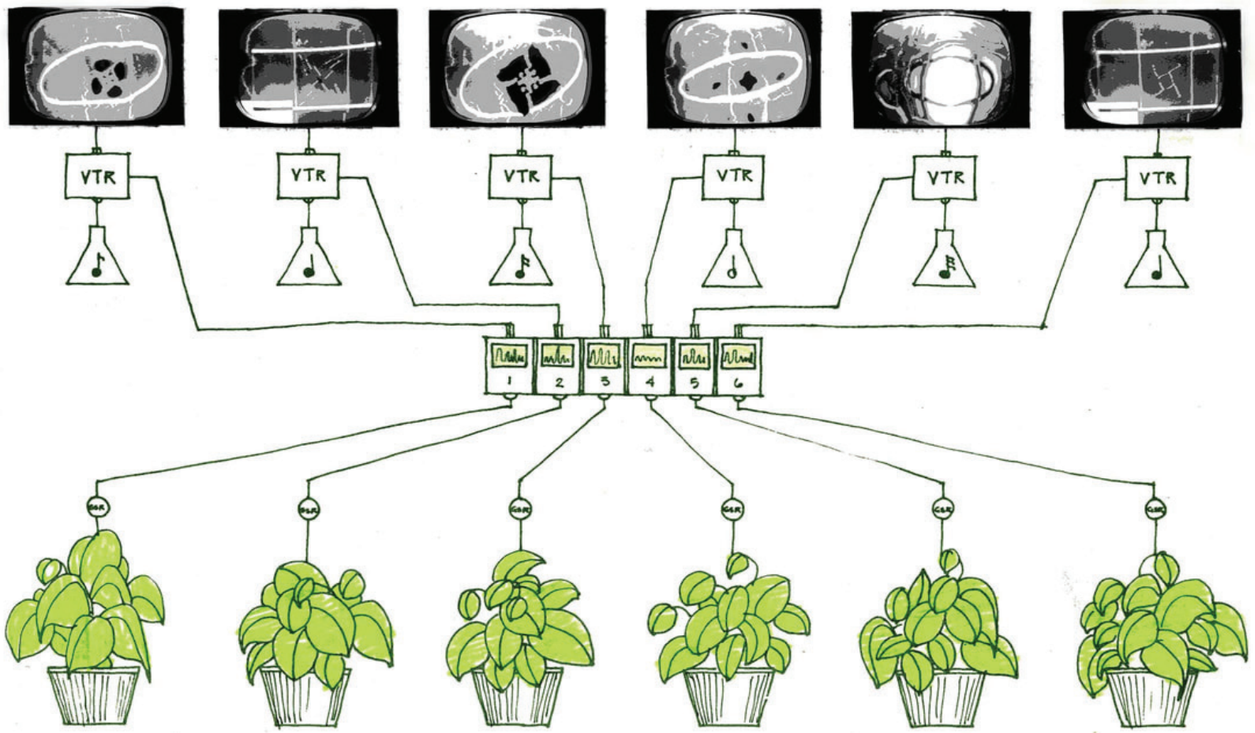
T. Lovleva

The Voice of Plants, colour film, 1968 © T. Iovleva / Archives Gaumont Pathé

Walon Green

The Secret Life of Plants, colour film, 1978 © Michael Braun

But more original and certainly more epochal than the time-lapse shots is the film's "cybernetic art" sequence, documenting a performance involving artists Richard Lowenberg, John Lifton, Jim Wiseman, and Tom Zahuranec. Reduced to a minimum in the picture's final edit – i.e., to footage from John Lifton's "Green Music" installation at the tropical conservatory of San Francisco's Golden Gate Park –, the sequence has since been recalled by Lowenberg.[45] In early 1976, Lowenberg, then an artist in residence at the NASA Ames Research Center, was asked by the film's production team to conceive a number of sequences for the screen version of *The Secret Life of Plants*. Influenced, among others, by cybernetics and the ecological writings of Gregory Bateson, Lowenberg had published in 1972 a small blurb on the concept of "environetic synthesis" in the now historic video magazine *Radical Software*. Accompanied by a suggestive drawing depicting an uncanny "circuited self", made of a joint human head and a television monitor, the text's premise was "that one's environment could be designed to respond to one's own physiology, such as the brain waves (EEG) and muscle potentials (EMG), with video, audio and



Richard Lowenberg

"Plant GSR Control of Audio-Video Tape Seed", drawing, 1971-1978 © Richard Lowenber

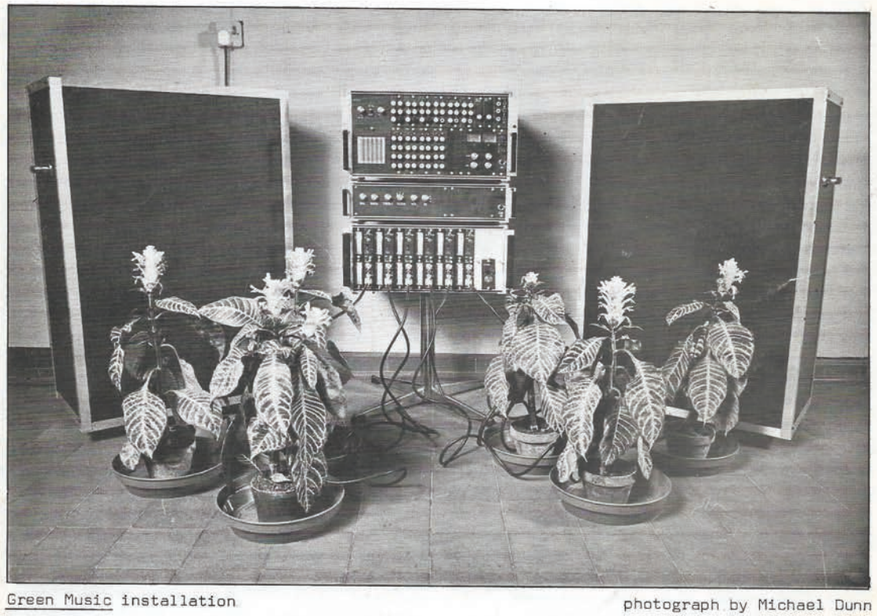
other sensory devices responding to the person".[46] With the help of John Lifton (who, in 1975, had presented his "Green Music" installation at the Whitechapel Gallery in London),[47] Jim Wiseman (who had built copies of the Paik/Abe video synthesizer and of the Sandin Image Processor) and Tom Zahuranec (who had wired a rhododendron into the oscillators of a Buchla Synthesizer live on radio in 1972 and invited the audience to telepathically communicate with it),[48] Lowenberg conceived a spectacular media-performance based on the interfacing of plants and different types of synthesizers. In addition to the restaging of Lifton's "Green Music" in San Francisco (an installation based on the bio-electric sensing of plants' reactions to the presence of humans and implicating a battery of monitoring devices), an experiment involving wired plants and six performers connected to bio-telemetric systems was shot in a Hollywood studio. Bioelectric information from humans and plants was inputted to audio and video systems, which outputted glitching, colored videos, and plant noise in a feedback loop connecting plants, humans, and machines: in sum, opening up the doors of perception. The communicative model inherent to Backster's hypothesis reaches here its cybernetic paroxysm. In its embodiment as bio-media performance (as "bio-dis-play", in Lowenberg's terms), *The Secret Life of Plants* is a collaborative venture between organic and non-organic systems, humans and non-humans. Tune in and be(come) aware: electronic mediation is the strategy chosen to counter the deafness and backgrounding to which vegetal beings are usually referred, bringing forth a new "ecology of mind", as Bateson would put it.[49] As video-art pioneer Juan Downey – whose *Vegetal System of Communications for New York State* proposed, in 1972, to transform electromagnetic energy between humans and philodendrons into a navigation tool – had intuited, cybernetic technology bore the portentous promise of closing "the man-nature chasm."[50] Moreover, the images and sounds made under Lowenberg's guidance for *The Secret Life of Plants* embody the idea of the electronic signal as medium; not surprisingly, in the early 1970s, he had worked with Steina and Woody Vasulka. Plant communication was by now more than a simple business of jagged lines drawn on strips of white scrolling paper: John Baldessari might have laughed at it, but plant communication had (also) become video art.

Conclusion

By the end of the 1970s, Tompkins and Bird's bestseller had captured popular imagination. References to the book popped up here and there, as in Philipp Kaufmann's remake of *Invasion of the Body Snatchers* (1979), where green plants are played classical music in a mud-bath parlor by an attentive keeper. Also, in 1979, a thriller directed by Jonathan Sarno, *The Kirlian Witness* (rereleased recently under the title *The Plants are Watching*) tells the story of a woman who attempts to telepathically communicate with a philodendron to find out who murdered her plant-loving sister. The film's heroine acquires a copy of *The Secret Life of Plants*, becomes interested in Kirlian photography (a collection of photographic techniques used to capture the phenomenon of electrical coronal discharges and understood by many to be "auras"), and even rents a lie detector. An episode from *Tales of the Unexpected*, "The Sound Machine" (1981), imagines an engine capable of perceiving the ghastly screams of flowers being cut.[51] The same year, in an episode from *Darkroom*, a botanist develops an apparatus able to read daisies' minds. His wife learns from the flowers of his affair with his assistant and shoots him dead.[52] In short, the communicative model quickly became a B-series plot.

From the 1950s onwards, plant agency had become a way for science-fiction and horror films to give voice to communist anxieties (the alien plant spores turn "pod people" in Don Siegel's *Invasion of the Body Snatchers*, 1956), radiation fears (the scowling tree stump from Dan Milner's *From Hell it Came*, 1957), or concerns about genetic manipulation and bio-engineering (the half-human, half carnivorous plant from *Venus Flytrap*, 1970).[53] Since an army of vegetal villains had been feasting on women's flesh for years, an exploitation film such as *Please Don't Eat my Mother* (dir. Carl J. Monson), starring a shy man who befriends a houseplant with unusual appetites (a parody of Roger Corman's 1960 film *The Little Shop of Horrors*, featuring an odd-looking blood-thirsty, consumerist plant), could see the day in 1973. The plant craze of "hippy times" eventually turned plant agency into a spoof, from Baldessari's *Teaching a Plant the Alphabet* to the cult-classic *Attack of the Killer Tomatoes* (1978).

The Secret Life of Plants badly impacted serious scientific research on plants' sensory and perceptual capacities. Widespread press coverage of Backster's pseudo-experiments contributed to this backlash. Work on plant communication and plant signaling "was somewhat stigmatized, and the limited availability of funding and other resources constrained further progress".[54] Indisputably, Backster's theses on the "primary perception" of plants were non-sense. Still, the real baby – the study of plant awareness and its potential challenging of the exclusiveness of both knowing and feeling as human assets – was thrown out with the bathwater. Almost thirty years had to pass before scientific works main stre-



Whitechapel Art Gallery, Whitechapel High Street, London E1 7QX

John Lifton

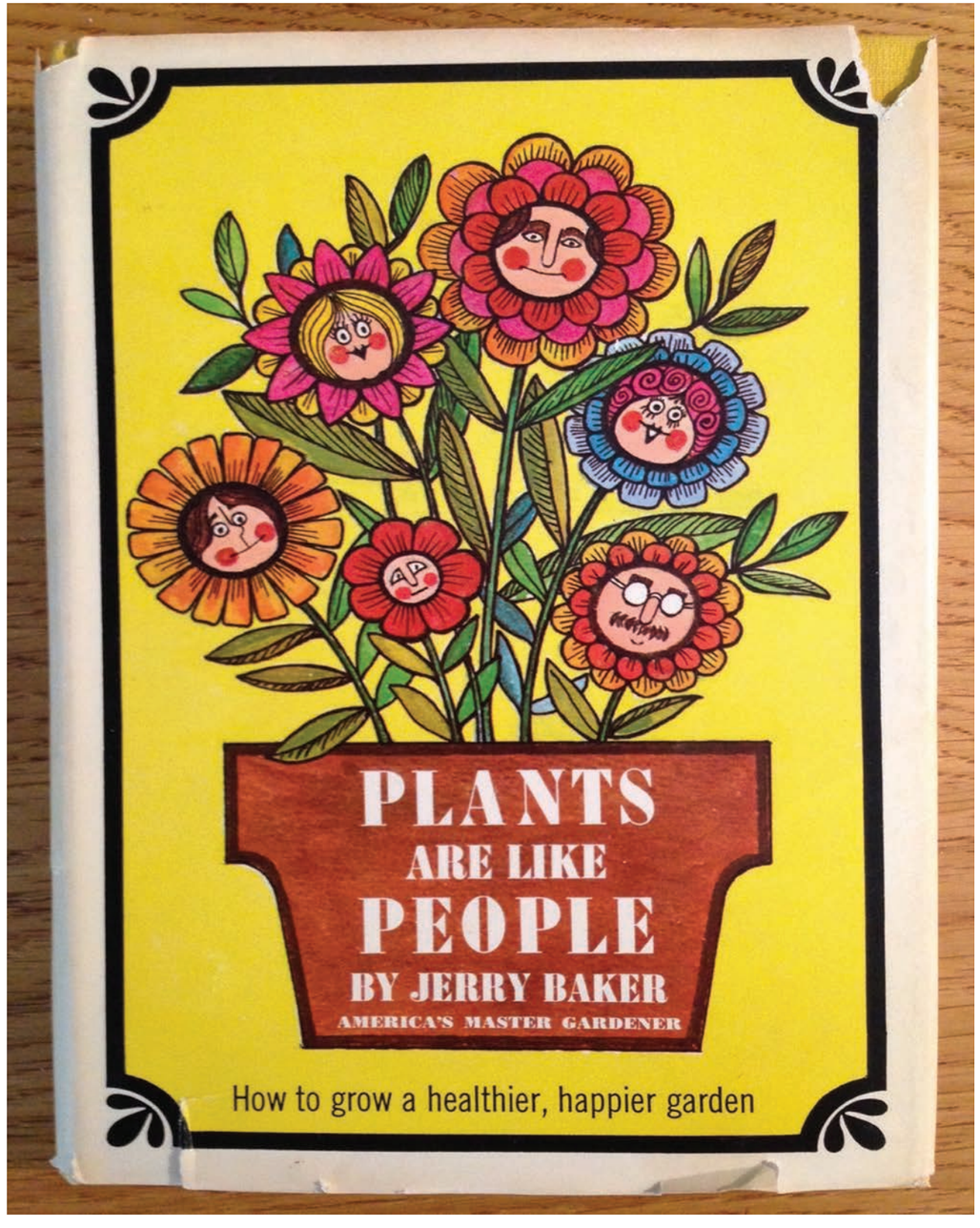
'Green Music'

Experimental gallery, 29 May–6 July 1975

Green Music installation photograph by Michael Dunn

John Lifton

Green Music, exhibition leaflet, 1975 © John Lifton



Jerry Baker

Plants are Like People, book cover, 1973 © Jerry Baker

aming the perceptual sophistication of plants – such as Chamovitz's *What a Plant Knows: A Field Guide to the Senses* (2012)[55] – were to see the day, as a general "plant turn" sweeps through different fields of knowledge and creation. Plants and their singular life forms, for so-long relegated to the margins of conceptual thinking about life itself, finally jut out the leafy, decorative setting to which they were backgrounded. In our present dire ecological crisis, to acknowledge the richness and complexity of plant-life is an invitation to withdraw from a centric reason that separated humans from "nature", situating human life outside and above it. In what constituted a striking ecological critique of Enlightenment science and its holy dualisms, "hippy times" attempted to tell a different kind of story about "Man" and "Nature" and grappled with a fundamental epistemological shift. Most of all, they experimented widely with alternative modes of engagement with what poet Gary Snyder described as "the most ruthlessly exploited classes": "animals, trees, water, air, grasses".[56] As we emerge shell-shocked from a global pandemic, what are we to do now? Maybe we can learn from the past: instead of imagining that "plants are like people", as suggested by "America's Master Gardener" in 1971,[57] we can focus instead on what it means to be human on a shared planet.

Endnotes

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[2]Boulton, B., "Do Plants Think?", *The Ladie's Home Journal*, May 1971 and De La Warr, G., "Do Plants Feel Emotion?", *Electrotechnology*, April 1969.
[3]Reichardt, J., "Art at large", *New Scientist*, vol. 59, nº 858, 9 August 1973, p. 347.
[4] On ecological thinking, see Belgrad, D., *The Culture of Feedback. Ecological Thinking in Seventies America*, Chicago, and London: 2019.
[5] Loehr, F., *The Power of Prayer in Plants*, New York: Signet Books, 1959.
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[12] Tompkins, P., Bird, Ch., "Love Among the Cabbages: Sense and Sensibility in the Realm of Plants", *Harper's Magazine*, November 1972, p. 90-96.
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[14] *Ibid.*, p. 15.
[15] Ribley, A., "Rock or Bach an Issue to Plants, Singer Says", *New York Times*, February 21, 1971: https://www.nytimes.com/1971/02/21/archives/rock-or-bach-an-issue-to-plants-singer-says.html (last accessed November 1st, 2019).
[16] George Milstein, *Music to Grow Plants*, 1970 (E.S.C.).
[17] Baroque Bouquet, *Plant Music*, 1976 (Amherst Records) and Roger Roger, *De la musique et des secrets pour enchanter vos plantes*, 1978 (Tchou Éditeur).
[18] Mort Garson, *Plantasia*, 1976 (Homewood Records).
[19] Roth & Bricker, *Plant Talk/Sound Advice*, 1976 (Plant Talk Productions).
[20] These terms are obviously non-equivalent, referring to different ways of envisaging the richness and complexity of plant-life. Symptomatically, they are all used again today, as different fields of knowledge, from biology to philosophy, have taken an interest in plant life. See, among many others, and on biology's side, Chamowitz, D., *What a Plant Knows: A Field Guide to the Senses* (New York: Scientific American Books, Farrar, Straus and Giroux, 2012); Trewavas, A., *Plant Behaviour and Intelligence* (Oxford: Oxford University Press, 2014); Mancuso, S., and Viola, A., *Brilliant Green: the Surprising History and Science of Plant Intelligence* (Washington DC: Island Press, 2015).
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[23] Darwin, Ch., *The Power of Movement in Plants*, London, John Murray, 1880.
[24] Bose, J. Ch., *Plant Autographs and their Revelations*, London: Longmans, Green, and Co., 1927.
[25] *Ibid*, p. vii.
[26] Daston, L. and Galison, P., *Objectivity*, New York: Zone Books, 2007, p. 121.
[27] Bose, *op. cit.*, p. viii.
[28] Wiener, R., *Cybernetics, or control and communication in the animal and the machine,* Paris: Hermann & Cie, 1948.
[29] Wiener, R., *The Human Use of Human Beings. Cybernetics and Society*, London: Free Association Books, 1989, p. 23.
[30] Bose, *op. cit.*, p. 235.
[31] Bose, *op. cit.*, p. 71 and p. 73.
[32] In English, the appellation "telegraph plant" goes back, at least, to the mid 19th century. A passage from the American journal *The Horticularist* suggests, in 1856, that the expression originated in Bengal (*The Horticulturist and Journal of Rural Art and Rural Taste*, v. 11, 1856, p. 243). "Telegraph plants" were also known as "Semaphore plants": the first use of the word *semaphore* in reference to English use was in 1816. Presumably, the appellation "Telegraph Plant" must have appeared between this date and the 1850s, as "semaphoric telegraphs" were built all around Europe and India.
[33] Copies of these films are held at the Gaumont Pathé Archives, Paris.
[34] As quoted in Tompkins and Bird, *op. cit.*, p. 78.
[35] *Ibid.*, p. 80.
[36] Lawrence, L. G., "Electronics and the Living Plant", *Electronics World*, October 1969, p. 28.
[37] Tompkins and Bird, *op. cit.*, p. 79.
[38] The German plant physiologist Wilhelm Pfeffer made four time-lapse films between 1898 and 1900, corroborating some of Darwin's contested ideas on plant sensitivity and irritability. On these early plant-motion films, see Gaycken, O., "The Secret Life of Plants. Visualizing Vegetative Movement 1880-1903", *Early Popular Visual Culture*, vol. 10, nº 1, February 2012, p 51-69.
[39] Colette, "Cinéma [Magie des films d'enseignement]" (1924), in *Colette et le cinéma*, Paris: Fayard, 2004, p. 369.
[40] Bilinsky, B., "Le costume", *L'Art Cinématographique*, Paris: Félix Alcan, 1929, p. 56.
[41] See Castro, T. "À l'écran, le végétal s'anime: cinéma, animisme et sentience des plantes", in Castro, T., Pitrou, P. and Rebecchi, M. (eds.), *Puissance du végétal et cinéma animiste. La vitalité révélée par la technique*, Dijon, Presses du réel, 2020, p. 41-73.
[42] Tompkins and Bird, *op. cit.*, p. 78
[43] Tompkins and Bird's book doesn't refer to the Dogon, but in 1976 Robert K. G. Temple had made popular the thesis according to which the latter had been in touch with intelligent extraterrestrial beings from the Sirius star system (cf. Temple, R. K. G., *The Sirius Mystery*, New York: St Martins Press, 1976).
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[46] Lowenberg, R., "Environetic Synthesis", *Radical Software*, vol. II, nº 1, winter 1972, p. 44.
[47] According to a *New Scientist* article from 1973, "Green Music" was also presented at the Edinburgh Festival that same year: Reichardt, *art. cit.*, p. 346-347.
[48] The composition and audience reactions are audible at: https://archive.org/details/RE_1972_10_18 (last accessed November 1st, 2019).
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[50] Downey, J., "Technology and Beyond", *Radical Software*, vol. 2, nº 5, Winter 1973, p. 2.
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[52] The episode is called "Daisies". *Darkroom* was produced by Universal Television and aired on ABC in 1981-1982.
[53] On such films see Knee, A., "Vegetable Discourses in 1950s Science Fiction Film" (in Keetley, D. and Tenga, A., *Plant Horror. Approaches to the Monstrous Vegetal in Fiction and Film*, London: Palgrave MacMillan, 2016, p. 145-162); Howe, A., "Monstrous Flora: Cinematic Plant Antagonists of the Post-World War II Era" (in Vieira, P. and Gagliano, M., *The Green Thread: Dialogues with the Vegetal World*, Lanham: Lexington Books, 2016, p. 147-163); and Adamson, J. and Sandilands, C., "Thinking Plant Politics with *The Day of the Triffids*" (in Gagliano, M., Ryan, J.C, Vieira, P. (ed.), *The Language of Plants*, Minneapolis: University of Minnesota Press, 2017, p. 234-252).
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Exhibiting plants: Curating the gaze on vegetal beings

The current proliferation of work in plant studies includes a host of exhibits that focus on the vegetal. Whether it is in US campus museums at the Universities of Kansas and Arizona or collaborations by German houses like the Wilhelm-Hack-Museum and the Hygiene-Museum Dresden, curators—often in collaboration with academics—seem to be on a mission to cure plant blindness. This article reviews plant exhibits geared at the general public taking place in Germany, the US, the UK, and France between 2018 and 2020, and it analyzes how these shows contribute to the field of plant studies with publications and online offerings.

The contemporary turn toward plants in both popular and academic culture has drawn the public not just into forests and fields, but also exhibition spaces. Several large plant-focused exhibits have taken place across the US and Europe in 2018 and 2019 alone. Their accompanying events and publications have contributed both to the ongoing scholarly work and the public perception of the importance of plants. Rather than only focusing on the beauty of plants, these exhibits draw on a range of ideas from recent research to ancient knowledge to make apparent to visitors the many ways in which human life is entangled with the vegetal. They are on a mission to cure what Wandersee and Schussler have described as "plant blindness" and add to the responses assembled in a 2018 collection asking *Why Look at Plants?*, edited by Giovanni Aloi.[1] This essay will take readers into several exhibits, primarily in Germany and the US, but also point to shows in the UK, France, and online in order to analyze the many different approaches and strategies of mediating encounters with our vegetal kin through art and language. In doing so, the piece asks about the ways in which these exhibits reflect the human imagination of plants, with a particular focus on the entangled human-plant relationships that emerge from these examples.

Germany: Of Plants and People

Deutsches Hygiene-Museum Dresden has a complicated history. Founded in 1912 by a mouthwash heir, the museum provided public access to modern health information, but was also instrumentalized by the Nazis for their propaganda of racial hygiene (a fact that the museum openly and critically addresses). Today, its permanent exhibition *The Human Adventure* is paired with well-researched, large-scale thematic shows. From April 2019 to April 2020, the temporary exhibit was *Of Plants and People: A Stroll Around Our Green Planet*, curated by Kathrin Meyer.[2] The bilingual German/English exhibition features three parts: "To the Roots", "Sowing and Reaping," and "Living in the Planetary Garden." The accompanying book leads through the show and intersperses approachable German-language essays written by scholars with poetry, short prose excerpts, and images of the artworks on display.[3]

The exhibition is as much about knowledge as it is about art. Renée Sintenis' (1888-1965) sculpture *Große Daphne* (Big Daphne, 1930) greets the visitor

Hygiene-Museum Dresden

Visitors of the exhibit *Of People and Plants* about to spin the flower language wheel. Photo by Oliver Killig for Stiftung Deutsches Hygiene-Museum Dresden, 2019

alongside a bookshelf that features various plant-related volumes. A wheel of fortune with flowers that tells the onlooker what a specific blossom would have communicated in the Victorian language of flowers is placed next to *Toiletten-Orchidee (Orquidea toilets)*, a faux orchid "made in China" and "discovered" in the entrance area of a public bathroom in Cologne in June 2018. This piece is part of *Herbarium künstlicher Pflanzen* (Herbarium of Artificial Plants), a collection of artificial flower specimens from around the world that Alberto Baraya archives like an eighteenth-century botanist, and it hangs close to some of the famous black-and-white photographs of ornamental plant patterns by Karl Blossfeldt (1865-1932).[4] Nearby is an auxanometer, a machine with which plants document their own growth, and another turn reveals a station with music recorded for plants, like Mort Garson's *Mother Earth's Plantasia: Warm Earth Music for Plants... and the People Who Love Them* (1976). Further ahead, a xylotheque with wooden books mesmerizes the bibliophile. Despite the wealth of materials that leave the visitor to choose their own path through the well-contextualized artworks and objects among black walls, the rooms' deliberate use of light amplifies the focus on senses like sight and sound, such as in the audiovisual installation *Treelab* (2015/17) by Marcus Maeder (with Roman Zweifel) that plays a symphony of crackling sounds from inside of trees while showing videos of the corresponding forest. Similarly engaging, the interactive installation *Titanwurz* (*Corpse Flower,* 2016) by Niklaus Heeb and Alessandro Holler invites visitors to participate in the growth cycle of a blossom through their body movements. As is the conundrum for all museum spaces, there are no living plants to touch, smell, or taste, but the mu-

seum is located in the middle of a park. It has installed large planters out front, thus making sure to keep engaging the visitor even in leaving and redirecting their focus onto the plants around them. The museum's tours and events take a similar approach, such as *ZusammenWachsen/GrowingTogether*, a series of hands-on workshops that take place in various gardens around the city. School classes are invited to start planting projects in their schoolyards after touring the museum. In doing so, the exhibit successfully bridges the traditionally assumed nature/culture divide, just as it combines culture, science, history, and art in its showrooms.[5]

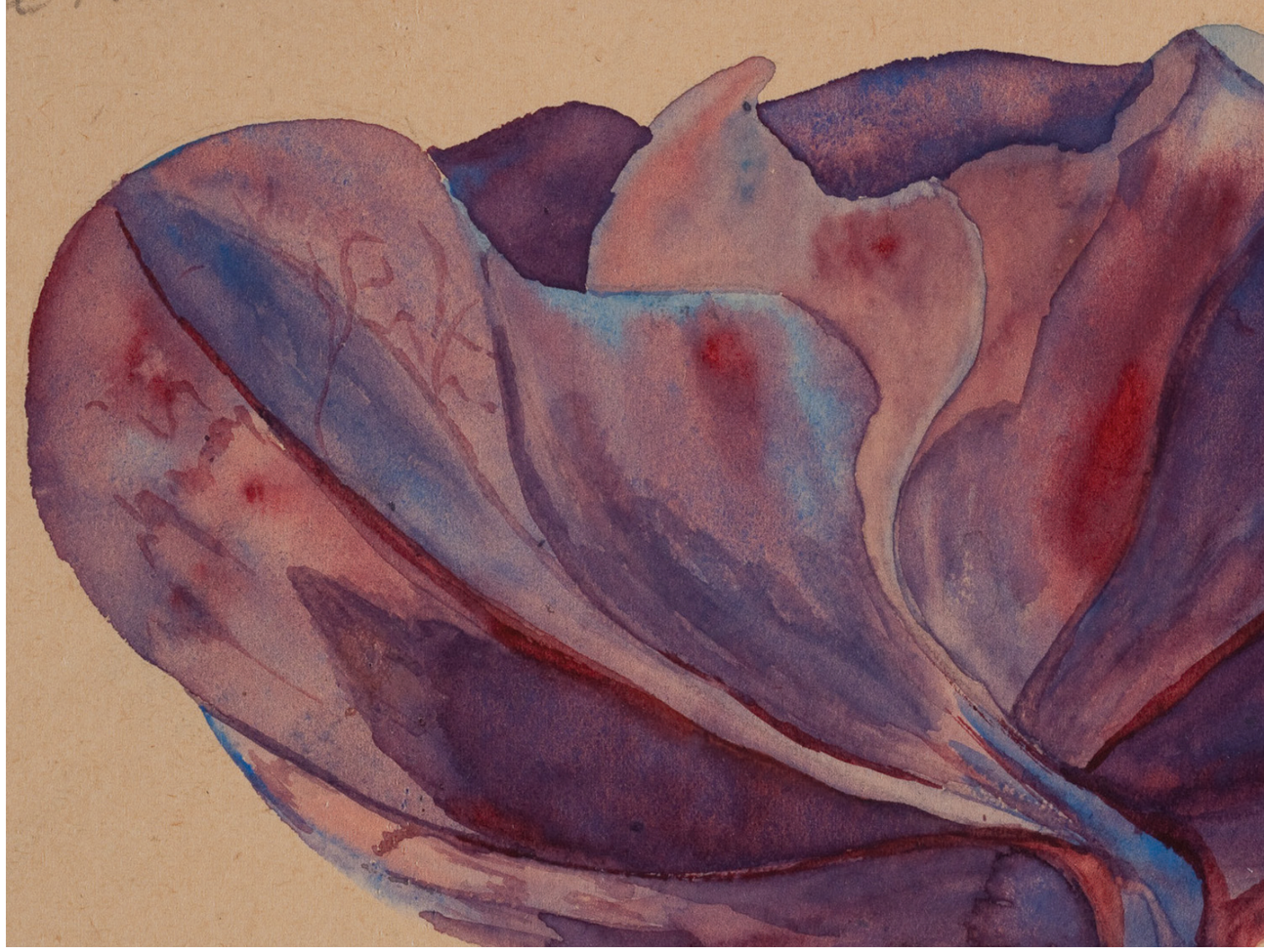
Many of the curator's choices reflect a conscious effort to rethink the human relationship with plants and one another. The exhibit makes clear that we reap what we sow, whether it is the history of colonialism and slavery whose bloody exploits all too often coagulated around medicinal or agricultural plants like opium or cotton and in which the question of land ownership remains controversial to this day—or whether it is the legacy of human intervention in the planet's ecology that is leading to climate change and the mass extinction of species. Our human dependence on plants and our destruction of their and therefore our own habitats is particularly poignant in objects of the exhibit such as the famous photograph showing *The End of the Mark Twain Log* (1891), the Giant Sequoia that was felled to have slabs of its over thirteen-hundred-year old trunk displayed, and in Volker Kreidler's *Prypjat* (2016), a photograph of plants overtaking a building in the evacuated zone around Chernobyl, which calls up Michael Marder's and Anaïs Tondeur's *Chernobyl Herbarium: Fragments of An Exploded Consciousness*.[6] Human destruction of the natural environment threads throughout history—often due to carelessness, though Johannes Cadamosto's fifteenth-century *Tractatus de sermone italico* that illustrates the harvesting of a mandrake root also raises the question of mutual destruction. Placed next to a variety of mandrake figures, including even one made of Lego, this illustration of the plant's mythological ability to kill anyone who uproots it with its screams points to centuries of a perceived power struggle between humans and "nature"—be it in the context of natural catastrophes or the psychoactive powers of plants like the mandrake that challenge the assumed human supremacy rooted in a specific kind of intelligence or cognition.

As is the conundrum for all museum spaces, there are no living plants to touch, smell, or taste, but the museum is located in the middle of a park.

Germany: Floral Fantasies

A juxtaposition of many different perspectives also unites another set of German exhibitions in the city cluster of Heidelberg, Mannheim, Ludwigshafen, and Bad Dürkheim. Called *Growths of the Soul: Floral Fantasies Between Symbolism and Outsider Art*, five interconnected exhibits approached "plant phantasies", as the German title literally translates, with works primarily from their collections from March to August 2019. The Wilhelm-Hack-Museum is located in the city center of Ludwigshafen, and its spacious exhibition halls feature a mix of work produced around 1900 by symbolists, surrealists, and artists with connections to spiritism like Max Ernst (1891-1976), Georgiana Houghton (1814-1884), Paul Klee (1879-1940), Hilma af Klint (1862-1944), René Magritte (1898-1967), Helen Butler Wells (1854-1940), Raphaël Lonné (1910-1989), Séraphine Louis (1864-1942), František Kupka (1871-1957), Victor Hugo (1802-1885), and Barbara Honywood (1825-1895). The smaller collections and galleries in the collaborative tend to be hidden away in side streets or other buildings and show a combination of artists whose biographies come to matter in the display of their art. For instance, Sammlung Prinzhorn has been collecting work by patients in psychiatric institutions for the last century (most famously perhaps that of Anna Zemáková [1908-1986]) and Museum Haus Cajeth specializes in nonprofessional artists since the 1960s, many non-neurotypical or living with disabilities. The sociocultural center zeitraumexit is famous for inclusive dance and theater performances, and Gallerie Alte Turnhalle is a workshop and exhibition place for artists with and without disabilities. The bilingual German/English catalog combines images and explanatory texts from all of these projects, each curated by a different team or individual with a focus on plants.[7]

Reflecting on the importance of plants to artists who are unable to go outside or move about without restrictions highlights the essential qualities of the symbolic



Helene Maisch

Bitte um ein Stück Kuchen! (1919) is drawn in pencil and water color on paper, 15.8 x 23.8 cm, inventory no. 1816 recto, © Sammlung Prinzhorn, Universitätsklinikum Heidelberg

language of the vegetal. Rather than dismissing plant symbolism as "not about the plant itself", the artworks in these exhibits make plants a central device of meaning-making and communication. The image of a purple flower, for instance, that is inscribed with *Bitte um ein Stück Kuchen!* (*A Piece of Cake Please!*, 1919) in the post-war oeuvre of patient Helene Maisch (1880-1941) at Sammlung Prinzhorn makes a gut-wrenching statement about the historical circumstances of asylum spaces, especially in times of resource scarcity. This sentiment recurs throughout the exhibit since many art pieces in the collection are drawn on any materials available to the patients, from packaging paper for steel shavings in the work of Elise Mahler (1862-1945) to calendar sheets used by Wilhelm Maasch (unknown, artwork around 1910). The lack of names and dates, for instance the unknown lifespan of Maasch and the undetermined first name of Frau von Zinoview, is just as disconcertingly meaningful as the many documented cases of involuntary confinement and all the deaths dating to the early 1940s, the height of Nazi euthanasia.

Maisch's plea for cake also assigns a particular value to her rendering of a purple blossom, created in the absence of possessing any currency or valuable objects to trade. In the proposed exchange of a flower painting for cake, the rendering of the plant corresponds to a piece of cake—a currency that becomes priceless (rather than

the figuratively "easily obtainable" piece of cake) when hungry or deprived. Featured as a work of art in the exhibit, the flower has also become the symbol of a tragic, nearly forgotten life that the collectors and curators assigned value by considering it worth preserving, and beyond the individual, it is a symbol for a certain historical context and its conditions. What is the visitor to do, then, with the affordable postcard of the image that can be purchased in the lobby? The image has been turned into a different kind of currency with another kind of value here—carrier of messages from the asylum into a space that is awash with cake and flowers, flush with writing and drawing supplies like the postcard itself. Does it ask us to reflect on the value of the things we take for granted? Will it remind us that others starve, while we can go to the museum café and satisfy our cake cravings amidst trees, grass, and flowers, or do we replicate Marie Antoinette's purported offense of suggesting to "Let them eat cake!"? With a view to our climate-stricken future, it is not just the cake but also the flowers we are taking for granted.

Haus Cajeth is another one of the places in this collaboration that features what the exhibit defines as "Outsider Art", a term critically contextualized in the catalog (Egon Hassbecker [1924–2013] originally collected these works under the problematic moniker "Primitive Art"). The house in the historical center of Heidelberg dedicates its upper rooms to the exhibit, and the visitor might be alone with the art on any given day. Here too, a stack of primarily gardening books is heaped on a nearby table, as if to contextualize plants beyond art, in case visitors forget their existence in the outside world. The images, on the other hand, often show flowers or trees that a taxonomer would have trouble identifying. The paintings of the farmer Pellegrino Vignali (1905-1984), for instance, depict symmetric tree-like structures growing from human heads on colorful backgrounds. He began drawing at 72, inspired by the old myths and fairy tales he heard as a boy from his father on their deliveries across Northern Italy. Other works focus on minute details, such as Günther Neupel's (1959-), who began his intricate drawings of hybrid faces, vines, and trees reminiscent of mandalas and mosaics during a psychiatric stay.

Helene Reimann (1893-1987), on the other hand, produced clearly identifiable specimens of geometrically precise flowers, such as poppies, roses, and tulips, as she lost her memory and the ability to communicate with the outside world. Given the information provided about the artists' lives, this exhibit is much more about the painter's relationship and imagination of the vegetal world, or the world as a whole, than about the onlooker's ideas about plants. Yet most of these plants are symbolic in their own way, indicative of the human idea of "a tree" or "a rose", and no matter how abstract their rendering, they become recognizable as an essentialized human idea of plants.

The United States: Botanical Relations & Big Botany

In the US, plant exhibits seem to take place primarily at the museums of public Universities or similar educational environments. *Botanical Relations*, for instance, showed from January to March 2019 at the University of Arizona Museum of Art and was co-curated by the museum's Curator of Exhibitions Olivia Miller, Professor of Plant Science Ursula Schuch, and myself, Assistant Professor of German Studies.[8] The interdisciplinary exhibit drew on the museum's collection to fill one of its galleries with work fitting the four topics of "Dis/Order", "Individualism", "Vegetal Eroticism", and "Vegetal Violence". Works by luminaries Pierre-Auguste Renoir (1841-1919), Georgia O'Keeffe (1887-1986), Andy Warhol (1928-1987) alongside local artists such as Barbara Rogers (1937-) challenged visitors to consider the manifold human relationships with plants, such as their attractive, sensual aesthetics and our violent use or outright neglect, despite our dependence on them.[9] For a selection of works in the exhibit, each of the co-curators contributed language to the labels that contextualized the piece in their respective areas of expertise of art history, plant science, and plant studies. The exhibit highlighted that plant individuality functions differently from our sense of self, and human attempts to order nature show the limits of human understanding.

One highlight of the exhibit was David Hockney's lithograph *Henry at a Table* (1976). Placed among other works engaged with the question of individuality that seems so easy to determine for humans but much less apparent for many plants, the man seated at the table with a single potted plant could be considered lonely or in good company. How many potted plants do we overlook in the spaces we inhabit daily? In the composition, man and plant compete for the viewer's attention in a space devoid of objects other than a chair and table covered in a patterned tablecloth. The image became one of my favorites because it reminded me of a special connection I formed with an individual plant at *Plantarium*, a conference organized by Marianna Szczygielska and Cielemęcka at the University of Linköping in the summer of 2017: Christina Stadlbauer and Regula Heggli invited the group of scholars and artists to participate in "Vegetal Speed Dating", an exercise in intense non-verbal focus on individual plants in which I began to wonder about the plant's consent of my smelling or touching it.[10] I was matched with my chosen plant partner in the end, but it has become a long-distance relationship, since US customs law would have separated us. Now, the plant, whose name I never learned, thrives in a Stockholm apartment under the care of friends, but it had little say in its journey and relationships. At the opening talk of the exhibit on Valentine's Day 2019, I shared the story of this "Botanical Relation" of mine and invited visitors to speed-date an artwork or cactus outside—no touching allowed.

Hosted at the University of Kansas Spencer Museum of Art, *Big Botany: Conversations with the Plant World* ran from March to July 2018 and combined pieces from the museum's permanent collection with some loans and commissioned works, including some installations with living plants placed outside of the museum, by its four artists-in-residence Ackroyd & Harvey, Sandy Winters, and Mathias Kessler.[11] According to the museum's website, the exhibit's goal was to "cultivate viewers' empathy" with plants, and this engagement was organized around five themes: "Botanophilia", "Plant Morphology & Rare Books", "Plant Lore & Herbaria", "Sustaining Plant Diversity", and "Imagined & Future Plants". The exhibit's themes brought together ideas from math and poetry, culture and economics, politics and film, pop culture and biology. In doing so, visitors engaged with the various interdependencies of the human-plant-world. Accompanied by a catalog (available online) that combines an overview of the artworks in the exhibit (which can also be seen individually online) with contributions by scholars and artists-in-residence, the exhibit also featured a series of events, including an interdisciplinary symposium with speakers such as Giovanni Aloi, David Chamovitz, and Timothy Morton that can be watched on YouTube alongside statements by the artists-in-residence.[12] These digital resources are vital in reaching a broader audience and making the materials accessible to scholars in plant studies worldwide.

The artwork chosen for the cover of the exhibition catalog shows a vegetal creature that seems to fall into the category of the mandrake or the 2016 horror film *The Birch* rather than cute, smart, or beautiful plants we might perhaps expect to help inspire empathy. The "stick figure" in Nicholas Kahn and Richard Selesnick's photograph *King of Weeds* (2013) is an anthropomorphized plant mass whose general features resemble a human form with fleshy hands in the tradition of The Green Man motif, yet it also breaks with the human silhouette by sticking out beyond its boundaries with green hornlike structures.[13] Its human-plant-animal hybridity prompts questions about the human relationship with the natural world and points to our own bodies' porous boundaries. In order to maintain the illusion of a closed-off, individual unit, humans tend to ignore the openings of a body that consists of many different kinds of entities, contains trillions of microorganisms, and exists because of a constant in and out of matter. Just like the hybrid creature in the piece, humans are one and many, and what we call the I, intellect, and culture cannot be neatly separated from what we call nature. Similarly, the *Weed King* raises questions about distinctions humans impose on the natural world, such as the category of the weed that often goes along with violent extermination, just as we try to eliminate the "germs" from our bodies. Many of the artworks in these exhibits invite us to consider instead what we have in common and how we live in community with other species.

University of Kansas Spencer Museum of Art

Part of the *Big Botany* exhibit, featuring Nicholas Kahn and Richard Selesnick's King of Weeds (2013) in the middle on the wall to the right. Photo provided by University of Kansas Spencer Museum of Art, 2018

Virtual Formats from London, Paris, New York, and an Invitation

Another artistic engagement with plants that has put most of its materials online is *The Shape of a Circle in the Mind of a Fish*, a series of symposia that took place at Serpentine Galleries in London as part of their larger *General Ecology* project in 2019. Two of their events focused on plants (one called *Plantsex* and the other adding *with Plants* to the long symposium title that alludes to the pufferfish's circular mating dance). The events (which included talks and performances) can be watched on YouTube, they are connected to exhibits (such as by artist Emma Kunz), and they have produced podcasts as well as a special issue of *MAL* journal on *Plantsex*.[14] As with other publications that accompany these exhibits and events, the quick turnaround time for published work is remarkable. Alongside the virtually available formats, this output is propelling the field of plant studies forward in leaps and bounds, since so many prominent and new voices in plant studies contribute to the materials.

Organized with the support of academic advisors Emanuele Coccia and Stefano Mancuso, the Paris exhibit *Nous les Arbres/Trees* just extended its run for two more months into 2020.[15] Distributing both a French and an English version of its catalog, it has reached a wide public and academic audience.[16] The publication combines images and text in a beautiful large format that would be the pride of any coffee table, and just like some of the other well-funded European houses that have made their exhibits bilingual, these projects are clearly meant to intervene beyond the local context and the time constraints of the shows. The exhibitions themselves and the accompanying publications reproduce research in plant studies, ranging from findings in plant neurobiology to philosophical considerations and from gendered implications of flowers to historical observations.

This interdisciplinary outreach also extends to places that usually exhibit living plants. The New York Botanical Garden (NYGB) currently offers an entirely digital exhibition on *Poetic Botany: Art & Science of the Eighteenth-Century Vegetable World* at https://www.nybg.org/poetic-botany/#start. Visitors can travel virtually through six multi-media chapters that explore the occurrence of specific plant species in English-language, eighteenth-century poetry. A short video explains, for instance, how Erasmus Darwin's *The Botanic Garden, A Poem in Two Parts* (1791), became a bestseller by combining poetic verse with explanatory scientific footnotes. From works like these, the visitor learns something about plants but also other aspects of eighteenth-century culture, such as philosophy, medicine, gender, politics, art, and colonialism, as the exhibit shows with thematic expansions. With the hashtag #plantlove,[17] the NYBG has also put on a series of events called *Biophilia: Sharing Our #plantlove* in 2019. Opening up their herbarium and library to visitors in addition to the new exhibition in the conservatory, NYBG invites people to fall in love with plants (again), or share their love for plants both online and at in-person events like the #plantlove weekend in February 2019, workshops, tours, performances, and a curated happy hour. Picking up on social media trends, such as popular Instagram accounts *plantparentcommunity* and *houseplantclub*, NYBG, and similar places like Kew Gardens (but also initiatives like *The Plant Society* and *The Planthunter*) are reaching a broad and often young audience with these visually appealing campaigns.[18]

All of these recent exhibits and more are listed on the website of the *Literary and Cultural Plant Studies Network* that has been bringing together scholars for collaboration and exchange since 2016. Similar to a root system, this network promotes the sharing of resources to promote collaboration in plant studies. In addition to an extensive bibliography, people profiles, and lists of conferences, exhibits, publications in progress, and most recently also teaching resources, the platform points to many other initiatives such as *Botanical Speculations*, the *Plant Studies Collaboratory*, *Imaginaire Botanique*, and *Herbaria 3.0* as well as resources like JStor's *Global Plants* and the *Biodiversity Heritage Library*.[19] The network's mission is to collect, connect, and amplify the work of scholars around the world and invites anyone to join and contribute by visiting https://plants.arizona.edu**.**

Endnotes

[1] James H. Wandersee and Elisabeth E. Schussler, "Toward a Theory of Plant Blindness," *Plant Science Bulletin* 47, no. 1 (2001): 2-9, https://www.botany.org/bsa/psb/2001/psb47-1.pdf. Giovanni Aloi (ed.), *Why Look at Plants? The Botanical Emergence in Contemporary Art* (Leiden: Brill|Rodopi, 2018).

[2] Kathrin Meyer, *Von Pflanzen und Menschen: Ein Streifzug über den grünen Planeten/Of Plants and People: A Stroll Around the Green Planet*, Deutsches Hygiene-Museum Dresden, April 19, 2019-April 19, 2020, https://www.dhmd.de/en/exhibitions/archive/of-plants-and-people/

[3] Kathrin Meyer and Judith Elisabeth Weiss (eds.), *Von Pflanzen und Menschen: Leben auf dem grünen Planeten* (Göttingen: Wallstein Verlag, 2019).

[4] A small exhibit dedicated entirely to Blossfeld took place at the same time at the Photographische Sammlung Cologne, Germany. Called *Poesie der Pflanze* (Poetry of the Plant), it featured photographs by Karl Blossfeldt and Jim Dine from February 22 to July 21, 2019 (see https://www.photographie-sk-kultur.de/ausstellungen/rueckblick/2019/poesie-der-pflanze/).

[5] In June, the museum also hosted the first conference of the Literary and Cultural Plant Studies Network (https://plants.arizona.edu/conference/) on *Vegetal Poetics: Narrating Plants in Culture and History*, organized by Joela Jacobs, Isabel Kranz, and Solvejg Nitzke. You can find the conference report by Christina Becher in *KULT online* no. 61 (May 2020): https://journals.ub.uni-giessen.de/kult-online/article/view/1015/1204.

[6] Michael Marder and Anaïs Tondeur, *Chernobyl Herbarium: Fragments of An Exploded Consciousness* (London: Open Humanities Press, 2016), http://www.openhumanitiespress.org/books/titles/the-chernobyl-herbarium/.

[7] Charlotte Arens, Ingrid von Beyme, Astrid Ihle, Nora Jaeger, Julia Nebenführ, Gabriele Oßwald, Thomas Röske, Wolfgang Sautermeister, and René Zechlin, *Gewächse der Seele: Pflanzenfantasien zwischen Symbolismus und Outsider Art*, Wilhelm-Hack-Museum (Ludwigshafen), Sammlung Prinzhorn (Heidelberg), zeitraumexit (Mannheim), Galerie Alte Turnhalle (Bad Dürkheim), and Museum Haus Cajeth (Heidelberg), March 3-August 4, 2019, https://www.wilhelmhack.museum/en/exhibitions/archive/2019/gewaechse-der-seele-floral-fantasies-between-symbolism-and-outsider-art. Wilhelm-Hack-Museum

(ed.), *Gewächse der Seele: Pflanzenfantasien zwischen Symbolismus und Outsider Art/Foral Fantasies between Symbolism and Outsider Art* (Berlin: Hatje Cantz Verlag, 2019).
[8] Joela Jacobs, Olivia Miller, and Ursula Schuch, *Botanical Relations,* University of Arizona Museum of Art, January 26-March 31, 2019, https://artmuseum.arizona.edu/events/event/botanical-relations.
[9]See https://www.barbararogersart.com/.
[10] Another interactive performance was Mirko Nikolić's "downward facing plant/happy plant pose," a yoga session that had the conference attendees, including keynote speakers Michael Marder and Catriona Sandilands, participate in yoga with potted plants outside. Find the full program at https://drive.google.com/file/d/15EsXHV4rc6NwrnO0CW7fBQv4IPZ0HYIJ/view and read the special section on "Plantarium: Human-Vegetal Ecologies" in *Catalyst: Feminism, Theory, Technoscience* 5, no. 2 (2019) at https://catalystjournal.org/index.php/catalyst/issue/view/2248.
[11] Stephen H. Goddard, *Big Botany: Conversations with the Plant World*, University of Kansas Spencer Museum of Art, March 27-July 15, 2018, https://spencerart.ku.edu/exhibition/big-botany-conversations-plant-world. See the exhibition brochure at https://indd.adobe.com/view/2a49f5ea-a834-4748-b1a7-08c501196445. For the artists-in-residence, go to https://spencerart.ku.edu/artist-residence/ackroyd-harvey, https://spencerart.ku.edu/artist-residence/sandy-winters, and https://spencerart.ku.edu/artist-residence/mathias-kessler.
[12] Stephen H. Goddard (ed.), *Big Botany: Conversations with the Plant World* (Lawrence: University of Kansas Spencer Museum of Art, 2018), https://indd.adobe.com/view/abf1ec41-5c41-4ce1-9096-757b03b75d66. The symposium videos can be found at https://www.youtube.com/watch?v=MRVNPzobxAQ&list=PLz3HvGH_1aI2kqCcUiYTWSj4RHoFEUMMM and the artist-in-residence video statements are at https://www.youtube.com/watch?v=HxlRxmKcxcE&list=PLz3HvGH_1aI2wQtE-J0emZGnfwo4X93Q7. For an overview of the exhibited art and the events, go to https://spencerartapps.ku.edu/collection-search#/exhibition/1082.
[13] According to the label, the artists say that the piece "can be viewed as a symbol of invasive species spread by climate change and human migration." See https://spencerartapps.ku.edu/collection-search#/object/47924.
[14] The various resources can be found at https://www.serpentinegalleries.org/exhibitions-events/shape-circle-mind-fish-plants. Maria Dimitrova, Lucia Pietroiusti, Filipa Ramos, and Kostas Stasinopoulos (eds.) "Plantsex," *MAL* no. 3 (April 2019), https://maljournal.com/3/plantsex/, which can be purchased here: https://serpentine-galleries.myshopify.com/products/mal-journal-plantsex.
[15] Bruce Albert, Hervé Chandès, and Isabelle Gaudefroy (ed.), *Nous les Arbres/Trees*, Fondation Cartier pour l'art contemporain, July 12-January 5, 2020, https://www.fondationcartier.com/en/exhibitions/nous-les-arbres.
[16] Fondation Cartier pour l'art contemporain (ed.), *Trees*, Paris: Fondation Cartier pour l'art contemporain, 2019. See also Cody Delistraty, "The Intelligence of Plants," *The Paris Review*, September 26, 2019, https://www.theparisreview.org/blog/2019/09/26/the-intelligence-of-plants/.
[17] See https://www.nybg.org/about/plantlove-apga-application/
[18] A recent article in *The New Yorker* discussed parts of this phenomenon; see Jia Tolentino, "The Leafy Love Affair between Millenials and Houseplants," *The New Yorker*, April 18, 2019, https://www.newyorker.com/culture/culture-desk/the-leafy-love-affair-between-millennials-and-our-houseplants. Find *The Plant Society* at https://www.theplantsociety.com.au/ and *The Planthunter* at https://theplanthunter.com.au/.
[19] See https://plants.arizona.edu for all resources, maintained by Joela Jacobs. Find *Botanical Speculations* and its Chicago-based events on Facebook and see Giovanni Aloi (ed.), *Botanical Speculations: Plants in Contemporary Art* (Newcastle upon Tyne: Cambridge Scholars, 2018). The *Plant Studies Collaboratory* is a research collective brought together by Natasha Myers at https://plantstudies.wordpress.com/. *Imaginaire Botanique* is a Canadian research project headed by Rachel Bouvet and Stephanie Posthumus at https://imaginairebotanique.uqam.ca/. *Herbaria 3.0* is a plant storytelling platform led by scholars Tina Gianquitto, Lauren LaFauci, Dawn Sanders, and Maura C. Flannery at https://herbaria3.org/. At https://plants.jstor.org/, researchers can explore plant archives and collections with the help of the digital tools provided by JStor's *Global Plants* project. The *Biodiversity Heritage Library* provides free images of historical plant illustrations at https://www.flickr.com/photos/biodivlibrary/albums/with/72157688236066255.

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could