A Look at Arboretum Visitors: Usage and Demographics

Washington Park Arboretum
Front-End Evaluation
New Directions Project
Spring 2010

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Executive Summary

The Washington Park Arboretum (WPA) in Seattle is a 230 acre expanse of land which abuts Lake Washington. Apart from the Japanese Garden, admission into the arboretum is free and access points into the park are numerous. As such, tracking visitorship is challenging. For this front-end study the focus was on visitors at the Graham Visitor Center entry point. This point-of-entry has the benefit of both a parking lot and an established facility, allowing for a large amount of visitor data to be collected in a relatively short amount of time. The goal of this study was to better understand who visits Washington Park Arboretum and to capture their self-generated reasons for visiting the arboretum. 125 visitors were surveyed during an eight-day period in May. The results of their surveys provide a demographic snapshot of WPA visitors, which the arboretum can use to make visitor-centered decisions, such as tailoring its programs. The research also serves to inform subsequent visitor studies at the arboretum.

Key findings:

- The vast majority of visitors surveyed had been to the arboretum before, though not necessarily in the last twelve months.

- 17.6% of visitors ethnically identified with a category other than Caucasian.

- 14.4% of survey participants said that part or all of their party was from out-of-state.

- To be in nature and to exercise were the two most frequent reasons given for visiting, followed by social reasons and the enjoyment of good weather.

- There was a significant increase in the number of visitors who identified picnicking as a reason for visiting over Mother's Day weekend.

- Slightly less than half of the visitors surveyed considered themselves birdwatchers.

- Over half of visitors surveyed reported studying plants for a hobby or profession.

- Visitors who reported studying plants for their hobby or profession were significantly more likely to indicate that they came to the arboretum to learn. However, the same percent of plant-studiers and non-studiers consider the WPA a place for others to learn.

- About a third of visitors surveyed came to the arboretum in a group of two. About a fifth of visitors came in a party of three people and another fifth visited alone.

- Over a third of surveyed visitors were part of an intergenerational group and almost three-fourths of intergenerational groups included children.

- Approximately a quarter of survey participants had children in their party.

- More than one in every ten survey participants visited the arboretum with a dog.

Introduction

The Washington Park Arboretum, a part of the University of Washington Botanic Gardens (UWBG), is a 230-acre arboretum housing over 10,000 individual plants and several world-class collections of genera, such as Japanese maples and mountain ash. The mission of UWBG is "*sustaining managed to natural ecosystems and the human spirit through plant research, display, and education*."

The arboretum is managed by two entities: the University of Washington, who owns and cares for the collection and operates all educational functions, and the City of Seattle, who owns the land and takes care of all infrastructure and lawns. The arboretum is a city park accessible from multiple entry points. There are three main parking lots and two restroom locations at the arboretum. The Graham Visitor Center (GVC), located at the north end of the arboretum, has both a parking lot and public restroom, and was selected as the data collection location. The GVC also has a front desk staffed by arboretum personnel, supplies arboretum guides and publications, provides a gift shop and conference facility, and houses arboretum staff offices.

The arboretum has not conducted a formal visitor study in recent years. Without site-specific data the "typical visitor" might be assumed to be white, above 40, female, and visiting to look at flowers or to use the space for recreation, in keeping with the general profile of audiences of arboreta and botanic gardens across the United States. Discovering if this generalization accurately reflects Washington Park Arboretum's visitorship will help the arboretum better understand and serve its visitors.

This front-end evaluation was conducted under the guidance of members of the *New Directions* faculty, in the Museology department at the University of Washington. *New Directions* is an IMLS funded project designed to train museum studies graduate students to understand, support and engage in audience research. A key component of the training is using museums as learning laboratories where students work with an institution to conduct audience research, under the guidance of evaluation mentors and support staff.

The goal of the evaluation study at the Washington Park Arboretum was to better understand arboretum visitors. The research questions this study attempted to answer were:

Who comes to the arboretum? (In terms of age, race, gender, and group composition.)
What do visitors identify as their reasons for coming to the arboretum?
What purpose do visitors feel the arboretum serves?

Literature Review

The Washington Park Arboretum has not recently engaged in formal visitor evaluation studies. Therefore, there is need for baseline data. Hayward, 1993, notes that when New York Botanical Garden instituted its first formal visitor evaluations they gained valuable information. For instance, staff thought 25-75% of visitors were first-time visitors, whereas data revealed this number to be 14%. This knowledge helped the garden tailor its services to its audience.

The general demographics of garden visitors are hard to define as a comprehensive study had not been performed in America. While international studies do exist, their results may not be applicable to American audiences. In Australia, a study of multiple public gardens found that visitors over age 60 composed only 13% of their audience (Ballantyne, Packer, Hughes, 2008), whereas in Great Britain, over 36% of garden visitors were over age 60 (Connell, 2004). Interestingly, both studies demonstrate that visitors to public gardens are, generally, similar to those who visit other museums or cultural institutions (educated, middle-class or higher, visited cultural institutions as children). However, their reasons for visiting gardens differ from their

reasons for visiting other museum institutions. Whereas these visitors generally go to museums in part for learning, these same people are more likely to go to gardens for relaxation or enjoyment (Ballantyne, Packer, Hughes, 2008).

Several American studies discuss further the reasons people visit gardens. A yearlong study at Chicago Botanic Gardens demonstrated that fewer young people visit than older people, and that the two populations come for different reasons (Hood and Roberts, 1994). Younger visitors were primarily there for enjoyment, to attend special events, and were more open to environmental messaging. Older people were more likely to be there to learn about plants, or take scheduled classes or tours, but were less open to environmental messaging. This study prompted the CBG to focus its limited resources on growing its young audience. A separate study at the Holden Arboretum in Ohio found that people were more likely to visit for festivals and events if they had children in their household. This study also touches on the importance of gardens as tourist destinations (Hood, 1993).

By gathering demographic and usage data from visitors at the Washington Park Arboretum, this study adds to the body of knowledge around arboretum visitorship in general. This study also aims to provide useful site-specific data to the arboretum.

Methods

This front-end evaluation was performed over 16 hours during an eight-day period in May 2010 (See Appendix A). Over the course of the study, 125 visitors completed the survey, which was administered by two researches. All data was collected at the Graham Visitor Center at the north end of the arboretum. This location was chosen as the data collection point due to the volume of visitors who utilize its parking, restrooms, maps, and information desk.

Subjects were considered eligible for the visitor study if they appeared over 18 years of age and were on the concrete area outside the visitor center. The sampling method was proximity. If multiple people were deemed eligible by the above criteria the researcher would approach the closest eligible visitor and invite the visitor to participate in a brief survey. Sixteen visitors declined to take the survey and one stopped halfway through. A total of 125 surveys were completed.

The front page of the survey instrument (See Appendix B) was administered as a face-to-face interview. The back page was then handed to the participant to complete. This was meant to minimize any discomfort felt in providing race or age information. Demographic information was collected purposefully, with the explicit intent of supplying baseline data to the arboretum as a means of understanding its visitor population.

The interview portion included three similar questions meant to elicit why visitors come to the arboretum and how they use the arboretum. The spacing of these three questions encouraged subjects to provide successively deeper responses. Following this series, visitors were asked, *"In your opinion, what are the most common reasons people come to the arboretum?"* The hope was that this question would allow the respondent to identify what purpose they feel the arboretum serves more broadly.

The back of the instrument, which was filled out by each individual participant, gathered demographic information such as age, race, and gender. There was also a spot for participants to indicate how many seniors, adults, and children were in their party. The final two questions, regarding birdwatching and plant studying/gardening were designed to get a small measure of the participant's interest level in plants and wildlife. They were placed at the end of the survey in an attempt to relieve any tension that might have been produced by revealing potentially

sensitive demographic information. These final two questions revealed interesting findings upon analysis.

After data collection, coding and analysis were performed. Inductive coding, based on the participants' self-generated responses, resulted in 18 categories. These 18 categories were clustered into six umbrella categories. The following diagram indicates the category divisions:

Inductive Coding Categories:

Outdoors	Nature	Any mention of plants, nature, flowers, gardens, or park setting. Example: azalea way
	Weather	Reference to the weather, or beautiful day.
	Exercise	Active use of the trails, canoeing, or biking. Ex: "Take a walk"
	Rejuvenation	Mention of a peaceful or relaxing feeling. Example: "A safe place"
	Non-Urban	Reference to being apart from the city. Ex: "It feels like the country"
Social	Relational	Reference to the visit as part of a social or family activity. Example: Mother's Day outing
	Picnic	Mention of having lunch outside or going picnicking.
Attraction	Destination	Reference to the arboretum as a tourist spot or local attraction. Example: Guests in town
	Convenience	Mention of accessibility or proximity. Example: "I live nearby"
	Event	Mention of an event related to the mission of the arboretum. Example: Bamboo Festival
Learning	Informal	Reference to studying, learning, or getting ideas. Example: "Looking for a tree to plant in our garden"
	Formal	Reference to classes or tours. Example: "I've seen a lot of school groups lately"
Hobby	Photography	Mention of taking photos.
	Animal Watching	Any mention of birds, animals, or wildlife. Example: "We saw an owl last time we were here"
Facility	Gift Shop	Explicit mention of shopping at the gift shop or plant sales.
	Event Space	Use of Visitor's Center for non-arboretum function. Ex: Conference
	Personal Needs	Reference to restrooms, water, or information gathering. Example: Here to see maps
	Other Facility Use	General mention of Visitor Center without specific usage information.

Results

Visitor Profile

- 65.6% of survey participants were female and 34.4% were male.
- 24% of survey participants were in their 60s or above. Figure 1 shows the age distribution of survey participants.
- Participants were encouraged to select as many categories as desired to accurately reflect their ethnic background. 17.6% of visitors ethnically identified with category other than Caucasian. Complete results can be found in Table 1.
- 14.4% of survey participants said that part or all of their party was from out-of-state.
- 44% of survey participants considered themselves birdwatchers.
- 60% of survey participants indicated they study plants for their hobby or profession.
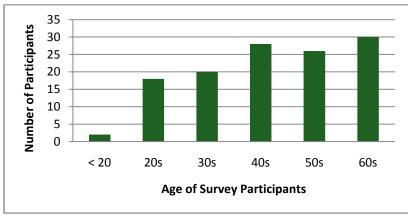

Figure 1: Age distribution of survey participants (n=124, 1 no response)

Table 1: Number of survey participants who identified with each ethnic background.

Number of Survey Participants (#)	Race/Ethnicity
111	White
3	Black/African American
3	Hispanic, Latino, or Spanish
4	American Indian or Alaskan Native
12	Asian or Pacific Islander
2	No Response

Group Composition

- The most common visitor group size was two with 32% of participants accompanied by one other person on their visit. Figure 2 shows the group size distribution.
- 12.8% of survey participants were accompanied by a dog.
- 24% of survey participants had at least one child in their party.

- 32.8% of survey participants were part of an intergenerational group. For the purposes of this study an intergenerational group is defined as a group composed of individuals from at least two of the three age categories listed on the survey. These categories were 'Seniors,' 'Adults,' and 'Children.'
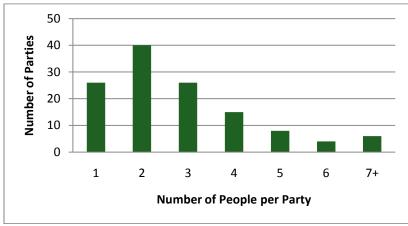- 73.2% of intergenerational groups included children.

Figure 2: Number of people in each visiting party.

Visitor Habits

- 84% of survey participants had visited Washington Park Arboretum before. Their self-reported frequency of visits in the last twelve months is displayed in Figure 3 below.
- In addition to frequency of visits, survey participants indicated if they had ever visited the Japanese Garden, Center for Urban Horticulture, Miller Horticulture Library, Union Bay Natural Area, or Foster Island. Table 2 shows those results.
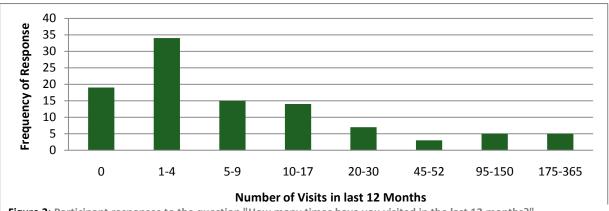

Figure 3: Participant responses to the question "How many times have you visited in the last 12 months?"

Table 2: Number of survey participants who indicated having visited related facilities.

Percent of Survey Participants (%)	Visited Sites
73.6	Japanese Garden
45.6	Center for Urban Horticulture
16.8	Miller Horticulture Library
37.6	Union Bay Natural Area
64.8	Foster Island

Visitor Use

• Participants were asked variations of a similar question three times in order to solicit their full range of reasons for visiting. The three questions were: *"Why did you choose to come to the arboretum today?" "What did or do you plan to do here today?" and "What was, or do you expect to be, the best part of your visit?"* The responses to these three questions revealed the visitor's 'self' usage of the arboretum.

• Additionally, one question asked visitors to consider why visitors other than themselves might visit the arboretum. Responses to the question "In your opinion, what are the most common reasons people come to the arboretum?" indicate the usage of 'others.'

•This survey method produced a large sum of open-ended information. Responses were coded into eighteen categories which were further grouped into six umbrella categories.

• Figure 4 shows the frequency of participant responses in each of the six umbrella categories (outdoors, social, attraction, learning, hobby, facility) generated from both the 'self' and 'other' questions.
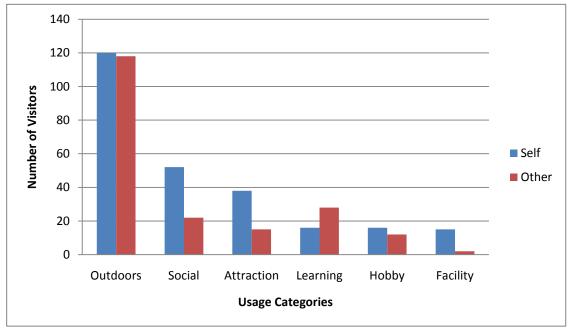

Figure 4: Frequency of visitor responses in each of the six umbrella usage categories. Note that visitors generated multiple responses and therefore are counted in multiple categories; however, no visitor is counted twice in any single category.

• Figures 5 and 6 give a broad picture of the umbrella categories and their sub-categories for both 'self' and 'other' responses.
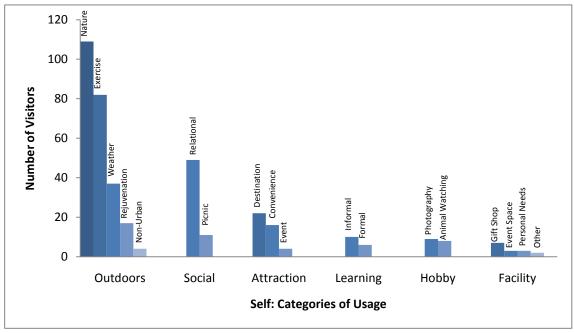

Figure 5: Visitor 'self' responses distributed by sub-category. Note that a single visitor may have responses in more than one sub-category within a single umbrella category.
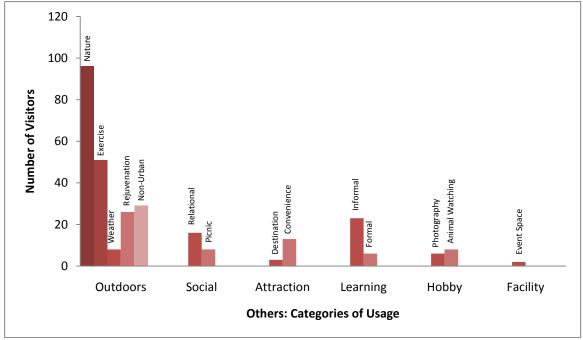

Figure 6: Visitor 'other' responses by sub-category. Note that a single visitor may have responses in more than one sub-category within a single umbrella category.

• Figures 7-12 provide a closer look at each sub-category in a display that allows for comparison between 'self' and 'other' responses.
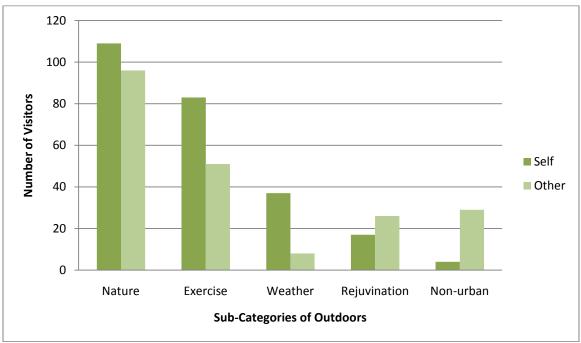
Figure 7: Number of visitor responses in the sub-categories within the umbrella 'Outdoor'

Figure 8: Number of visitor responses in the sub-categories within the umbrella 'Social'

Figure 9: Number of visitor responses in the sub-categories within the umbrella 'Attraction'

Figure 10: Number of visitor responses in the sub-categories within the umbrella 'Learning'

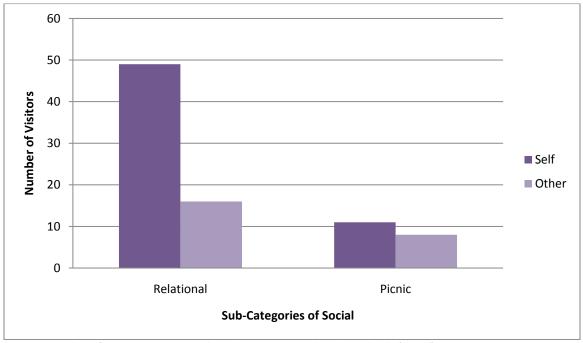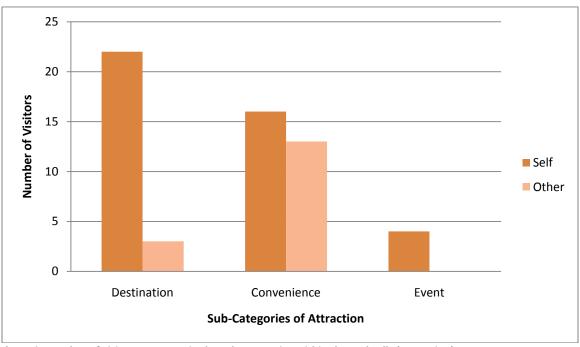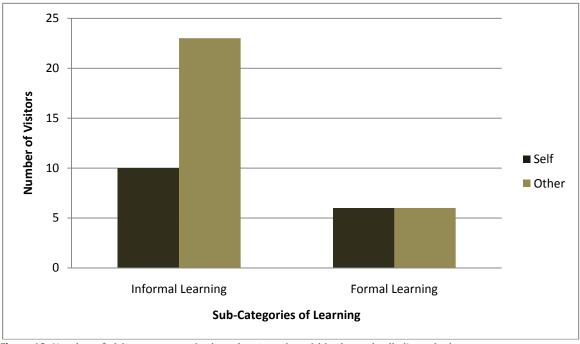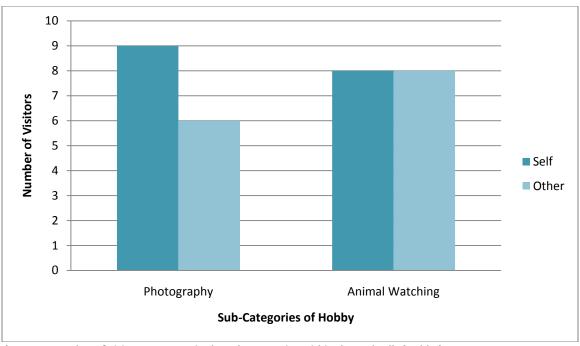**Figure 11:** Number of visitor responses in the sub-categories within the umbrella 'Hobby'
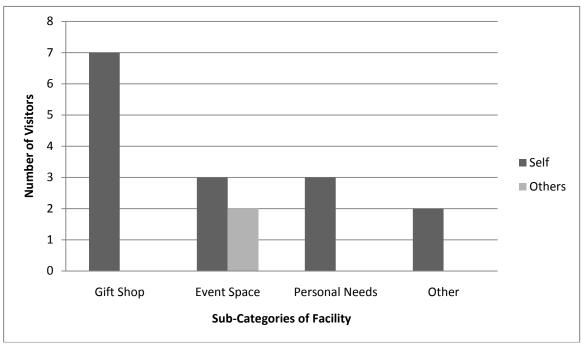

Figure 12: Number of visitor responses in the sub-categories within the umbrella 'Facility'

Analysis

- A Chi Square Test was used to determine significant differences between survey groups. There was a significant difference between the plant-studier and non-studier groups. There was also a significant difference between Mother's Day Weekend and non-Mother's Day weekend groups.

- Those who self-identified as plant-studiers were significantly more likely ($\chi^2 = 5.782$ p= 0.05) to designate the arboretum as a place they come to learn, as compared to non-studiers. No significance difference was found between plant-studier, and non-studier responses related to the learning of 'other' visitors.

- Chi Square test revealed a significant difference ($\chi^2 = 4.569$ p= 0.05) in the number of people who indicated picnicking as a reason for visiting over Mother's Day Weekend as compared to the other survey days. Since many of the data points come from weekdays, more weekend data points are needed to know if the Mother's Day Weekend picnicking was significantly different from other weekends in general

Discussion

Who comes to the arboretum?

84% of survey participants were repeat-visitors to the arboretum. The majority of participants also identified themselves as female, Caucasian, and 50 or older. Survey participants typically visited in small adult and family groups with approximately a quarter of those groups including at least one child. Additionally, about one in every ten survey participants were accompanied by a dog. When asked if they considered themselves birdwatchers, 44% of survey participants responded positively. Similarly, 60% of survey participants indicated they study plants for their hobby or profession.

What do visitors identify as their reasons for coming to the arboretum?

Eighteen response categories were derived from the usage reasons visitors provided. While arboretum uses were many, the most frequent reasons given for visiting the arboretum were to be in nature, to exercise, to socialize, and to enjoy good weather.

What purpose do visitors feel the arboretum serves?

While the usage reasons indicated by visitors hint at the purpose they feel the arboretum serves, the responses to the question *"In your opinion, what are the most common reasons people come to the arboretum?"* provide further insights. The frequency of three specific responses stands out. Many more people sited the arboretum as a place for rejuvenation, escape from an urban setting, and a location for learning when specifically prompted to think about others rather than themselves. Through Chi Square analysis the frequency difference between viewing the arboretum as a place for 'self' learning opposed to a place for 'others' to learn was not found to be statistically significant on its own.

However, those who reported studying plants as part of their hobby or profession were significantly more likely ($\chi^2 = 5.782$ p= 0.05) to designate the arboretum as a place where they come to learn, as compared to non-studiers. Plant-studiers and non-studiers alike equally consider the arboretum a place where *other* people can learn. This distinction accounts for the discrepancy in 'self' learning and 'others' learning best seen in Figure 10. The arboretum is perceived to be a place of learning by plant-studies and non-studiers alike, by those who use the arboretum as a place to learn, and those who do not.

Limitations:

- The relatively short surveying period does not provide a complete picture of the arboretum's year-round visitorship. Additionally, Mother's Day weekend fell within the data collection period. Mother's Day weekend is generally the busiest weekend of the year and may need to be analyzed as a separate set of data in the future.

- The Mother's Day findings, which indicate an increase in picnic visitors, are inconclusive without ample data from another weekend with which to compare.

- While Graham Visitor Center was deliberately chosen as the site for data collection, it is unlikely that surveys from a single arboretum entry-point accurately capture the full range of visitors and their motivations.

- Open-ended questions introduced some subjectivity when coding responses.

- The first three open-ended questions about why the respondent visited the arboretum may have affected how the visitors responded to the question about why other people visit the arboretum.

- Ages for the 'seniors,' 'adults,' and 'children' categories were undefined on the survey. As such there was some inconsistency in where survey participants categorized teenagers and those adults in their early 60s. Also, using these categories to identify intergenerational groups was restrictive.

- The question about modes of transportation did not provide information about the distance visitors traveled to get to the arboretum.

- In at least three circumstances, two individuals from the same visiting group separately participated in the survey, therefore confounding some of the visiting group data.

Conclusion

The goal of this research was to begin to better understand the people who visit the Washington Park arboretum, their intentions, activities, and perceptions. Through better understanding their audience, the arboretum can more effectively serve its visitors and reach new populations. While this study is by no means comprehensive, the findings provide baseline information for the arboretum to use when conducting future studies. For instance, the 18 "categories of use" could be a starting point for creating a more detailed instrument.

Audience research can inform institutional action. The survey data collected offers many avenues of action and suggests additional research areas, depending on the arboretum's goals. Group demographics, motivators, and interests could lead to new programs or help the arboretum evaluate its current offerings. Existing data, such as school program attendance, could be used in conjunction with this study's finding that a quarter of the arboretum's audience visits with children. Talking to special interest visitors, such as birdwatchers, photographers, dog-walkers, and joggers, could indicate the viability of a new program, such as a nature photography class.

It should not be forgotten that the overwhelming majority of visitors came to the arboretum for nature itself. This motivator further supports the arboretum's mission.

Acknowledgements

          Kaleen and Cynthia would like to thank Sarah Reichard of the UWBG, as well as other staff who were so helpful and courteous during the study. We would also like to thank Kris Morrissey, Nick Visscher, Katherine Owen, and Mary Jackson for their guidance and encouragement. Additionally, we would like to express our appreciation to *New Directions* and its partner institutions for the opportunity to design and implement an on-site evaluation study.

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Appendix A: Research Schedule

April 28 - Site Test to confirm methods

May 1 - Data collection 12:30-1:30pm (Cynthia)

May 3 - Data collection 12:00-2:00pm (Kaleen)

May 4 - Data collection 7:30-8:30am (Kaleen)

May 5 - Data collection 4:00-6:00pm (Cynthia)

May 6 - Data collection 10:00am-12:00pm (Cynthia)

May 7 - Data collection 2:00-4:00pm (Kaleen)

May 8 - Data collection 10:00-12:00am (Kaleen)

May 9 (Mother's Day) - Data Collection 10:30am-12:30pm (Kaleen)

                                - Data Collection 2:30-4:30pm (Cynthia)

Appendix B: Interview Instrument

Survey # _____   Visitor Study   Date _____
Initials _____   Time Block _____

Why did you choose to come to the arboretum today?

Have you visited the arboretum before?   Yes   No

　　　No: How did you know about the arboretum?

　　　Yes: How many times have you visited in the last 12 months?

What did, or do you, plan to do here today?

What was, or do you expect to be, the best part of your visit?

In your opinion, what are the most common reasons people come to the arboretum?

Have you ever visited any of these related facilities:
　　　　　　☐ Japanese Garden
　　　　　　☐ Center for Urban Horticulture
　　　　　　☐ Miller Horticulture Library
　　　　　　☐ Union Bay Natural Area
　　　　　　☐ Foster Island

Other notes:

These questions will help the arboretum better understand its audience. The information given is anonymous, all questions are voluntary, and you may stop at any time.

What mode of transportation did you use to get here today?

    ___ foot
    ___ bicycle
    ___ car
    ___ ferry
    ___ bus or other public transportation
    ___ other: _____

Please circle **your gender**:   Male   Female

Please circle **your age**:   20-29   30-39   40-49   50-59   60+

Please put a check next to the category for ethnicity/race/ancestry that best applies to you.
Feel free to check all that apply:

    ___White
    ___Black/African American
    ___Hispanic, Latino, or Spanish origin
    ___American Indian or Alaska Native
    ___Asian or Pacific Islander
    ___Other race or ethnicity: _____

Please indicate the **number of people** in your party (including yourself):

        Adults_____   Seniors_____   Children_____

Do you garden/study plants as a hobby or for your profession?   Yes   No

Do you consider yourself a birdwatcher?   Yes   No

Thank you for your time!