

Digital Plant Encounters: Integrating Critical Plant Studies with Digital Environmental Humanities

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ABSTRACT

The distinction between nature and technology is a western dichotomy that is slowly being eroded. As we are continuously confronted with humanity's role in the climate crisis, it is important that humanists also tell stories about the environment and not cede that conversation to the sciences. The Humanities have a role to play in explaining the histories, cultures, and stories of plants to help us see and acknowledge all of the lives around us. Our research foregrounds Digital Humanities projects that weave together different narratives that tell deeper, more nuanced stories about the natural world, specifically focusing on projects that center plant narratives. We examine how Digital Environmental Humanities in conversation with critical plant studies can create detailed, interactive narratives about the lives of plants and underscore the importance of portraying plants as subjects of inquiry and not merely background objects. (HR and CB)

KEYWORDS: plants, critical plant studies, Public Digital Humanities



Introduction

The misconception of plants as immobile figures fixed in the backdrop around us feeds into forgetting the presence of plants in everyday life. This is especially troublesome in light of the climate crisis. The effects of a rapidly warming planet, such as rising temperatures and persistent drought, have taken their toll on plant life and, as a result, plants have been observed blooming in new areas or have disappeared entirely from places they could once be found (Lang et al. 115). Thus, as the climate catastrophe intensifies, there is an increased need for compelling storytelling about the environment to help encourage change in how humans see, understand, and engage with the natural world around them. As Natasha Myers reminds us, “[plants] teach us the most nuanced lessons about *mattering* and what really *matters*: their beings and doings have enormous planetary consequences” (“Photosynthesis” Web). It has been documented that humans in general lack an awareness of plants and that plants fall into the “margin of the

margin” in western thought (Wandersee and Schussler; Marder 2). One of the biggest obstacles to action is that you cannot save what you cannot see, or what you are predisposed to not acknowledge. The Shenzhen call to action (Crane et al.), and even James H. Wandersee and Elisabeth E. Schussler, leaves the responsibility to address this issue with scientists, science educators, and perhaps even stretches to those involved with science communication. However, Digital Humanists and the Digital Environmental Humanities, too, have the power to use engaging digital methods and tools to help shift perceptions about plants in dynamic and far-reaching ways. We extend that call to action to raise awareness about plants to the Digital Humanities. By utilizing media and platforms that are highly visual and/or interactive, such as games, apps, digital essays, and installations, Digital Humanities projects that focus on plant lives can literally draw our attention to parts of our surroundings we were predisposed to overlook or disregard. This interdisciplinary approach may offer the answer to the question of “How do we get people to see plants?” Digital Environmental Humanities research can be used to increase plant awareness.¹

At the intersection of Digital Humanities and Environmental Humanities sits the subfield of Digital Environmental Humanities. It is not only Digital Humanities scholarship focused on the environment, as in digital projects that explore environmental topics, but also Environmental Humanities that incorporate the relationship technology, as in environmental projects that explore relationships between nature and technology. Broadly, Digital Environmental Humanities explore human relationships with the more-than-human lives around them, the relationship between technology and natural resource consumption, and the understanding of environments both physical and virtual. As Finn Arne Jørgensen attests, “[t]he ways in which we experience, navigate, and ultimately know natural environments and landscapes today have become suffused with digital information structures” (108). Moreover, Digital Humanities methods that are applied to environmental humanities research topics can enable “seeing and experiencing nature differently than would be otherwise possible” (Sinclair and Posthumus 371) and have the potential to profoundly impact how we interact and relate to plants around us, thus allowing users to “appreciate and experience connections to nature in ways that abstract statistics cannot” and “that demand our active and conscious participation” (Swanstrom 4–5). Moreover, the incorporation of individual stories featured in Digital Environmental Humanities projects prompts

audiences to consider their own stories and their own unique interactions with the botanical world around them.

In addition to focusing on the landscape of Digital Environmental Humanities projects, we also draw on critical plant studies, a field that “forges new research paths for thinking (with) plants as a way of repositioning the human in the surrounding natural-cultural environment and human-vegetal knowledge” (Szczygielska and Cielemecka 6). Building on research from various disciplines such as science, philosophy, art, and human-plant geographies, critical plant studies advocate for turning attention once more to the botanical world around us to reconceptualize human-plant relations in a deeper, nuanced, and more ethical way. Rather than viewing the botanical world as passive, critical plant studies instead ask “how plants *act upon* us, contributing to the co-generation of our cultural practices, values, perceptions, relations, artifacts” (Ryan 104). As John Charles Ryan argues, applying a critical plant studies approach to understand human-vegetal relations is a crucial step forward “in the way in which plants are regarded and researched socially and culturally” and “offer a way forward for contemporary perceptions of plants” (103). What would it mean, then, to apply a critical plant studies approach to plant-centered stories in digital spaces in a multitude of formats? Digital projects offer a multitude of ways to notice, engage with, and deepen one’s understanding of how human relationships to and with plants have been shaped across time and place.

Digital Environmental Humanities can be a powerful tool for this type of inquiry and approach. Projects that fall under the Digital Environmental Humanities umbrella help to broadly reimagine what scholarly outputs can be, and at the heart of digital project design is understanding who the audience for that research is. If the goal with this form of digital environmental scholarship is to impact how people see and understand plants, it cannot only speak to the academy, and academic essays alone will not accomplish this goal of reconfiguring how plants are perceived and treated by people. In this way, Digital Environmental Humanities can also be Public Humanities. As demonstrated by Sheila A. Brennan, Public Digital Humanities is not Digital Humanities that is merely available online, but one that is intentionally designed for or with a specific public in mind (Brennan 384–85). By focusing on storytelling in a variety of media, we can invite more people to consider not only the plant stories they did not know before, but their own relationships and experiences with plants. In this way, we are calling for Public Digital Environmental

Humanities that works with critical plant studies to craft and disseminate human-plant narratives. These projects have the power to spark curiosity, reorient our gaze, and encourage a reflection on the importance of plants in potentially new and deeper ways. Moreover, the ability to encourage reflection on connections between humans and plants through digital methods can foster new ways of understanding the role plants play both on an individual and global scale. In this way, Digital Environmental Humanities can be a strong partner for critical plant studies thus allowing scholars to highlight plants in their research and encourage audiences to see, understand, and appreciate plants on a new level.

In what follows, we feature and examine projects that meet the following criteria: digital projects that are publicly available and interact with plants in a meaningful way. Going beyond merely depicting nature, these projects are decentering or displacing the human agent and instead “call[ing] attention to the environment as more than mere staging” (Chang 36). The plants featured in these projects need to be a main character or subject of the project. While some of these projects may fall more into the category of digital art than the broader field of Digital Humanities, we are analyzing them as environmental texts (Buell 6–8) and through a digital humanistic lens. There were also countless projects that dealt with nature more generally, such as *Calling a Glacier*² and the VR game *Wakamarina Valley*,³ but as they merely included plants and did not focus on plants themselves, they are not part of our specific corpus. And while many video games use their mechanics to encourage their users to notice and pay attention to plants in interesting ways, like *Strange Horticulture*⁴ and *The Legend of Zelda: Breath of the Wild*,⁵ we chose to exclude games that contain fictional plants.

The projects we discuss invoke different elements such as noticing, revealing, recreating, and inviting in how they present their research on plants whether through centering plants or challenging commonly held perceptions about the role plants have played across time and place. These four elements are both themes and design elements, manifesting in both the topics of the projects and the ways they were technically built and presented. Noticing focuses on the ways the projects shed light on plants by making them subjects, forcing users to pay attention to them. Revealing moves beyond noticing, now that users notice the plants how the projects introduce them to aspects of the plants’ experiences, histories, and more. In some ways recreating is a subset of revealing, unveiling histories of plants through digitally recreating their environments, but since it is a major method and has immense affordances for Digital Environmental

Humanities, it is the fourth lens. And inviting more explicitly explores these projects as Public Digital Humanities projects and how they are specifically positioning themselves to appeal to non-academic audiences.

Noticing

The act of merely noticing plants is a crucial step in acknowledging plants in a deeper way. If the plants that can be encountered in the environments around us are framed as secondary, background figures, it is easy to overlook them. However, by encouraging a practice of noticing individual plants and thereby fostering curiosity to learn more, people can begin to reimagine their connection to the plants around them, not as separate but as intertwined and part of a larger collective. What does it mean to notice the plant lives around us and what could we change through noticing?⁶ In highlighting the importance of noticing to reimagine human-plant dynamics, we draw on Bennett's new materialism that incorporates a call to notice the more-than-human lives that are often overlooked. In a time of ecological degradation and unsustainable resource consumption that has rippling effects throughout the botanical world, Bennett's new materialism offers an ethical approach to more-than-human relations that begins with reorienting our gaze, looking down and around us. As she posits in *Vibrant Matter*, "[t]his sense of a strange and incomplete commonality with the out-side may induce vital materialists to treat nonhumans—animals, plants, earth, even artifacts and commodities—more carefully, more strategically, more ecologically" (Bennett 17–18). In raising the status of the more-than-human around us, such as plants, Bennett's new materialism advocates for a re-imagining of our place in the order of things, not at the center but in relation with more-than-human life. Entangled and connected, we are affected by "a particularly rich and complex collection of materials" such as the plants around us (Bennett 11).

The following four resources demonstrate how stories, both historical and personal, can powerfully highlight the interconnectedness of plants and humans. In drawing on art, history, and science to tell more nuanced botanical stories, these sites foreground plants as being central figures in shaping human life on individual scales to being at the heart of the creation of colonial systems and unequal dynamics between people. *Herbaria 3.0*⁷ offers a virtual entry into the personal stories and reflections on the ways in which plants leave their mark on our lives. Similarly, *JSTOR Plant of the Month*⁸ presents case studies that feature histories of plant cultivation, exchange, and significance within and among different cultures.

The Center for Plants and Culture⁹ is a POC-run digital platform that creates space for artistry, exhibits, and stories that provide a deeper look at historical connections between humans and plants. Lastly, the Plant Humanities Lab¹⁰ brings together stories of plants that draw on information from both the sciences and the humanities to highlight the importance of drawing across disciplines to create a fuller understanding of plants.

With an emphasis on exploring human-plant relationships, *Herbaria 3.0* “emerged as a collaborative effort of environmental humanities scholars, scholars of science pedagogy, and plant biologists to contemplate the role and meaning of plants in an era of rapid climate change and species displacement” (*Herbaria 3.0*). In order to address the problem of inattention to plants, *Herbaria 3.0* features stories about plants and people with the belief that “these stories can draw our attention to the intertwined nature of human-plant relationships. Turning to these relationships helps us to remember plants and reconnect with them, acknowledging the pivotal role plants play in our lives” (*Herbaria 3.0*). Visitors to *Herbaria 3.0* can find stories that connect plants with memories of family, plant recollections from childhood, and the importance of a plant in one’s culture. By showcasing individual stories, *Herbaria 3.0* creates a digital tapestry where humans and plants are not separate but deeply connected with one another.

As part of a partnership of Dumbarton Oaks and JSTOR Labs, *JSTOR Plant of the Month* presents readers with histories for featured plants and explores how they have come to be seen as key aspects, symbols, and natural resources within certain cultures. Through text and historical illustrations, each article presents readers with a snapshot of iconic plants. For example, drawing from the multifaceted history of the hibiscus plant, Andrés Triana Solórzano writes that “plants can be archives of human histories, and hibiscus carries in its roots and petals stories of how enslaved and indentured people struggled to preserve their relationship with plants and knowledge of nature” (Solórzano). Storying plants thus helps to draw our attention to the intertwined and complex colonial histories of the role plants played in structuring and affecting human power dynamics. Through noticing these complex relationships, we can understand plants not simply as resources, but key actors in shaping human relationships. These stories also serve to connect readers to more resources about the plants, both within and external to JSTOR, and by taking a more informal tone can generate more public interest in these hidden histories.

The Center for Plants and Culture foregrounds the role plants play in structuring complex relationships among people with a focus on

centering perspectives from people of color. Through a variety of online education content, exhibitions, and arts-based research creation, the Center highlights lesser known or marginalized botanical histories, shifting the viewers focus back to the plants. Exhibitions incorporate botanical specimens, photos, and artwork to weave together a mosaic that invites viewers to examine the different connections between people and plants. Similarly centered on the role of narratives to bring plants into focus, the Plant Humanities Lab offers a curation of stories that feature less-known plant histories. As the members of the lab attest:

Although we think of plants as rooted in place, their global travels over the millennia offer fascinating pathways into the past and illuminate some of the most burning issues of today, including legacies of colonial violence and displacement. Climate change, habitat loss, and accelerated species extinctions add to the urgency of researching plant-human interactions and acknowledging the importance of plants in our environment. (Plant Humanities Lab)

The Lab approaches storying plants in a two-fold way: drawing on historical resources such as herbals and collections of botanical illustrations from the Dumbarton Oaks rare book library and creating interactive and dynamic digital exhibits to bring these resources to life. These images are as important to the experience as the text. Using Juncture,¹¹ the platform they developed to build the visual and dynamic digital narratives, these images are given as much screen space and attention as the written narrative. Additionally, the Lab utilizes a discovery interface that allows users to search for information on different plants. The search collates resources such as images and articles from both the sciences and humanities. Doing so reinforces the understanding that to create a fuller picture of a plant requires drawing on a diverse array of resources from multiple disciplines without prioritizing anyone.

Revealing

Noticing plants is only one step, however. Digital projects can also have the ability to reveal lesser-known histories of human relationships with plants that have been pushed to the margins of environmental history. In ushering these stories into focus, Digital Environmental projects peel back layers of history and demonstrate that plants are not only affected by humans, but in turn affect the human lives around them in multifaceted and

complex ways. For example, the growth and cultivation of coffee, tobacco, and cinchona are often synonymous with ecological imperialism,¹² resulting in the displacement of Indigenous peoples, ecological alteration, and the movement of plants as resources globally.¹³

Digital Environmental Humanities projects that highlight lesser showcased stories offer another way to broaden the scope of plant histories and bring to the foreground marginalized perspectives and ways of being with plants. Central to the scholarship created by the Center is the relationship between colonialism and botanical history. The Center strives to create space for often marginalized or erased narratives through highlighting botanical stories that foreground Black, Brown, and Indigenous botanical histories. In one exhibition at UCLA's Mildred E. Mathias Botanical Garden on the whitewashed history of colonialism, the exhibit curators explain that

[u]nlike most botanical displays, plants that have long been collected, cataloged, and capitalized on are shown beside images of peoples whose labor and contributions are rarely acknowledged within scientific circles. Elements are linked using specimen tape, signifying ownership and the inextricable connection between natural history, big business, and colonialism. (Center for Plants and Cultures)

By revealing the colonial history of the plants, as well as centering marginalized perspectives, these Digital Environmental Humanities projects are crucial for developing more informed and inclusive relationships with plant-life moving forward. Western science and knowledge structures, such as Linnaean taxonomy, have dominated plant studies, and there is a need to give other perspectives and knowledge systems the same level of respect and attention, otherwise, the field will continue to alienate potential audiences. Projects like the Center signal to Black audiences, for example, that their botanical histories and experiences with plants are important. Digital Environmental Humanities will flourish when it is inclusive and brings in people with a wide range of experiences. The predominance of western notions of nature as being separate from technology, civilization, and art is part of the problem that these projects must help address.

*The Welikia Project*¹⁴ digital mapping project visualizes what Mannahatta, the island we now call Manhattan, would have looked like in 1609 before European contact via its website. Its strength lies in how it introduces the user to a lush green island that seems to be the exact

opposite of the urbanized island today. In addition to presenting the plants that likely grew on Mannahatta, the project tries to reconstruct the topography, waterways, and animals of the island. To provide a familiar navigation, the project divides the map using the modern city streets, and by clicking on these blocks the user is greeted with a pop-up that provides information about that section of land in 1609 as well as today. Users are only presented with a list of names of plants that likely grew in that area, but it helps introduce us to a landscape that none of us alive today would have ever been able to interact with. While the map does not contain more stories, it is a useful starting point for engaging with the historical landscape of plants across encouraging them to consider how the plant world around them has since changed.

Recreating

Digital projects that recreate forgotten or previously non-visualized historical landscapes can thus assist users in reimagining what those landscapes have looked like. Two key examples of recreation in digital projects are *Walden, a game*,¹⁵ a video game adaptation of Henry David Thoreau's year at Walden Pond, and the *Alpine Garden MisGuide*,¹⁶ an app that augments a visit to the Jardin Botanique de Montréal by explaining the history and colonization that lead to the plants being "discovered" and brought to gardens like this one. By utilizing the framework of an actual, and specific, landscape, these projects are also tying plants to history and demonstrating how plants have played a role in our histories and our cultures. They ask us to question the assumptions we have made about the places we find ourselves in and point us to new sources of information.

Both the two different media, video game and an app, allow users to interact with these historical landscapes in different ways and highlight different aspects of plant histories. *Walden, a game* is perhaps the more immersive of the two as it places the user directly in the environment. They live, explore, and tend to the land around Walden Pond for four in-game seasons. When analyzing games as scholarship, the rules of the game function as the argument (Spring 217), and in *Walden* the player is rewarded by taking time to seek inspiration from the flora and fauna around the pond. If the player plays the game as a typical survival game by prioritizing food, shelter, and so forth, the game will slowly lose saturation. Inspiration is as important a health metric as food, and only by observing the natural world will this health bar be filled. These observations trigger passages of Thoreau's writing about the plant to appear on screen and are then added to

the player's journal. The journal can be revisited at the end of each in-game day, encouraging the user to keep reflecting on that which inspired them. Additionally, the potential observations change with the seasons, time of day, and the weather so one can observe the same plant at different points in the game. This triggers different passages of Thoreau's writing which encourages the user to keep looking at plants and to notice changes. They are not merely rewarded for "discovering" the plant for the first time, but by paying continual attention to it. The game opens with a quote from Thoreau's writings that year at Walden Pond, "I wanted to live deep and suck out all the marrow of life" and the goal is not just survival but living reflectively and "achieving higher levels of contemplations and aesthetic appreciation" (Thoreau 98; Spring 216). The game rewards this type of behavior by making some in-game observations only unlockable when the character is in this state of high inspiration.

The *Alpine Garden MisGuide* creates an augmented experience when looking at actual plants in the botanical garden. Visitors can download the app and use the in-app camera to scan QR codes throughout the alpine garden. The app recreates the experiences of plant-hunters: an in-app compass directs visitors to the locations of QR codes, which can be scanned with an in-app Brownie camera; the content then is presented in a notebook, similar to the field notebooks kept by explorers, with information paper clipped to the page. These attached notes provide links to literary and archival texts as well as images of the plants. These period-specific media "frame their experience of travel in foreign landscapes in ways that reinscribed colonial authority" (Didur 20). The app severs the illusion presented by the garden, showing that it is in fact not a natural landscape but a man-made garden influenced by years of colonial thinking in garden design and "makes visible the 'absent-presence'" of a colonial archive associated with botanical exploration and garden history" (Didur 22). Like the plant-hunters, visitors are exploring nature and seeking to collect (digital) specimens, but the app also serves to extend the visitors engagement with the Jardin Botanique de Montréal as all unlocked content is still accessible once the visitor leaves the garden. While interested visitors can use the physical plant labels in botanical garden and apps like iNaturalist¹⁷ on their phones to identify and learn more about the scientific/biological lives of the plants, the *MisGuide*, as implied in the name, "redirects the visitor's attention" to the relationship between plants and the places/cultures they are native to and the colonial history of plant hunting and botanical gardens (Didur 15). Users can walk away from this visit more

aware of some of the ways plants arrived in the land around them, and how colonialism impacted their physical landscapes.

Inviting

While these projects have been examined through the lens of their content before, it is equally important to study both their media and how they invite audiences into the project. Different modes of interaction allow the users to take a range of roles, from reader all the way to active participant. These projects help remind us all that technology and nature are not opposites or separate. Rather, plants belong in technology and technology should be in conversation with plants. As Charles Travis explains, “the humanities can be expanded by the [Digital Environmental Humanities] to operate on widely interactive and multiple modalities and dimensions of the human relation to the environment, incorporating textual, tactile, visual, and auditory mediations in the pursuit and creation of knowledge” (106). Digital projects that focus on plants are able to create nonlinear digital ecologies that link together multiple nodes of information and collectively help us to create a fuller, more detailed understanding of individual plant experiences.

In a way, Digital Environmental Humanities projects can invite users in by operating in spaces where the users already spend time such as on their phones. Plants have a huge space in the social media landscape. At the time of writing, #plantsofinstagram has 16.3 million posts on Instagram and #planttok has 5.1 billion views on TikTok. *A Witness Tree*¹⁸ leverages this interest on X (formerly Twitter). It is presented as a tree’s X account where the tree shares about how it feels by periodically tweeting out updates from its own point of view. The tree helps remind its followers how plants are impacted by their conditions. Mobile apps also operate in this way. The *MisGuide*, while place-based, takes the form of an audio or digital guide in a cultural institution—a mode many users will already be familiar with. The mobile selfcare app *A Kinder World*¹⁹ centers plants and the care of plants as a way of taking care of ourselves. By watering your virtual plant, you can unlock information about the plant, such as details about where the plant grows in the wild and the different varieties that exist. If users are turning to their phones to interact with plants digitally, it is clear that projects that fall under the umbrella of Digital Environmental Humanities have an established audience who are looking to have digital nature experiences.

Other ways these projects have explored untraditional types of interactions with scholarly and cultural material is by leveraging other

common digital experiences. The *Botanical Botticelli Quiz*²⁰ is a quiz made by Google Arts & Culture that explores the symbolism of the plants in the background of Botticelli's *Primavera*. It is reminiscent of other lighthearted internet quizzes while simultaneously demonstrating how even static depictions of plants were never merely for decorations but were active decisions on the part of the artist to portray more information. Additionally, *Walden* builds on an interest in both survival games and walking simulators to provide players with another way of interacting with the text of *Walden*, the book.

While inviting people to explore plants by using technologies they are familiar with, Digital Environmental Humanities can also reinforce the idea that one's own story and experience with the plants around them are just as rich and valid as scholarly materials. There are two projects in particular that encourage this direct personal engagement: *Herbaria 3.0* and the City of Melbourne's email-a-tree project.²¹

Herbaria have their roots in the documentation, characterization, and study of plants and fungi. Herbarium collections around the world contain nearly 390 million specimens (Thiers 219), and as Maura C. Flannery points out, "[e]ach of the millions of specimens stored in herbaria around the world records a species growing in a particular place at a particular time, each unique and irreplaceable" (1). While the sheets that herbarium staff use to preserve plants and fungi include information to help identify taxonomic and environmental information, it is important to remember that the story of each plant extends beyond those sheets. Plants affect people on a personal level, and these impressions can live on in stories and memories. Some of these stories are saved in *Herbaria 3.0*. Unlike a traditional herbarium which requires the user to be present to examine plants unless digitized, *Herbaria 3.0* is a digital public archive, demonstrating that personal stories about plants are just as worthy of saving and making accessible. The stories within *Herbaria 3.0* range from short recollections to poetry and longform essays, all centering a particular plant. To showcase these stories, *Herbaria 3.0* also incorporates an interactive Story Garden Map that allows users to see where the personal plant stories occurred. For example, in one story, Eria Wei recounts the impression the pine trees of the Rockies made on them:

I looked up at the cliff again: the leopard flowers' slender stems and thin petals seemed fragile, but they stood upright in the wind and rain without

showing a sign of wavering. Their deep, dark pupils gazed upon the mountains, the river, and us (Wei, *Herbaria* 3.0)

Mapping these stories emphasizes that human-plant narratives come in many forms and span across various locales. Moreover, such stories emphasize that humans do not exist separate from the natural world around us and that meaningful experiences with plants are not exclusive to those in the sciences.

Like many cities across the world,²² the City of Melbourne created a public database and map of all the trees planted in the city. Unlike other cities however, in doing so they also created a unique email address for each of the almost 80,000 trees using its ID number. Initially this was so citizens could report maintenance needs, but it morphed into something else entirely. People from all over the world started to send personalized emails not about, but to, the trees. This goes beyond the type of interaction in a project like *Calling a Glacier*, which allows users to call a glacier and listen to it, by instead allowing the users to start an active correspondence with the trees. This type of interaction, although not what was intended, allowed people to reconsider how trees fit into their own personal experiences and foregrounded the trees' experiences in their day-by-day activities (Straughan et al. 508). In these emails the correspondents personified the trees, not merely addressing the emails using the trees' ID numbers but asking about their name or asking what to call them, and writing to them as if they were a friend (512). The trees were not "numbered objects in the city" but interlocutors and fellow citizens in the city, which in turn helps promote care and consideration for what the trees themselves are experiencing (515). In writing these emails, some correspondents used the space to rethink their past interactions with the tree, especially from the point of view of the tree, apologizing for inadvertent damage or rudeness directed at it, and to "get to know the tree on human terms" (517). This project is one of the most direct ways for people to enable a critical plant studies practice in their day-to-day lives, and it allowed people to recognize the trees not just as subjects or agents but as equals.

In addition to inviting users to look at plants with a humanities and critical plant studies lens, these projects also encourage users to explore different technologies. Clearly there is a deep potential for Digital Environmental Humanities as a field to both meet the interest audiences already have and to introduce them to new ways of thinking about plants

and ways of presenting information. As this intersection of thought gets further developed, it could have immense implications for the field.

Conclusion: Reimagining

By using elements of noticing, recreating, revealing and inviting, these digital projects encourage us all to reimagine our relationships to plants thereby honoring them and their stories. Changing how we understand and connect with plants requires a multidisciplinary approach that draws on information from both the Sciences and the Humanities, and digital projects allow for dynamic and interactive ways to bring these different threads together. A Public Digital Environmental Humanities approach paves the way for collectively reimagining a number of approaches working together. Digital Environmental Humanities projects have the potential to reach and impact a much wider audience. There will always be more questions about the best ways to convey these stories and this article can merely plant a seed that we hope will flourish as more join the conversation.

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Notes

1 In this paper we will be borrowing Kathryn M. Parsley's framework of the plant awareness disparity in the place of "plant blindness" which uses ableist language (599). Parsley identifies four types of awareness that need to be addressed in regard to plants, attention, attitude, knowledge, and interest, all of which contain implications in the Humanities and are not exclusive to science writing (599).

2 Kalle Laar, "Calling the Glacier". www.callme.vg/Glacier/E/project.html. Accessed 1 Dec. 2023.

- 3 Wakamarina Valley, NZ. <https://lushfoil.litch.io/newzealand>. Accessed 12 Oct. 2023.
- 4 Strange Horticulture. www.strangehorticulture.com. Accessed 1 Dec. 2023.
- 5 The Legend of Zelda: Breath of the Wild. <https://zelda.nintendo.com/breath-of-the-wild>. Accessed 1 Dec. 2023.
- 6 As Bennett attests, “human-plant affinity abounds once you become alert to them, and then there’s a slight but real kaleidoscopic shift in everything you see, hear, smell, touch, taste, and think” (*Vegetal Life and Onto-Sympathy* 103).
- 7 *Herbaria 3.0*. <https://herbaria3.org>. Accessed 12 Oct. 2023.
- 8 JSTOR *Plant of the Month*. <https://daily.jstor.org/series/plant-of-the-month>. Accessed 12 Oct. 2023.
- 9 Center for Plants and Culture. www.plantsandculture.org. Accessed 12 Oct. 2023.
- 10 Plant Humanities Lab, Dumbarton Oaks and JSTOR Labs. <https://lab.plant-humanities.org>. Accessed 12 Oct. 2023.
- 11 Juncture by JSTOR Labs. <https://labs.jstor.org/projects/juncture>. Accessed 1 Dec. 2023.
- 12 Alfred Crosby coined the term “ecological imperialism” in 1968 to describe the movement of plants that coincided with European colonization in North America and the Global South. For more information see Alfred W. Crosby. *Ecological Imperialism. The Biological Expansion of Europe, 900–1900*. Cambridge: Cambridge UP, 2015. Print.
- 13 With a focus on the *Rubiaceae* (coffee) family, Figueiredo and Smith found that although a large amount of *Rubiaceae* genera can be found within Angola, the majority of *Rubiaceae* collected in Angola are deposited in European herbaria. This disparity highlights the lingering effects of colonization while underscoring the problem of scholars being unable to access their own botanical history.
- 14 The Welikia Project. <https://welikia.org>. Accessed 12 Oct. 2023.
- 15 *Walden, a game*. www.waldengame.com. Accessed 12 Oct. 2023.
- 16 The Alpine Garden MisGuide. <https://greeningnarrative.wordpress.com/home/projects/alpine-garden-misguide>. Accessed 12 Oct. 2023.
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- 19 A Kinder World. www.playkinderworld.com. Accessed 12 Oct. 2023.
- 20 Botanical Botticelli Quiz. https://artsandculture.google.com/story/lQXhy_28Liuodw. Accessed 12 Oct. 2023.
- 21 Urban Forest Visual, City of Melbourne. <http://melbourneurbanforestvisual.com.au>. Accessed 12 Oct. 2023.
- 22 For example, New York City undertakes a street tree census every 10 years and uses the data for a variety of projects, including interactive maps. <https://tree-map.nycgovparks.org>. Accessed 12 Oct. 2023.

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