

**Part 2. Further Dissection of Durfee Conservatory's Tropical House**

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Sustainable Community Development 205

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**Section A. Photographs of the Durfee Conservatory and its Tropical House**



***Photo 1:*** Exterior view of Durfee Conservatory from Stockbridge Road



***Photo 2:*** Exterior view of the Durfee Conservatory Tropical House





***Photos 3 and 4 (Left to Right)***

***Photo 3:*** A wood Bench dedicated to conservatory donors ***Photo 4:*** A stone bench enclave



***Photo 5:*** A fountain feeds into the koi pond

***Photo 6:*** A warns dwellers not to use their cell phones





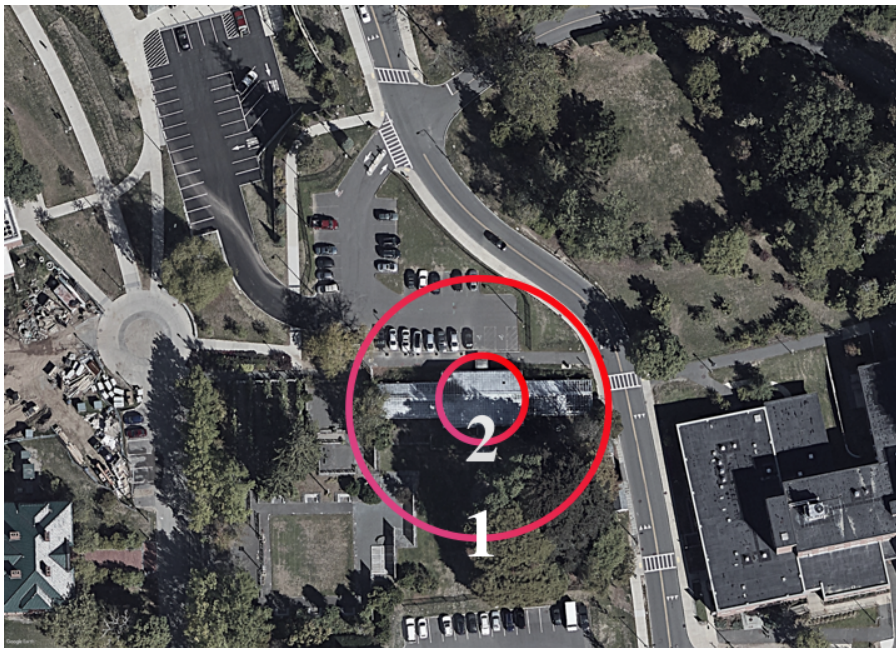
***Photo 7:** The pedestrian bridge crossing over the koi pond*



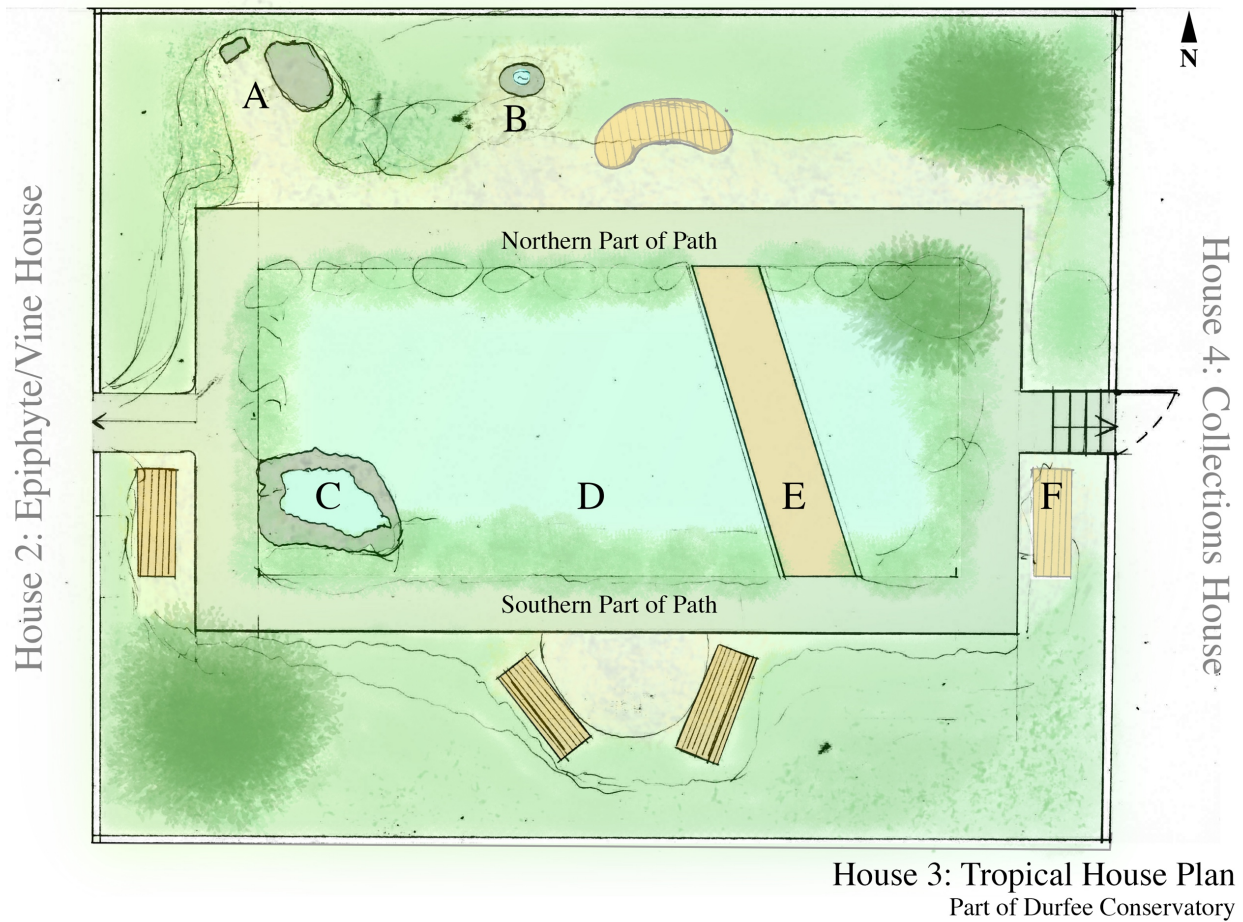
***Photo 8:** A sinuous wooden bench with a nearby information sign.  
Bound, reed mats (six feet tall) line the walls. Possibly, an attempt to boost privacy*



**Section B. Plan of Site with Labels**



***Maps 1 and 2 (Top and Bottom).*** Macro Context. Durfee Conservatory's relation to the UMass Amherst campus (aerial shot). The "1 outer ring" indicates the entire Durfee Conservatory plot of land. The "2 inner ring" indicates the location of the Tropical House.



**Map 3.** *Micro Context. House 3: Tropical House Plan*

- A. The Japanese inspired enclave, with bamboo surrounding a stone bench. (See **Photo 4**)
- B. A human made ceremonial water holder (made of stone). (See **Photo 8**)
- C. A human made fountain (See **Photo 5**)
- D. A human made koi pond (See **Photo 5**)
- E. A narrow pedestrian bridge that spans the pond (See **Photo 7**)
- F. A wooden bench commemorating the donors who contributed money



## **Section C. The Tropical House is Not a Restorative Environment for Everyone**

### **I. Introduction**

Two behavioral mapping studies were conducted at the Durfee Conservatory Tropical House (located at the University of Massachusetts, Amherst campus) (*See Maps 1 and 2, Page 5*). The first study occurred on April 2, 2019, from 10:00 AM to 10:35 AM. The second study occurred on April 9, 2019, from 1:00 PM to 2:00 PM. The weather on the first day was ‘mild,’ when compared to the dull drizzle on the second day. The aforementioned weather and time variables might have affected the results. Between both visits, there was a combined total of 41 people observed. There were six main findings from the two visits. The first was that a majority of the observed users appeared to be courteous and drawn to the flora in the Tropical House (possibly because of its therapeutic benefits). They were often silent and rarely took out their cell phones (however, seven users had earbuds ‘in’). The second was minimal handicap accessibility. The third was that approximately 80.5 percent of all users were between the ages of 18 and 34 (based on visual observations) (*See Figure 3*). The fourth was that Caucasians were the largest user ethnic group (roughly 80.5 percent of all users), followed by Asians (roughly 12 percent of all users) (*See Figure 1*). The fifth finding was that groups of people appeared to have more power than individuals (they took up more space, talked with each other, and were often eating). The final finding was that the attire and behavioral patterns of users appeared to communicate a lot about them nonverbally (possibly because of implicit and explicit biases). The findings indicate that the Tropical House is not inclusive, because it does not fully serve the needs of everyone.

## II. Analysis of the Built Environment

Durfee Conservatory and its Tropical House opened in 1867.<sup>1</sup> The pleasure grounds park design style was popular in the later part of the nineteenth century and appears to have influenced the architectural and landscape design of the Tropical House.<sup>2</sup>

To this day, one common environmental narrative for the Tropical House is that it is a haven (for some people). Students (primarily) can go to the exotic greenhouse to escape from stressors in the urban, college environment.<sup>3</sup> Attention Restoration Theory claims that this rejuvenation occurs when humans come in contact with greenery, which decreases cortisol in the body and blood pressure.<sup>4</sup> One can speculate that the those in charge of the Tropical House value multisensory experiences, as evident by the various human-made props scattered around the space (i.e. a gurgling fountain, a koi pond, and a pedestrian bridge) and sweet smelling plants (*See Map 3, Page 6*) (*See Photos 5 and 7*).<sup>5</sup> Both visits indicated that there might be underlying etiquette influencing the Tropical House. The first was a respect for the quietness. It did not matter if the users were sitting in the space or moving through it, they rarely talked, and if they did it was a low murmur. Similarly, users seldom took out their phones, thereby abiding by the posted rules (*See Photo 6*). Another unspoken rule was to walk on the Northern part of the path (which could be deemed ‘undesirable’ with reduced sun exposure and less seating available) (*See*

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<sup>1</sup> History. (n.d.). Retrieved April 3, 2019, from The Durfee Conservatory website: <http://durfeeconservatory.umass.edu/history>

<sup>2</sup> Cranz, G. (n.d.). *Changing Roles of Urban Parks: From Pleasure Garden to Open Space* [PDF]. Retrieved from [https://moodle.umass.edu/pluginfile.php/2554692/mod\\_resource/content/1/Cranz%20ChangingRolesUrbanParks.pdf](https://moodle.umass.edu/pluginfile.php/2554692/mod_resource/content/1/Cranz%20ChangingRolesUrbanParks.pdf)

<sup>3</sup> Finney, C. (2014). Chapter 1: Bamboozled. In *Black Faces, White Spaces: Reimagining the Relationship of African Americans to the Great Outdoors* (pp. 21-31) [PDF]. Retrieved from [https://moodle.umass.edu/pluginfile.php/2554697/mod\\_resource/content/2/Finney%20Bamboozled%20BlackFacesWhiteSpaces.pdf](https://moodle.umass.edu/pluginfile.php/2554697/mod_resource/content/2/Finney%20Bamboozled%20BlackFacesWhiteSpaces.pdf)

Pader, E. (Presenter). (2019, April 11). Lecture presented at the University of Massachusetts, Amherst, Amherst, MA.

<sup>4</sup> Selhub, E., & Logan, A. (2013, January 8). Your Brain on Nature: Forest Bathing and Reduced Stress. Retrieved April 15, 2019, from Mother Earth News website: <https://www.motherearthnews.com/natural-health/herbal-remedies/forest-bathing-ze0z1301zgar?SlideShow=1>

<sup>5</sup> Marcus, C. C. (2009). *Landscape design: Patient-specific Healing Gardens* [PDF]. Retrieved from [file:///Users/maxwellzaleski/Downloads/CooperMarcus%20Patient-specific%20Healing%20Gardens%20\(3\).pdf](file:///Users/maxwellzaleski/Downloads/CooperMarcus%20Patient-specific%20Healing%20Gardens%20(3).pdf). 1.; Rojas, J. (1993). The Enacted Environment of East Los Angeles [PDF]. *Places*, 8(3), 42-53. Retrieved from [https://moodle.umass.edu/pluginfile.php/2554688/mod\\_resource/content/2/Rojas%20Enacted%20Environment.pdf](https://moodle.umass.edu/pluginfile.php/2554688/mod_resource/content/2/Rojas%20Enacted%20Environment.pdf)

*Map 3, Page 6*). The clustering of seating on the Southern part of the path could be interpreted as exclusionary, like the interactions amongst people (*See Map 3, Page 6*).

A bulk of the users were individuals and seemed private and soundless. One might conclude that the Tropical House is more inclusive to individuals, as groups of people were infrequent and probably felt obligated to talk softly (as dictated by the ‘verbal’ ground rules).

### **III. Interpretation: Inclusion and Exclusion**

The Tropical House seems to matter to people looking for restorative environments that free them from mental fatigue (even if it is brief contact with nature).<sup>6</sup> An observer might call this phenomenon ‘unfortunate,’ because the users who are tethered to their phones and earbuds are likely missing the full multisensory experience.<sup>7</sup> The human-made ‘outdoor views’ in the Tropical House offer an alternative to the barren views found in other parts of the UMass Amherst campus.<sup>8</sup> Openings (with no physical doors obstructing the way) to the second greenhouse and the fourth greenhouse help reduce physical boundaries and create captured space—or the illusion that the Tropical House continues beyond (*See Map 3*). The Tropical House seems more welcoming to certain user groups.<sup>9</sup>

Based on the two visits, the two main user demographics appeared to be Caucasians and people aged 18-34 (most likely students). One possible explanation for why these two groups predominately use the space is ‘word-of-mouth’ and awareness that the Tropical House exists and is open to the public. The campus faculty may not be privy to the Tropical House’s location and hours of operation. The scale of the space might discourage large groups of people from entering the Tropical House (the path is approximately two-and-a-half feet wide). While the

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<sup>6</sup> Marcus, C. C. (2009). *Landscape design: Patient-specific Healing Gardens* [PDF].; Pader, E. (Presenter). (2019, April 11). Lecture presented at the University of Massachusetts, Amherst, Amherst, MA.

<sup>7</sup> Pader, E. (Presenter). (2019, April 11). Lecture presented at the University of Massachusetts, Amherst, Amherst, MA.

<sup>8</sup> Pader, E. (Presenter). (2019, April 11). Lecture presented at the University of Massachusetts, Amherst, Amherst, MA.

<sup>9</sup> Pader, E. (Presenter). (2019, April 11). Lecture presented at the University of Massachusetts, Amherst, Amherst, MA.

scale of the space might not cater to groups, that does not seem to affect the social power of the groups. In two instances individuals had to stop walking to let groups pass by them. These incidents speak to the proxemic patterns in the Tropical House. In general, groups took up more space when walking on the paths and seemed less hesitant encroaching on the space of others (i.e. there was one occasion where one group came close to bumping into someone seated on a bench). These occurrences point out that the Tropical House is not exactly an enacted environment, as it does not offer many spaces that can get manipulated (i.e. no one moved the benches).<sup>10</sup>

It seemed as if wheelchair access was difficult. One possible solution is to have a moveable ramp that gets attached the pedestrian bridge and stairs and helps people in wheelchairs to traverse the space. Additionally, the university could offer participatory design workshops where students and faculty come together to create artwork and new furniture.<sup>11</sup> These workshops could (1) raise awareness that the Tropical House exists, and (2) boost levels of ownership (and stewardship).<sup>12</sup>

#### **IV. Reflection**

I studied the Durfee Conservatory Tropical House because I associate the space with my own ritualistic behavior. With the onset of spring, I make an annual visit to the conservatory. I roam around the space taking in the scents and bursts of color. Besides these prior memories, I chose the Tropical House because I knew it was accessible throughout the day and that it was a small enough space for me to keep track of what was going on. I was pleasantly surprised (1)

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<sup>10</sup> Rojas, J. (1993). The Enacted Environment of East Los Angeles [PDF]. *Places*, 8(3), 42-53. Retrieved from [https://moodle.umass.edu/pluginfile.php/2554688/mod\\_resource/content/2/Rojas%20Enacted%20Environment.pdf](https://moodle.umass.edu/pluginfile.php/2554688/mod_resource/content/2/Rojas%20Enacted%20Environment.pdf)

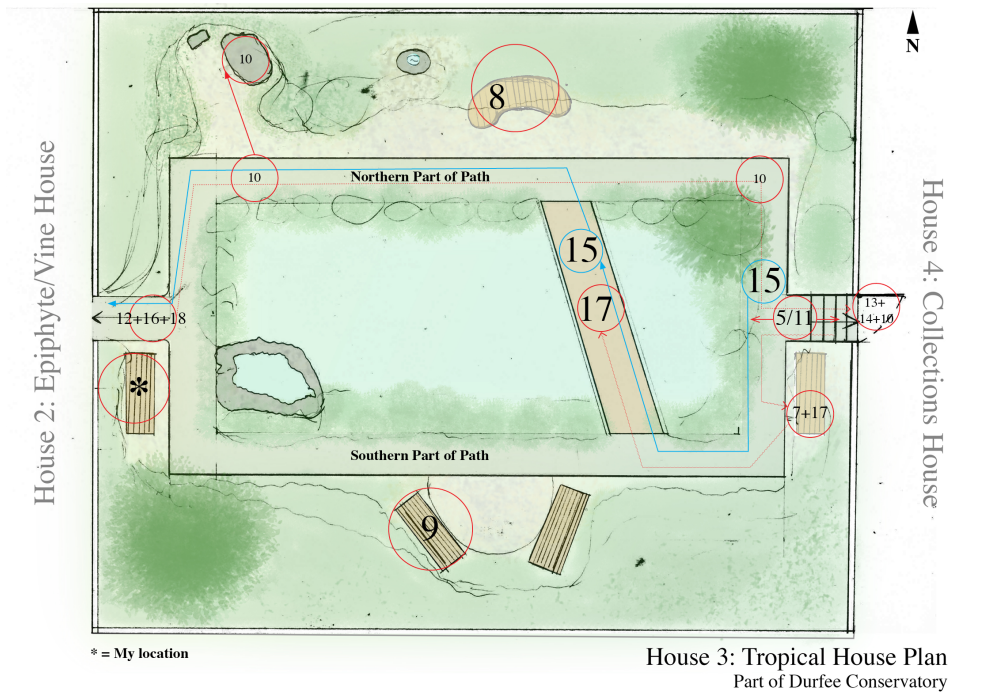
<sup>11</sup> Project for Public Spaces. (2018, April 20). Cultivating Place: Refugees and Urban Gardening in Baltimore. Retrieved April 17, 2019, from Medium website: [https://medium.com/@PPS\\_Placemaking/cultivating-place-refugees-and-urban-gardening-in-baltimore-880849f0e6c9?fbclid=IwAR2bDSJj6rHOeduvAZF\\_bXupjZVSYgLy6xHEXXp5jWfFXn8wbOKEpJEJiVw](https://medium.com/@PPS_Placemaking/cultivating-place-refugees-and-urban-gardening-in-baltimore-880849f0e6c9?fbclid=IwAR2bDSJj6rHOeduvAZF_bXupjZVSYgLy6xHEXXp5jWfFXn8wbOKEpJEJiVw)

<sup>12</sup> Pader, E. (Presenter). (2019, April 16). Lecture presented at the University of Massachusetts, Amherst, MA.

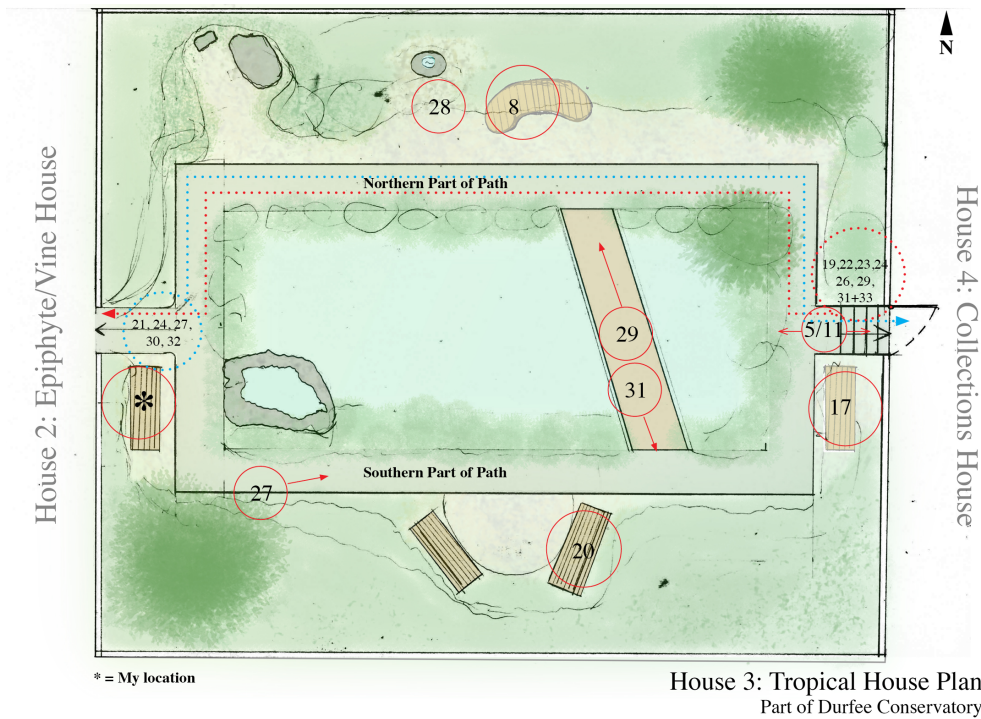


that the notoriety of the Tropical House had grown and (2) that only a few people were using their smartphones. This assignment highlighted my shyness, my preference for privacy, and my ‘outsider’ perspective. While recording data I felt like I was disrupting the lives of the other patrons, simply by observing their actions. This uneasiness prompted me to avoid interviewing the users. In addition, I felt enormous pressure (as it should be) to accurately record the actions and interactions of the users. Frequently, I wanted to reposition myself to get a new perspective (to corroborate my findings), but I thought that would draw too much attention to myself.

Section D. Field Observation Notes from the Second Visit



Map 4. Groups 8 thru 18



Map 5. Groups 19 thru 33

[illegible]

**Second Visit.** *Durfee Conservatory's Tropical House Data Collection Form*

### Field Notes. Second Visit

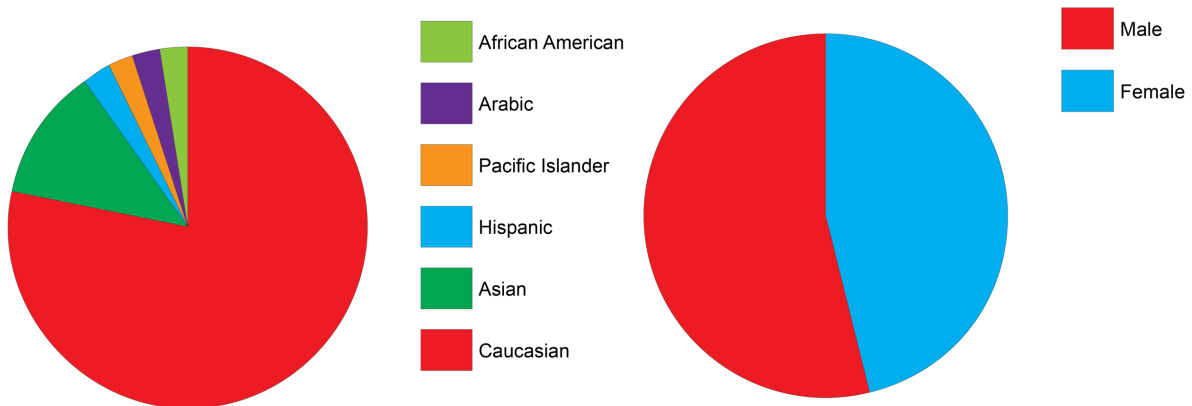
The users of the Tropical House during the first visit were predominately females, however with the addition of the second visit results, the ratio of users is approximately half females, half males (*See Figure 2*). Once again users tend to keep to themselves and rarely (if ever) talk. I did not spot much ‘people watching,’ but that is because most of the patrons were engrossed the flora and walking. Groups alter these dynamics, often talking quietly and eating. Groups take up more room and seem less vulnerable. For example, groups are more likely to venture out on the pedestrian bridge (giving up defensible space). Additionally, Group 24 (composed of two, noisy, males) nearly bumped into the female sitting along the Northern path (Group 8). While cell phone usage was once again at a minimum, there were several passersby who had earbuds in. If these passersby are intending to get the beneficial effects of the greenery and the multisensory

experience, they might be missing out. I added a column for “attire” (to the data collection form) and began looking at clothing closely. I was surprised that clothing has a big impact on users perceive each other. People who did not take-off their jackets attracted attention from patrons (maybe because the Tropical House’s temperature and humidity made wearing jackets uncomfortable). This might be one way ‘regulars’ can identify outsiders or ‘dirt’. In a similar fashion, I kept making judgments about people based on their outfits and age. In one incident, I expected that two female users (in athletic jerseys) would be fast-moving, given ‘that they play sports’. This was a misinformed presumption on my part.

After 2:00 PM I decided to ‘go against’ circulation patterns and walked on the Southern path, which was met with disapproving looks. If I were to continue studying the Tropical House and its users, it would be great to have ‘second set of eyes’ to get fresh new perspectives on the action of users and maybe reduce any implicit biases of mine. Additionally, implementing a video camera and a more routine schedule would allow me to collect data with fewer variables and room for error.



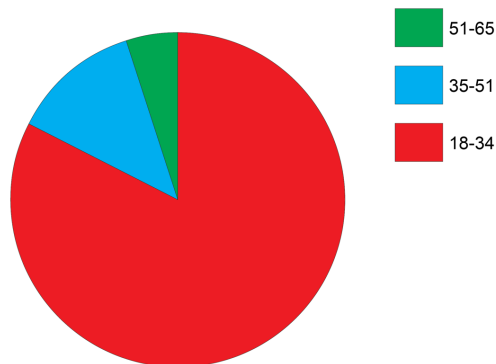
## Section E. Data Visualization



**Figures 1 and 2 (Left to Right)**

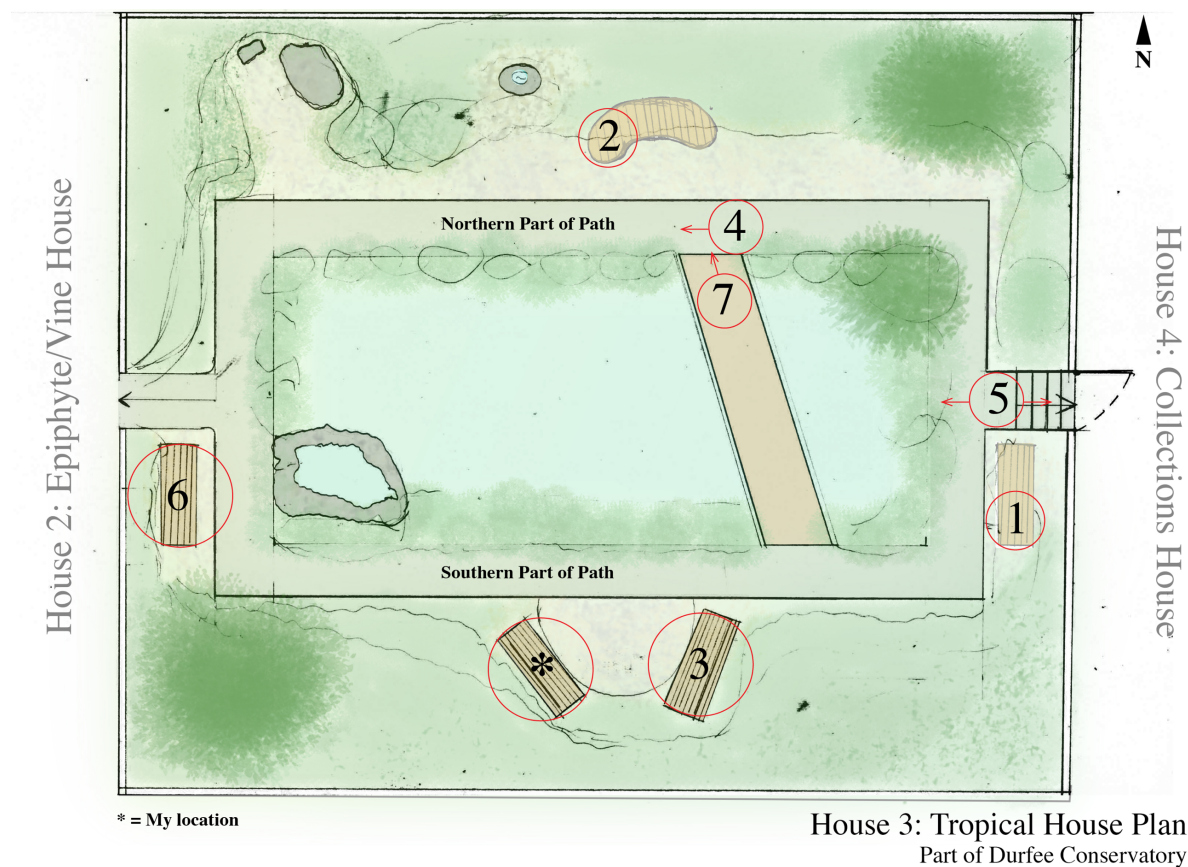
**Figure 1:** Caucasians were the largest ethnic demographic group

**Figure 2:** The male-to-female user ratio was nearly 1:1. Roughly are 54 percent are male. Females are more likely to spend more time in the Tropical House. Visually, none of the users appeared to be gender non-binary.



**Figure 3:** 18-34 year olds were more likely to be users of the Tropical House. One can speculate that students account for this result

**Section F. See Part 1 (Attached Pages) for Additional Field Notes**



**Map 6.** A circle with an arrow indicates people moving in a direction. A circle indicates stationary people. A larger ring indicates a larger territory claimed.

BEHAVIOR MAPPING - DATA COLLECTION FORM

LOCATION: Durfee Conservatory - House 3: Tropical House

OBSERVER: Maxwell Zaleski

TIME: 10:00 AM (Start time) to 10:35 AM (End time)

DATE: April 2nd, 2019

TEMPERATURE: 40°F (Outside), 70°F (In Tropical House)

[illegible]

## Self-Evaluation

Name Maxwell Zaleski

### Places that Matter...Or Not: Physical and Symbolic Boundaries of Inclusion and Exclusion

SustComm 205 Dynamics of Human Habitations Self-Evaluation Form

**Complete and turn in with your project (hard copy and online versions)**

<b>Map of location</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
Detailed	<b>X</b>		
People and activities are clearly represented	<b>X</b>		
<b>Field notes 1<sup>st</sup> and 2<sup>nd</sup> observations</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
Detailed observations of space use	<b>X</b>		
Detailed observations of people	<b>X</b>		
<b>Essay</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
Title	<b>X</b>		
Opening paragraph	<b>X</b>		
<b>Analysis</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
Description of location and observations	<b>X</b>		
Description of ground rules	<b>X</b>		
Use of class concepts	<b>X</b>		
<b>Interpretation</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
Explanation of the use of space	<b>X</b>		
Exploration of inclusion and exclusion	<b>X</b>		
Understanding & appropriate use of class concepts	<b>X</b>		
<b>Reflection</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
Reflection: Ability to self-critique your work	<b>X</b>		
<b>Structure, etc.</b>	<b>Very Good</b>	<b>Okay</b>	<b>Poor</b>
All parts of the project complete	<b>X</b>		
All formatting instructions followed	<b>X</b>		
Grade – What grade do you expect?	A 93% or greater		

I thoroughly enjoyed this project. It was the perfect excuse to go to Durfee Conservatory's Tropical House and de-stress, during these intense final weeks. One issue with the assignment was the confusing order of the deliverables (which contradicted each other). Other than this hiccup, the assignment was great!

### Table of Concepts Explored

Project	List Concepts Analyzed
Photo Essay	1. The Seven Behavioral Traces
	2. Incongruence and Congruence
	3. Values, Norms, Symbols, Mental Maps
	4. Placemaking and Placemaking
	5. Enculturation
	6. Servicescape
	7. Front stage and backstage
	8. Symbolic and Functional Meaning
	9. Proxemics and Territoriality
	10. Wayfinding, Districts, Landmarks
	11. Etiquette
	12. Order
	13. First Place, Second Place, Third Place
	14. Formal and Informal Learning Spaces
	15. Campus as a Whole
	16. Crowding
<b>Environmental Autobiography</b> ( <i>italic = concept from early in the semester</i> )	
Favorite Place	1. Domestic Design – Front Stage and Backstage
	2. Topoanalysis
	3. Gentrification
	4. Interdependence and Independence
	5. Legible Environment
	6. <i>Boundaries</i>
	7. <i>Values and Norms</i>
	8. <i>Built Environment</i>
	9. <i>Crowding</i>
	10. <i>Wayfinding and Landmarks</i>
	11. <i>Territory</i>
Place that I Dislike	1. Single Stories and Multistranded Stories
	2. Assimilation
	3. Implicit Bias
	4. Interdependence and independence
	5. Culture Clashes
	6. <i>Cultural Relativism</i>
	7. <i>Mental Maps of Reality</i>
	8. <i>Ethnocentrism</i>
	9. <i>Values and Norms</i>
<b>Places that Matter... or Not</b> ( <i>italic = concept from early in the semester</i> )	
Analysis of Built Environment	1. Pleasure Garden/Grounds
	2. Environmental Narrative
	3. Stressors
	4. Attention Restoration Theory
	5. Multisensory
	6. Props
	7. <i>Etiquette</i>
	8. <i>Individualism</i>
	9. <i>Privacy</i>
	10. <i>Nonverbal Communication</i>



Interpretation	1. Restorative Environment and Mental Fatigue
	2. Barren Views and Outdoor Views
	3. Physical Boundaries
	4. Captured Space
	5. Enacted Environment
	6. Participatory Design
	7. Ownership and Stewardship
	8. <i>Awareness</i>
	9. <i>Proxemics</i>

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- Cranz, G. (n.d.). *Changing Roles of Urban Parks: From Pleasure Garden to Open Space* [PDF]. Retrieved from [https://moodle.umass.edu/pluginfile.php/2554692/mod\\_resource/content/1/Cranz%20ChangingRolesUrbanParks.pdf](https://moodle.umass.edu/pluginfile.php/2554692/mod_resource/content/1/Cranz%20ChangingRolesUrbanParks.pdf)
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Rojas, J. (1993). The Enacted Environment of East Los Angeles [PDF]. *Places*, 8(3), 42-53.

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