

To the Graduate Council:

I am submitting here within a thesis written by Andrew J. Pulte entitled “Survey of Public Garden Leaders.” I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Plant Sciences.

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Survey of Public Garden Leaders

A Thesis

Presented for the

Master of Science

Degree

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Andrew J. Pulte

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Dedication

This thesis is dedicated to Ralph Pulte who started me on this journey with plants.

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Abstract

Leadership and leadership development is an important topic facing those who lead and train people in the area of public horticulture. In the fall of 2007 an email survey consisting of 55 questions was sent to 448 executive directors of public gardens in the United States. This survey was divided into six major sections: demographics on each director's garden and their association with their garden; each directors view of leadership in their garden and in the field of public horticulture; each directors experience with, and their view on the importance of internships; leadership style; each directors level of confidence, and their views on the importance of different aspects of their job; general personal demographic information and each directors' comments.

Results from this study suggest current garden directors have an interest in furthering their own knowledge in the area of leadership. The results from this study also revealed leaders of public gardens in the U.S. lead using a participative style of leadership. This style of leadership fosters an environment where subordinates opinions are taken into consideration when making decisions. Respondents to this study also value experiences during college at a high level in regards to choosing their career path. This includes participation in hands-on work experiences such as internships. In conclusion, those who currently lead public gardens typically feel that the ability to communicate is the most important aspect of what they do. Unfortunately, this is also an area where current directors lack personal confidence and desire professional development.

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Chapter 1

Introduction to the Study

Public gardens are an important facet of American society providing an outlet for leisure activity, environmental education, and conservation of plant species. There are approximately 500 public gardens in the United States according to the American Public Garden Association. In March 2006, the American Association of Botanic Gardens and Arboreta was renamed the American Public Garden Association (APGA, 2007). Little is known about the education and leadership of the executive directors of public gardens. Such information would benefit the APGA which supports these institutions and the colleges and universities which prepare future leaders of public gardens.

Purpose/Focus of Study

This study surveyed leaders of public gardens in the United States to gain a better understanding of their educational background, career preparation and development, job confidence, and leadership. The names of executive administrators at public gardens who are members of APGA were used for this study. Information on their self-reported background, involvement in continuing education, and leadership style was assessed. This data was collected through a web-based survey.

This study will contribute to the current literature on public garden leaders in the United States. The University of Tennessee's Department of Plant Sciences currently offers educational and career preparation in the area of public garden operation and management. Better understanding of the current leaders in the public garden field will benefit educational institutions like The University of Tennessee as well as the APGA by giving them a clearer picture of who the leaders are as individuals. Hopefully, this clarity will lead to better preparation of future leaders. The APGA exists to serve and strengthen public gardens throughout North America by supporting and promoting their work, value and achievements in horticultural display, education, research and plant conservation (APGA, 2007).

Another aspect of this study was to understand what formal and informal educational experiences influenced current executive directors of public gardens. One component which was explored on a deeper level was undergraduate college internship programs. Many universities throughout the United States now require or strongly encourage their students to participate in hands-on educational internships. This survey assessed the impact of internships upon current leaders in the field as well as their current view on internship programs.

Several categories of job confidence and job importance were also measured in this study. Identifying job strengths and weaknesses as well as the importance of individual duties will help in the preparation of future leaders in the field. This information paired with educational background will create a better understanding of leaders in public gardens and how career preparation and development can be improved.

This study was initiated in the summer of 2006 and was completed in January of 2008. Study participants were selected from the APGA 2007 Directory of North American Gardens (APGA, 2007).

Hypotheses:

1. Top executives at many (over 50%) U.S. public gardens have educational backgrounds that do not always include horticulture or plant sciences.
2. Many (over 50%) top executives who participated in internship/educational programs at a U.S. public gardens as undergraduates are now leaders in similar institutions.
3. Top executives at many (over 50%) U.S. public gardens will lead using a participative style of leadership.

The first main hypothesis (1) states that many or over (50%) of top executives will have educational backgrounds that do not always include horticulture or plant science. The reasoning behind this is the thought that many institutions of public horticulture hire

those with varying backgrounds. Many gardens are now hiring individuals with backgrounds that focus more on development of the organization and fundraising. In this case a background in horticulture or plant science may not be needed.

The second main hypothesis (2) states that many or over (50%) of top executives who participated in internship/educational programs at a U.S. botanic garden or arboretum are now leaders in similar institutions. The reasoning behind this hypothesis stems from wanting to find out what impact, if any, these programs are having on who is leading public gardens in the U.S. It is beneficial to understand more about the impact these programs are having on the leaders in the field.

The third main hypothesis (3) states that many or over (50%) of U.S. public gardens will lead using a participative leadership style. Regardless of the size of an institution, it is possible that the type of leadership remains the same. This study will hopefully be used to show where improvements could be made in the area of leadership and leadership style in public gardens

Survey Objectives:

1. Determine the demographic characteristics of the executive directors from public gardens in the U.S.
2. Determine if executive directors at U.S. public gardens were developed into leaders within or out of the field of public horticulture.
3. Determine the percentage of executive directors from U.S. public gardens who participated in college internship/hands-on educational programs.
4. Determine the value placed on horticultural college internship programs by executive directors who participated in similar programs.
5. Determine the confidence level of executive directors in different aspects of their job.
6. Determine the leadership style of executive directors at U.S. public gardens.
7. Ascertain shortcomings in current career education and development in the field

The first objective of this study was to determine general demographic data on the executive directors at many US botanical gardens and arboreta (Objective 1). This will provide important information on who the leaders are in the field. We would then like to determine the educational background of current executive directors and if they participated in a horticultural internship program (Objectives 2, 3). Within the area of internships we would like to know how much value is placed on personal intern experiences as well as how much value they place on similar programs at their garden or arboretum (Objective 4). Something else that goes with the basic question of “who are our leaders?” and their educational background is their confidence level in different areas of their job (Objective 5). This will be determined by their answers to questions that ask them to reveal their confidence level on several different facets of their job. The same questions will then be repeated replacing confidence with importance. This allows us to determine not just how confident respondents are but how important different aspects of their job are.

Again, one of the main areas of focus for this study is the leadership styles of the single top administrators of public gardens (Objective 6). In an effort to understand the leaders in the field better, several situational questions will be asked that deal with their leadership style. These questions were developed by Dr. Andrew J. DuBrin, a researcher, professor, and respected author in the area of leadership at the Rochester Institute of Technology and are based on the previous work of Robert Tennenbaum and Warren H. Schmidt (DuBrin, 2001). From the analysis of these answers, a clearer picture of the leaders can be drawn. Knowing if one style of leadership dominates leaders in the field will help us better train students for the field as well as make us more aware of where we may need to increase training for our current leaders. The last objective of this study is to ascertain shortcomings in career development in the field (Objective 7). This will help us understand how we can better prepare our future leaders in the field.

Theoretical Rationale

Theory regarding the individual leaders in the area of public gardens is currently non-existent. Likewise, theory regarding individual leaders in similar disciplines such as museum studies is also non-existent. Those who study leadership and leadership theory are found in a wide range of disciplines including business, sociology, and psychology. We can look to some of these disciplines to find a lens to look through for this study. As stated earlier, a large portion of this study looked at different leadership styles. Kurt Lewin and Ronald Lippitt, the original researchers in this area, theorized there was more originality, group-mindedness and friendliness in democratic groups. They also noticed that there was more aggression, hostility and discontent in free-rein and autocratic groups (Reid 1981). Lewin concludes that the difference in behavior in autocratic, democratic and free-rein situations is not fully the result of individual differences (Reid 1981). This portion of the study was not done to determine which leadership style is best; it was done to help us learn more about those who lead public gardens.

Again, it is important to note that this study is not focusing on what leadership style is the best for those leading public gardens or arboretums. However, this is an area where much of the theory on leadership style is found. Fiedler's Contingency Theory of Leadership (Fiedler, 1967) explains that group performance is a result of the interaction between two factors. These factors are known as leadership style and situational favorableness. The first major factor in Fiedler's theory, leadership style, is the consistent system of interaction that takes place between a leader and work group. Fiedler concludes an individual's leadership style depends primarily upon the individual leader's personality and is fixed. (Fiedler, 1967; Bedeian and Gleuck 1983). According to Fiedler, the success of a leader is determined by the level of positive match between a dominant trait of the leader and how favorable of a situation the leader is in (Fiedler, 1967, Dunham, 1984). The second major factor in Fiedler's theory is known as situational favorableness. This is sometimes referred to as an environmental variable. Often this is defined as the extent a situation enables a leader to exert authority or influence over a group. Fiedler then extends his study by highlighting three key situational factors, which are leader-member, task structure and position power.

Fielder used a scale known as the least-preferred coworker (LPC) scale. The LPC scale asks a leader to think of all the persons with whom he or she has ever worked, and then to describe the one person with whom he or she worked with the least well. This person can be someone from the past or someone he or she is currently working with. From a scale of 1 through 8, leaders are asked to describe this person on a series of bipolar scales such as:

Unfriendly 1 2 3 4 5 6 7 8 Friendly
Uncooperative 1 2 3 4 5 6 7 8 Cooperative
Hostile 1 2 3 4 5 6 7 8 Supportive
Guarded 1 2 3 4 5 6 7 8 Open

The responses to these scales (usually sixteen in total) are summed and averaged: a high LPC score suggests the leader has a human relations orientation, while a low LPC score indicates a task orientation. Fiedler's logic is that individuals who rate their least preferred coworker in relatively complimentary light on these scales derive contentment out of interpersonal relationship; those who rate the coworker in a relatively harsh or unfavorable ways get contentment out of successful task performance (Gray and Starke, 1988). This method reveals an individual's emotional reaction to people with whom he or she cannot work well. It is also stressed that it is not always an accurate measurement. According to Fiedler, the effectiveness of a leader is determined by the degree of match between a dominant trait of the leader and the favorableness of the situation for the leader.

Chapter 2

Review of Literature

Introduction

The concept that leaders are made and not born is generally accepted by experts on the principals of leadership. Those who wish to lead can become leaders through development of their own leadership skills (Burke and Socolofsky, 2005). Public gardens top leaders have an opportunity to cast vision for their organization and inspire others to greater levels of accomplishments. Leaders influence others to accomplish aspects of their vision through their own attributes of ethics, character, skills, and knowledge (DeVader et al., 1986)

This study will be done to further our knowledge of the current individuals who lead public gardens. Through data obtained from survey participants, a clearer picture of leaders in public gardens will be obtained. Through the use of a survey instrument the single top administrator of many public gardens will be identified and surveyed. Demographic information will be gathered to determine the characteristics of current top administrators of public gardens. This information is critical to determine from where the top administrators and leaders of U.S. public gardens are coming. Without this information those who strive to lead public gardens have no information to draw on in their own career aspirations.

Within the survey each administrator will be asked about their educational experiences including if they participated in a horticultural internship program. It is a secondary goal of this research to see what impact these experiences had on their continued interest in the field of public gardens operations and management. Those who did not have particular educational experiences or did not participate in certain programs will be able to skip questions regarding these topics.

Gathering information on executives from public gardens and where they are coming from is beneficial to all those striving for a better understanding of leadership roles at botanical gardens and arboreta. As public gardens strive to be better, it is

important to understand who the leaders are and the role of leadership in their institutions.

A review of literature concerning institutions that are considered similar to public gardens such as museums, zoos and aquaria was also conducted. Personal contact with organizations such as the Association of Art Museum Directors and the Association of Zoos and Aquariums confirmed that these institutions also lack similar knowledge concerning their leaders. This study could be replicated in these institutions in the future.

Public Gardens

Public Gardens by definition are gardens that are open and accessible to the public (The Columbia Electronic Encyclopedia, 2007). The majority of these gardens are classified as either botanic gardens or arboreta. For instance, many zoos, cemeteries, museums, city parks, and libraries, though not initially known for their landscapes, are members of the American Public Garden Association, and encourage public visitation and enjoyment of their grounds. Even in situations where an organization's main focus may not be botanical or horticultural, they will often consider themselves botanic gardens or arboreta. Examples include Mount Hope Cemetery in North Attleborough, Mass., and the North Carolina Zoological Park in Asheboro, NC, both listed in the membership directory of APGA.

An exact definition of a botanic garden can be hard to develop. A botanic garden is considered a garden that exhibits plants often with greenhouses for the culture, study, and exhibition of special plants (Merriam-Webster Online Dictionary, 2007). However, there are hundreds of botanic gardens in the United States all with different missions, visions, and ideas of what they are. Many botanic gardens have diverse functions. Some functions include educational programs for children and adults, plant breeding, living collections management, management of botanical libraries and herbariums, plant exploration and collection from around the world, and the display of proper horticultural techniques (The Columbia Electronic Encyclopedia, 2007).

Arboretums fall under the category of botanical garden or public garden with the distinction of being devoted primarily to the growing of woody plants (The Columbia

Electronic Encyclopedia, 2007). Arbor, from the Latin “plantation of trees,” is the root of the word arboretum. Merriam-Webster Dictionary (2007) defines an arboretum as a place where trees, shrubs, and herbaceous plants are cultivated for scientific and educational purposes. Based upon these definitions, arboreta are appropriate for inclusion in this study.

The Discipline of Public Horticulture

Public horticulture is a growing area of horticulture that places an emphasis on people, their education, interaction and enjoyment of plants (Hamilton, 1999). Those who work for public gardens throughout the United States are considered to be in the field of public horticulture. The institutions that employ public horticulture professionals such as botanic gardens and arboreta are widely considered museums. Just as an art museum has a collection of paintings, sculptures, and other art work, a public horticulture facility has a collection of plants. The only difference between the two is that a garden or arboretum has a living collection (Altman, et al., 2005).

Organizational Structure within Public Gardens

“Successful for-profit and nonprofit organizations share the same fundamental characteristics, starting with a sense of purpose and commitment to maximum positive impact (Hamilton, 2005).” All U.S. botanic gardens and arboreta function as either nonprofit or for-profit institutions. For those that are for-profit entities, many run and are structured like any other for-profit business. However, a large number of botanic gardens and arboreta are nonprofit organizations. The organizational structure of these horticultural institutions is often patterned after other nonprofit entities, which relies on a board of directors.

Internships

An internship, by definition, is a supervised practical experience (Webster’s Unabridged Dictionary of the English Language, 1998). This means an internship is not a job; it is a learning experience that is structured to educate students (Inkster and Ross,

1998). Universities currently require or recommend a student complete an internship as part of their degree requirement (Wipf, 2000). Internships help students to acquire real-world, hands-on experience that puts classroom work into action (Davis and Williams, 2004).

One way leadership can be developed is through knowledge in one's field. For undergraduate students in the area of public horticulture an internship in their field is an opportunity for them to gain supervised practical experience. These students also get the opportunity to interact with leaders in the world of public horticulture. With more internships being demanded by universities and colleges, it is more important than ever that public gardens and arboreta provide meaningful and educational internship experiences. (Weppner, 2000).

In 2005, more than 119 gardens and arboreta advertised for over 700 individual internship positions through the American Association of Botanical Gardens and Arboreta internship directory (AABGA, 2005). This number has been on the increase for many years and demonstrates the continued, increasing importance internships play for both students and horticultural institutions (Weppner, 2000).

Currently, the literature concerning evaluation of learning during internships is poor but increasing. There has been no evaluation of current leaders in public horticulture to determine what impact, if any, an undergraduate college internship program or other work experience had on their career. Today, only a small amount of literature exists on interns at public gardens or arboreta. Much of previous research on this topic has been focused on a broader range concerning the fields of horticulture and agriculture. Weppner (2000), however, completed a thesis on Learning During Summer Internship Programs at Public Gardens which dealt primarily with what skills were learned during an internship at a public garden. Other literature on the topic of internships include an article on preparation for horticultural internships by Davis and Williams (2004), Layton (1995) and Wipf (2000) discussed the benefits of floriculture internships, and Vincent (1995) discussed the value of work experiences, in general, in agriculture science curricula. Each concludes that internships benefit students by allowing them the opportunity to gain real-life hands-on experience.

Some internship research shows that many students report internship programs help clarify future options and career choices. They can also serve as a catalyst to boost self-confidence. Another positive effect of an internship program is an increase in a student's understanding of job or employment responsibilities (Vincent, 1995).

One purpose of this study was to identify if top administrators at leading US botanical gardens and arboreta participated in a public horticulture internship program(s) as undergraduates. Also, of those administrators that did participate in public horticulture internships as undergraduates, what effect, if any, did it have on their choice to continue with public horticulture as a career. In essence, this portion of research is to determine if alumni of undergraduate college level public horticulture internships are now leaders in similar institutions. No longitudinal study has been done to inform us of the long-term impact of such internships on student's career choice or career path.

Leadership

“The ability to inspire confidence and support among the people who are needed to achieve organizational goals” (Dubrin, 2001) is a common way of defining what leadership is. However, different people across many different cultures and generations have differences in how they define leadership. Leadership in various forms occurs universally in all cultures (Bass, 1978). Discussions on the subject of leadership can be found within the Chinese classics, writings of ancient Egyptians and in the texts of the classic era (Bass, 1978). In Plato's *Republic* he offered three types of leaders: (1) the philosopher-statesman to rule the republic with reason and justice (2) the military commander to defend the state and enforce its will; and (3) the businessman to provide for citizens' material needs and satisfy their lower appetites. This was one of the first attempts at leadership theory (Bass, 1978).

The field of leadership is a broad one and the topic of leadership has always held a strong fascination for all people (Fiedler, 1967). The literature on leadership abounds with discussion on every possible area of leadership. This includes but is not limited to homilies on leadership effectiveness, gender role in leadership, successful leadership, classification of leaders, or the general meaning of leadership.

This study focused solely on the areas of leadership style. This was chosen due to the potential benefit of knowing the leadership styles of those who are leading public gardens. Knowing if one style of leadership dominates leaders in the field will help us better train students for the field as well as make us more aware of where we may need to increase training for our current leaders. In any field, if there is a known style of leadership that is dominant, it would make sense to know both the benefits and downside of that particular style of leadership.

Leadership Style

In the late 1930's, Lewin and Lippitt conducted early studies which defined leadership styles. From their study of Boy Scout Leaders, Lewin and Lippitt (1938) suggested leadership behavior could be classified by the way leaders allowed or restricted decision making by subordinates. Later research extended these ideas to include leadership structure, leadership consideration, and employee-centered versus work-centered leadership. In 1939, Lewin continued his work with leadership decision experiments that identified three distinct styles of leadership: autocratic, participative, and free-rein (Bass, 1978).

In 1967 Likert published his findings in *The Human Organization: Its Management and Value*. His ideas were primarily from problems and successful practices he observed in the business world. He believed that other businesses or institutions, such as schools, labor unions, and professional and voluntary organizations would have little difficulty in applying the general principles of his theory. Likert's research distinguished between four types of leader behavior or styles: (1) System 1: 'exploitative authoritative'; (2) System 2: 'benevolent authoritative'; (3) System 3: 'consultative'; and (4) System 4: 'participative group'. This research is valuable because it focused on how leadership can be categorized. These studies by Likert and Lewin work provide the building blocks for later research on leadership styles (Likert 1967).

The leadership style survey questions used in this study were based upon the studies of Tannenbaum and Schmidt (1973). Their leadership research ranges from the late 1950's to the mid-1970's. They advised managers how to choose a leadership pattern

from among a range of leadership behaviors (Tennenbaum and Schmidt 1973). The behaviors they chose characterized different leadership styles. Tennenbaum and Schmidt developed a continuum of leadership behavior that has three specific anchor points along a continuum: autocratic leadership style, participative style, and free-rein style. This continuum and research was built off of Lewin and Lippitt's earlier work (Tennenbaum and Schmidt 1973).

Autocratic leaders tend to retain authority for themselves. An autocratic leader tends to make decisions confidently and assume their subordinates will comply. These leaders tend to be less concerned with the attitudes of their subordinates toward their decisions. The majority of autocratic leaders are considered task-oriented because of the emphasis they place on results and accomplishing tasks. A typical autocratic behavior would include being assertive, instructing others, and focusing on being a model of behavior for others (Byrne 1998).

Participative leadership encompasses those leaders who share decision making with group members. This style of leadership could also be sub-characterized into three subtypes: consultative, consensus, and democratic. A consultative leader likes to make the final decision on issues but consults with their subordinates or group members. A consensus leader tends to not think a decision is final until all members of their team or group members reach a consensus. They will often encourage group discussion on issues and want input from everyone who will be affected by the decision. The democratic leaders confer final authority on the group. They tend to function as collectors of group opinion and will ask for a vote before making a decision. The democratic form of leadership can be easily confused with the third main leadership style, free-rein (Dubrin 2001).

Those who are free-rein leaders turn over virtually all authority and control to their subordinates. It is not surprising that this style is also known as *laissez-faire* which is a French term meaning "let them do." This style leader provides their subordinates or group members leadership indirectly rather than directly. Subordinates are presented a task to perform and are given free rein to figure out how the task should be best performed or completed. Normally with this style the leader does not get involved in a

task unless a request is made. In short, the free-rein leader delegates completely, only requiring subordinates to not violate policy (Tennenbaum & Schmidt 1973).

Summary and Evaluation of Literature Review

The overall evaluation of the public garden leadership literature shows a literature base that is non-existent. While much is known about the technical aspects of the field, little is known about the individuals who hold leadership roles within the field. The literature lacks studies focusing on leadership in the area of public gardens or any other area of the discipline. A review of similar fields also finds a void on whom is moving their organization toward the future.

In contrast, the research regarding the general area of leadership and in particular, leadership style is fairly rich in content. Research has been conducted since the late 1930's on the topic and the literature continues to grow and be built upon. The literature shows several inconsistencies regarding the most effective leadership style, however, there is relative consistence in the area of classification of leadership style.

Chapter 3

Methods

Type of Survey

In the fall of 2007, the University of Tennessee conducted a web survey of all of the top administrators from public gardens in the United States. The web survey sent to these individuals was used to gather information on general demographics, educational experiences and leadership style.

Participants/Population

The population for this survey was limited to the single top administrator, usually the executive director, at all U.S. botanical gardens and arboreta. Requirements for selected participants will be that they are the single top administrator from any U.S. botanic gardens or arboreta listed by the APGA membership directory. This includes gardens both for and not-for-profit, government, and state run facilities, such as university gardens. APGA staff update these records yearly.

Sampling Frame

The primary way names of garden directors were obtained for use in this study was a complete list of contacts provided by the APGA directly to the researcher. This list was sent as a Microsoft® Excel spreadsheet and contained a total of 492 names. Of the 492 names provided, 448 were found to contain current working email addresses from gardens that fit the criteria for this study. The APGA's yearly publication "Gardens of North America" was also used as a resource to locate participants for this research study. This publication also lists each garden or arboretum primary contact who is the single top administrator at that institution.

Sample and Sampling Procedures

The estimated population of top administrator in all botanic gardens and arboreta is the APGA's membership was 492. Of the 492 in the membership of the APGA, 448 were eligible to participate in this study based on the criteria of being a director of a garden in the United States.

Survey Design, Construction, Testing, and Summary Description of Final Instrumentation

A survey titled "Survey of Public Garden Leaders" was developed by Andrew Pulte a researcher at the University of Tennessee. This survey was available to be taken by participants in a web-based format.

All of the survey questions were either nominal or ordinal (Likert-type) in scale except those questions that ask for respondents' comments or to fill in a piece of information. Before the final survey was sent out, a focus group was conducted to find reactions to the general layout and questions contained within the survey. A preliminary test was also done on the instrument used to determine leadership style of participants. Several individuals participated in a preliminary test of the leadership style instrument and responded to the accuracy of their results. The instrument used to assess leadership style developed by Andrew DuBrin was found to be accurate by those who were tested.

Survey Administration and Implementation

The "Survey of Public Garden Leaders" was first emailed on October 30, 2007 and completed in January of 2008. Consent for participation in the survey was indicated by completing the survey. To encourage high response rates, the researcher followed a modification of the Dillman method for survey mailings in a web-based format (Dillman, 1978; Salant and Dillman, 1994). On October 30, 2007, a notification letter was emailed to all 448 potential participants, notifying them why and how they were selected for this study (Appendix A-1). A link to the survey instrument (Appendix A-2), was also imbedded in the first email. An email reminder was sent to the participants on November 6, 2007, reminding those who have not yet responded and thanking those respondents

who had completed their survey (Appendix A-3). A second reminder (third email) containing a link to the survey was sent on November 12, 2007 (Appendix A-4). The final email (November 27, 2007), consisting of a link to the survey, along with a revised cover letter (Appendix A-5), went to all participants who had not yet returned the survey.

Data Analysis

Results from this survey were entered into and analyzed using SPSS 15.0 for Windows. Descriptive statistics were performed on the response variables, including means, medians, modes, standard deviations, minimum and maximum values, and frequency distributions. Qualitative information was divided into consistent themes, based on the frequency in which they were reported.

Chapter 4

Journal Manuscript

This chapter was written with the intention of being published in a horticulture research journal. My primary contributions to this paper include (1) selection of the topic, (2) identification of the study areas and research questions, (3) development and implementation of the survey instrument, (4) survey sampling and analysis, (5) gathering and interpretation of literature, (5) combining the contributions into a single paper, and (6) the majority of writing.

Abstract

Leadership and leadership development is an important topic facing those who lead and train people in the area of public horticulture. In the fall of 2007 an email survey consisting of 55 questions was sent to 448 executive directors of public gardens in the United States. This survey was divided into six major sections: demographics on each director's garden and their association with their garden; each directors view of leadership in their garden and in the field of public horticulture; each directors experience with, and their view on the importance of internships; leadership style; each directors level of confidence, and their views on the importance of different aspects of their job; general personal demographic information and each directors' comments.

Results from this study suggest current garden directors have an interest in furthering their own knowledge in the area of leadership. The results from this study also revealed leaders of public gardens in the U.S. lead using a participative style of leadership. This style of leadership fosters an environment where subordinates opinions are taken into consideration when making decisions. Respondents to this study also value experiences during college at a high level in regards to choosing their career path. This includes participation in hands-on work experiences such as internships. In conclusion, those who currently lead public gardens typically feel that the ability to communicate is

the most important aspect of what they do. Unfortunately, this is also an area where current directors lack personal confidence and desire professional development.

Introduction

Gardening is consistently ranked as one of the top leisure activities for Americans. Public gardens are places where those who take pleasure in plants and gardening go to enjoy aesthetic beauty and get new gardening ideas. Different public gardens have many diverse functions; some of these include educational programs for children and adults, plant breeding, living collections management, management of botanical libraries and herbariums, plant exploration and collection from around the world, and the display of proper horticultural techniques (The Columbia Electronic Encyclopedia, 2007). The objective of this study was to learn more about who executive directors of public gardens are, this includes the style they use to lead their organization. Hopefully, this will lead to better education and preparation of future leaders in public gardens. This study directly benefits the APGA as well as universities who prepare future leaders for positions at public gardens. This research helps both the APGA and universities who teach in the area of public gardens by equipping them with information on what should be emphasized in secondary and continuing education, as well as partial information on the career path many current leaders took to reach their current position.

Materials and Methods

A survey titled “Survey of Public Garden Leaders” was developed by Andrew Pulte a researcher at The University of Tennessee (Appendix A-2). The survey consisted of 55 questions and was divided into six major sections: demographics on each director’s garden and their association with their garden; each director’s view of leadership in their garden and in the field of public horticulture; each director’s experience with, and their view on the importance of internships; leadership style; each director’s level of job confidence, and their view of importance of different aspects of their job; general personal demographic information and each director’s comments.

Implementation

The population for this survey was all of the single top administrators of U.S. public gardens who are members of the American Public Garden Association (APGA). Typically, these individuals are known as the director or executive director of their organization. Study participants were selected from the membership records of the APGA. All public gardens with membership in APGA that are geographically located in the U.S. had the opportunity to participate. This population included gardens of all sizes and types including botanic gardens, arboretums, and university gardens. The survey was implemented during the fall of 2007. Consent for participation was indicated by completing the internet-based survey. A modified version of the Dillman method was followed for the order of each email sent to participants (Dillman, 1978; Salant and Dillman, 1994). Participants were emailed four different emails between the dates of 10/30/2007 and 11/27/2007 asking for their participation in the study. Of the 492 names and emails provided by the APGA, 448 names and emails were found to be eligible for participation in the study. Out of the 448 participants, 208 surveys were returned before the cut off date of 01/17/2008, for a response rate of 46.43%.

Data Analysis

The data was analyzed using the Statistical Package for the Social Sciences (SPSS, 15.0). Descriptive statistics were performed on the response variables to summarize the responses of garden directors. Analysis of qualitative responses summarized the experiences and ideas of garden directors (Hatch, 2002). Much of the qualitative analysis was performed by using SPSS Text Analysis for Surveys 2.1.

Results

The results for this research are presented in the following sections. Research questions are paired with corresponding results.

What are the descriptive characteristics of the executive directors from public gardens in the U.S.?

Of the 208 respondents to the survey 58% (121) were male and 41% (84) were female. One percent (3) of respondents chose not to report on their gender. In the last 10 years, there had been an equal balance of men and women who had become the director of their garden. The average respondent was 53 years old. This places the average respondent in what is typically referred to as the Baby Boom Generation (Born 1946-1964). When asked to describe the highest level of education they completed 0.5% (1) of respondents reported having an education of eight years or less, and 1.6% (3) said their highest level of education was high school or high school equivocally. Of all respondents 4% (9) said they had completed “some college” and 3% (6) reported having an associates degree. Bachelor degrees were held by 29% (61) of respondents, 43% (88) had masters degrees and 19% (39) had received doctoral degrees.

When asked about numbers of siblings, answers ranged from 0 to 20. The average respondent has 2.75 siblings. Of those who reported, the majority were first born in their family (41%), followed by middle children (35%), youngest (21%) and then only children (1%). A likely profile of a respondent to this survey would be a 53 year-old, male, with at least a masters degree who happened to be one of the first two siblings born in his family.

Have executive directors of U.S. public gardens been developed into leaders within or out of the field of public horticulture?

The educational background of the executive directors of U.S. public gardens is varied. Each director was asked to report on their formal education. Of all respondents, 39 reported having obtained a PhD, 18 of which were in horticulture or plant science. Seven of the respondents had PhD's in botany and five had PhD's in biology. The remainder of the PhD holding respondents had degrees in other areas not as closely

related to horticulture or plant science. Two of these respondents held a Ph.D. in education.

Of all respondents, over 50% held a minimum of a masters degree. The majority of these degrees (53) were held in the area of horticulture or plant science. Ten respondents reported having a masters in botany and five had a masters in biology. Eight respondents had their masters in ecology and four had their MBA. The remainder of the respondents included three masters of education, 19 degrees in a variety of other disciplines, and five respondents who had reported having a masters degree but did not specify a discipline.

A large percentage of respondents reported having an undergraduate degree (86%). Seventy seven of the respondents had degrees in horticulture or related disciplines such as plant science or landscape design. A large percentage of respondents had degrees in either biology or botany with 24 indicating a degree in biology and 13 reporting a degree in botany. There were eight respondents with forestry degrees and six who held degrees in various areas of ecology. Fifty-four respondents had degree areas that did not fit into any of the above categories. Of all 54 of these individuals, psychology had the largest representation with six respondents.

Looking at the educational background of respondents, it is concluded the majority of them have a background that includes at least one degree within the natural sciences relating to plants, horticulture or biology. This is contrary to the researcher's original hypotheses that over 50% of current garden directors would not have a background in horticulture or a related field.

What percentage of executive directors from U.S. public gardens participated in college internship/hands-on educational programs?

When asked if they had ever participated in a formal or informal internship of any kind at a public garden or arboretum, 21% (44) of respondents indicated they had. Of the 44 respondents who have done public garden internships 30% (13) of respondents had done more than one internship; all but four of these internships were done in the U.S. Of

those respondents reporting they had not done an internship at a public garden, 26% (54) reported an internship of other kinds not specifically at a public garden or arboretum.

As part of the survey each respondent was asked to indicate the current budget of their garden. This allowed the researcher to classify respondents' institution as small, medium, or large. Gardens with an annual budget of over \$2 million dollars was considered a large garden, a budget of \$1 – \$2 million was considered a medium sized garden and those with budgets under \$1 million were classified as small gardens.

Respondents were also asked to report the name of the garden where they did their internship(s). These institutions were also classified as small, medium or large after surveys were collected by information provided by the APGA. Based on this information, descriptive data was compiled on the information. Of all respondents who did an internship at a public garden, 41% are now directors of gardens of equal size. Of the remaining respondents, 41.5% are now working in smaller gardens, and 17% are working in gardens larger than where they interned.

A hypothesis of the researcher was that garden directors would now be leaders of similar institutions to where they interned. In some cases this is true, with 41% of those who did internships at a public garden now leading similar size institutions. However, slightly over 41% of those who did internships are now leading smaller institutions. There are many factors to consider with this data including the fact that larger gardens tend to have more internships available. From the information collected, it is concluded that as a director, you are least likely to move from doing an internship at a small garden, to directing a larger garden than where you interned.

How much value do executive directors place on internship programs?

Survey questions explored the value directors placed on their personal internship experiences as well as the value they placed on their garden's internship program. One question directors were asked was how influential their internship experience was in determining their current career. Of the 98 respondents who had done a variety of different internships 50%, reported their experience was very or extremely influential in

determining their current career. Previous literature on internships reports hands-on career training such as internships help focus students career path (Vincent, 1995).

Respondents were also asked if their current institution had an internship program and how important it was for them to provide internship experiences to individuals. Fifty seven percent (119) of participants reported having an internship program. On a scale ranging from 1 – 5 where one was “not important” and five was “very important” respondents said the importance of their gardens internship program was a 4.43.

A follow up question asked respondents to gage if their internship program was more beneficial to their garden or more beneficial to their interns. On a scale of 1-5 where one equaled “no benefit” and five represented “greatly benefits.” Respondents rated their internship program’s benefit to their garden at a mean of 4.25. Respondents rated their internship program’s benefit to their interns at a mean of 4.58. Although not largely statistically different, respondents felt their current internship program was slightly more beneficial for participants.

How confident are executive directors in different aspects of their job?

When asked how confident each executive director was in 17 different areas of their job: written communication, verbal communication, general horticulture, long-term planning, and working with a board of directors were the top five areas directors were the most confident. Seven areas that scored in the mid-range, where they had lower confidence were: mentoring, safety practices, adult education, human resource or personnel management, special event coordination, volunteer management, and conflict resolution. The five areas where executive directors were the least confident in their abilities were: garden interpretation and signage, internet technology, development and fundraising, youth education, and general marketing/branding of their garden. Directors were also asked how important each of the above duties were in their leadership role. The results of these questions are visually represented in table 1.

Out of the seventeen different areas directors were asked about, thirteen areas showed significant differences between confidence and importance. In some categories

Table 1: Importance verses confidence of respondents

Item	Importance	Confidence	p-value
Verbal communication	4.75	4.34	p=<.001
Written communication	4.73	4.46	p=<.001
Long-term planning	4.60	4.11	p=<.001
Working with a board of directors	4.34	4.07	p=<.001
Human resources or personnel management	4.27	3.76	p=<.001
Conflict resolution	4.27	3.66	p=<.001
Safety practices	4.11	3.92	p=.006
General horticulture	4.08	4.08	p=.935*
Development and fundraising	4.07	3.43	p=<.001
Mentoring	3.73	3.93	p=.005
Internet technology	3.70	3.45	p=<.001
General marketing/branding	3.66	3.25	p=<.001
Volunteer management	3.60	3.70	p=.222*
Special event coordination	3.58	3.75	p=.025
Garden interpretation and signage	3.55	3.66	p=.153*
Adult education	3.43	3.80	p=<.001
Youth education	3.20	3.28	p=.277*

*Importance and confidence were ranked on a scale of 1-5, where 1 represented not being important or confident, and 5 represented very important or confident. * p-values exceeding 0.05 are not statistically strong enough to represent significant difference*

such as adult education directors expressed they were more confident in their abilities than it was important. However, the majority of the categories which showed differences that were significant, had directors reporting they were less confident in areas they rated as more important.

It is important to note that respondents to this survey lack confidence in the two areas they find the most important, written and verbal communication. They also similarly lack confidence in their third most important area, long-term planning. These three areas have strong potential for possible education by institutions such as the APGA and universities. However, even though respondents did not rank development and fundraising as one of their most important tasks, it is the area where there is the largest discrepancy between confidence and importance. This area should also be looked at as a possible area for continuing education and support.

What is the dominant leadership style of executive directors at U.S. public gardens?

Each respondent was given the opportunity to answer a series of questions designed to determine their leadership style. Of the 208 respondents to the survey 63% (131) choose to participate. These 131 respondents represent roughly 29% of all garden directors in the U.S. who are members of the APGA. Respondents answers were scored and plotted on a scale of 1-20. Those who scored closer to the extreme low end of the scale (score 5 or less) tend to be more autocratic in nature and those scoring on the extreme high end of the scale have a more free-rein style of leadership (DuBrin, 2001). None of the directors surveyed fell into the low side of these two extremes. However, some participants did fall into the high extreme. These individuals are likely to exhibit a free-rein style of leadership. Respondents who scored fifteen or higher on the leadership style instrument are most likely (or would be) a participative/team style leader (DuBrin 2001). Leadership style scoring is visually represented in figure one.

Each of the 131 respondents who were administered the leadership style instrument could be classified as participative style leaders. However, even though

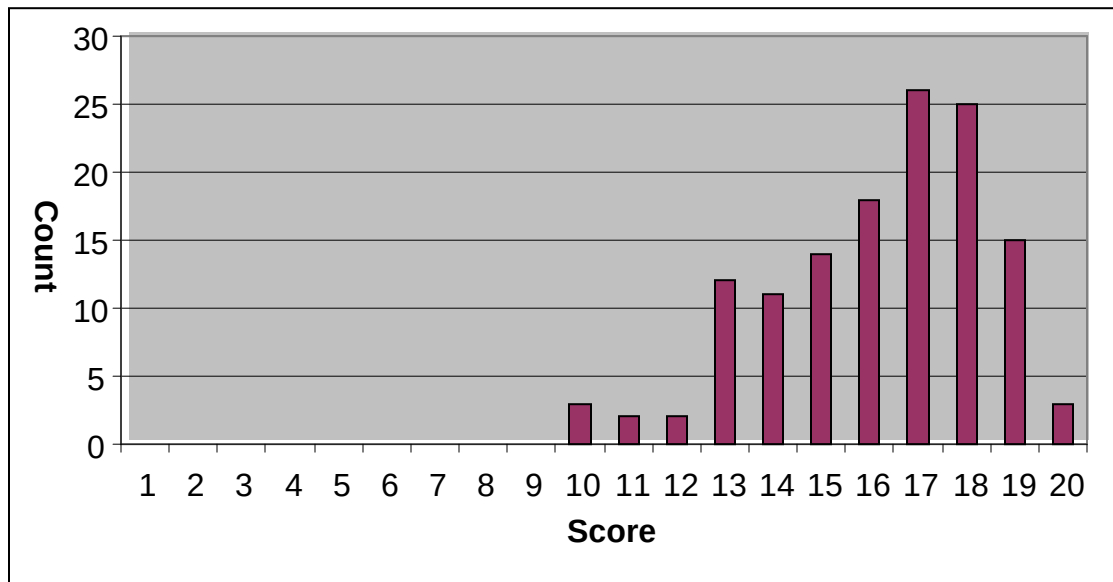
every director could be easily classified as a participative style leader, there were some differences among respondents. Of all directors administered the leadership style instrument, 23% (30) could be classified as participative style leaders leaning toward the autocratic style of leadership (score of 10-14); and 33% (43) of the directors surveyed are participative style leaders that learn toward the free-reign style of leadership (score of 18+). In the middle of those two groups were 44% (58) of individuals who could be classified as true participative style leaders (score of 15-17).

With every person surveyed being classified as a participative leader, the dominant leadership style among executive directors at U.S. public gardens was a participative leadership style. Participative leadership style encompasses those leaders who share decision making with group members (DuBrin, 2001). Although it is true these leaders share decision making, research suggests that with this group there would be a difference in how much burden they bear for the final decision process. Some individual leaders would tend to lean more toward siding consistently with their subordinates; others would exhibit a more independent nature. A review of leadership style literature shows there tends to be more originality, group-mindedness and friendliness in a participative style leadership environment, particularly with those who lean more toward democracy (Reid, 1981). The frequency and leadership style scores are visually represented in figure two.

Additionally, all leadership style scores were compared to other data collected. It was found there were no statistically significant differences between other information gathered and participant's leadership style. This included comparing individual leadership styles with birth order, age, sex, and size of garden they represent.



Figure 1: Leadership style score 1-20



Those who scored 15 or higher, are most likely (or would be) a participative/team style leader. Those who score 5 or lower, are most likely (or would be) autocratic style leaders (DuBrin 2001). Respondents who scored between 10 and 14 lean more toward an autocratic style. Respondents who scored 15-17 are considered true participative style leaders and those who scored 18 or above lean more toward a free-rein style of leadership.

Figure 2: Leadership style scores

Are there any shortcomings in current career education and development in the field of public horticulture?

Garden directors were asked if there were any continuing education topics or programs about leadership they would like to have offered through the APGA or other sources. This question received a wide variety of responses; however several respondents indicated a desire to learn more about leadership of their staff. Many directors want to learn how to better teach their staff to develop their own leadership skills. Some of the areas cited included helping staff expand their personal vision for their job, encouraging staff members to develop their own leadership skills, and teaching staff to show leadership in their community.

Many respondents seemed please with what is currently going on in leadership education. However, some directors expressed frustration that their budget did not often allow them to attend many of the career education and development programs that are offered through APGA or other sources.

Garden directors were also asked how universities can better train the leaders of tomorrow for jobs similar to theirs. Specifically they were asked what they think should be emphasized in university coursework. The number one area current garden directors believed should be emphasized was strategic planning. This would help future directors learn how to focus the resources of their organization and define the strategy to achieve their goals.

The second area directors felt was important for future leaders in their field to learn were different aspects of management. The two top areas of concern for current directors were knowledge in the area of personnel (including human resources) and financial management. Directors also cited knowledge of general non-profit administration as an important asset to future directors.

Equally as important as management for current directors were the areas of communication and garden development. Many directors in this and other areas of the survey cited written and verbal communications as the most important part of their job. Some respondents wrote how important the ability to communicate on many different

levels was to their current job. Garden development or fundraising also stood out as an important area of knowledge for future directors. Some respondents stated they needed high levels of help in this area and that they did not feel equipped for this aspect of their job. The need for knowledge in development was often paired with the need to know how to effectively work with a garden's board of directors.

Discussion and Recommendations

This research provided insight into who is currently leading public gardens in the U.S. Some of the general demographics of these leaders may not come as a surprise. Almost 50% of the survey respondents work for organizations that are classified as non-profit. Nearly 59% of respondents had working operational budgets under \$1 million. This is consistent with the records of the APGA who reported almost 70% of their gardens as small gardens with total budgets under \$1 million in their 2007 membership directory. Findings show that the leadership of public gardens is slightly male dominated with 58% of survey respondents being male and 41% being female. The average age of U.S. garden directors was 53. Survey respondents were typically either a middle child or first born into their family and had an average of 2.75 siblings. Eighty three (41.5%) of the respondents described themselves as first born (oldest child) and seventy one of respondents reported being a middle child (35.5%). Of the 200 respondents to the question of their birth order, only 46 reported being the youngest or an only child (23%).

Although interesting, it is difficult to speculate on results relating to birth order and leadership. Psychologists disagree on the influence of birth order and the role it plays on personality. Many other factors such as socioeconomic background of respondents would have to be considered to realize the full potential of this information. Research questions were asked to see if any significant information would result from knowing the birth order of directors. No noteworthy statistics were gained.

It appears that overall leaders of public gardens are well educated and possess at least one college degree in the natural sciences. These degrees tend to be in the areas of horticulture, plant science or the biological sciences. At least 50% of directors surveyed had a minimum of a masters degree.

Each director was asked how long they had worked for their garden, and how long they had provided the leadership for their garden. Seventeen percent of directors are new on the job with less than two years employment with their current employer, and 24% of directors had directed their garden for less than two years. Thirty one percent of directors had worked for their current institution in any capacity for over 16 years. However, when asked how long they had held their current position or job title 18% had been director for over 16 years. This indicates that one-quarter or 25% of garden directors are new to the leadership role of their garden. Around one-third of the directors moved up through the ranks at their garden to become the director. This information informs new college graduates that in many cases, they can expect to take an introductory role at a garden and plan to move up over time.

Current garden directors felt many different experiences lead them to be in the field of public horticulture. Several reported family members as catalysts to their current career. A large portion of respondents pointed to experiences during their college education as having influenced them heavily toward public horticulture. This is supported further by 21% of current garden directors who participated in internships at U.S. public gardens while they were undergraduates or graduates. Of those 21% who participated in internships at a U.S. public garden, 70% did them optionally. When asked how influential their internship experience was in determining their current career, 50% of respondents indicated it was either very or extremely influential. On a scale of 1-5 where one is “not influential at all” and 5 is “extremely influential,” current directors rated the influence their internship had on their current career as 3.40. This demonstrates that directors who did an internship at a public garden were ultimately moderately or very influenced by it. Current literature, combined with the information gathered in this study, lead to a strong recommendation that internships should be required for undergraduates wishing to pursue a career within a public garden. Furthermore, gardens that offer internships seemed to be doing a good job creating a balance that is mutually beneficial for both the intern and their garden. These mutually beneficial relationships should continue and further research in this area would benefit both parties.

With 46% of U.S. public garden directors participating in this research on leadership in public gardens, this is potentially a topic of importance. Results from this study suggest current garden directors have an interest in developing their leadership skills. In the area of leadership development, only 33% of directors rated the amount of training they have received in leadership development as “quite a bit” or “extensive.” This equates to the majority (67%) of U.S. garden directors rating their training in leadership development as anywhere from “some training” to “no training” at all. On a scale of 1-5 where one is “no training” and five is “extensive training,” current directors described the training they had in leadership development as 3.05.

The majority of U.S. garden directors believe leadership is a skill that can be learned over time. Seventy-six percent of respondents agree or strongly agree this is true. On a scale of 1-5 where one was “strongly disagree” and five was “strongly agree,” directors agreed with the statement of “leadership is a skill that can be learned over time,” at the level of 3.78. This belief paired with what several gardens are doing to develop leadership among their staff again points to the importance garden directors place on the leadership development of their staff.

Each respondent was asked about activities their garden supports or offers to help foster leadership development of their staff. They were provided with a list of six potential leadership development activities and then asked in which ones they participated. The highest responses came in the area of strategic planning and encouraging employees to develop vision and goals for their area of responsibility. Seventy percent of garden directors reported their garden did this. The lowest responses were in the area of mentoring programs at their garden with 26% of respondents saying they have a mentoring program. Each director was also asked about other activities their garden offered to foster leadership development of their staff. The responses were varied, some responses showed a large commitment to the fostering of leadership development such as the following. ***“We hire from within frequently, which fosters a sense that developing leadership skills will be rewarded. We have a continuous improvement, team process culture and frequently assign staff leadership functions related to teams. We also have many of our staff participate in a weekly television spot,***

which gives them exposure to speaking, presentation and public visibility. We encourage other media engagement, as well. We support staff leadership participation in organizations beyond ours, and we encourage staff to take university courses that support their career goals in relation to their employment with us. We engage many staff in the hiring/interview process, and include them in presentations and tours involving visiting professionals.” However, many of those who choose to respond to the follow-up question of other leadership development activities supported by their garden expressed some frustration. The largest majority of respondents in this category expressed their garden was too small of an organization to be heavily involved with leadership development. Some of these responses included the following:

“Unfortunately, the skill level among my employees along with current motivation causes me to think that the second tier will remain at this level. All of the above (leadership development activities) are important for the success of this and all other organizations.”

“We don’t do ropes courses. It’s a small organization, with limited ability to do other than mentor, provide funds for some professional development, etc.”

“It must be understood, we have no professional staff directly responsible for the garden/arboretum other than myself. However, we do foster training opportunities for non-professional staff.”

These findings indicate that those gardens that have the resources to provide leadership development for their staff are in fact doing so. Gardens with small budgets and few employees don’t have the resources to develop the leadership skills of their staff; in some cases there may only be one staff member in the garden which makes it hard to promote or be involved in leadership activities. A recommendation to the APGA would be to develop programs that reach smaller gardens with little or no cost to help support their leadership activities.

Current garden directors share the same leadership style. One of the researcher's original hypotheses was garden directors would lead using a participative leadership style. This was in fact the case with every one of the directors surveyed falling into the category of participative. However, there were some differences with 23% (30) of directors that could be classified as participative style leaders leaning toward the autocratic style of leadership; and 33% (43) of the directors surveyed who were participative style leaders that lean toward the free-reign style of leadership. In the middle of those two groups were 44% (58) of directors who could be classified as true participative style leaders.

If such a large proportion of garden directors are participative style leaders then there could be room for possible education for those who wish to lead public gardens, or work for these leaders. Many participative leaders have a style which encompasses a teamwork or collaborative approach (DuBrin 2001), education for future leaders on how to work as a team could be critical to their success. A downside of this leadership style is often the time-consuming aspects of working as a team (DuBrin 2001). For participative style leadership to flourish, leaders must know what tasks are trivial and what tasks require a team approach (DuBrin 2001). A recommendation for future research in this area would be to additionally investigate personality types of public garden leaders.

Results from this survey document and provide a view of who is currently leading public gardens in the U.S. This research may be helpful to both the APGA and those wishing to lead a public garden in the future. Currently the APGA is involved in other activities that strive to learn more about leadership in the field. A handful of universities in the U.S. now have programs specifically geared toward public horticulture. This research can be used as a partial guide to help better understand what is important for those wishing to lead public gardens in the future.

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Appendices

Appendix A- Survey Instrument and Letters

A-1: First Survey Letter

**Survey of Public Garden Leaders:
The University of Tennessee
Department of Plant Sciences**

My name is Andrew Pulte and I am a graduate student in Public Horticulture at The University of Tennessee. As part of my masters thesis on leadership, I am asking for your participation in a survey of leaders in public gardens.

This survey will help us advise the American Public Garden Association of improvements you think need to be made in education and training of current and future garden leaders.

Your answers are completely confidential and will be released only as summaries in which no individual's answers or organization can be identified. This survey is completely voluntary. however, you can help us very much by taking a few minutes to share your experiences and opinions about leadership in public gardens.

Your name was provided by the American Public Garden Association as the executive leader of your organization. If you are not this individual please feel free to forward this survey on to the appropriate person. Typically this survey takes 10 to 15 minutes to complete. To participate in the survey, please click on the following link or copy and paste it into your browser.

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=SURVERYOFPUBLICG>

I appreciate your assistance and will be happy to share a summary of results with you by email at the completion of the study. I also hope to present these results at the national meeting of the APGA.

If you have any questions or comments about this study, we would be happy to talk with you. Please contact Andrew Pulte, Survey Project Director, by phone at 865-974-8820, or email at apulte@utk.edu.

Sincerely,

Andrew J Pulte
Graduate Teaching Assistant - Public Horticulture
The University of Tennessee
Knoxville, Tennessee

A-2: Survey Instrument

Survey of Public Garden Leaders

Only completed surveys can be used for this study. If for any reason you do not complete the survey at this time, you may return to my email and click on the link at anytime and start over. Typically the survey takes 10 – 15 minutes to complete. As a reminder, your responses to the survey will be kept completely confidential, and will not be associated with your name or organization.

Thanks again!

Andrew J Pulte
Graduate Teaching Assistant – Public Horticulture
The University of Tennessee
Knoxville, Tennessee

1. Which of the following best describes the garden where you work?
 - ☐ Non-profit
 - ☐ Private
 - ☐ State
 - ☐ Federal
 - ☐ City
 - ☐ Other
 - ☐ No Answer

2. The America Public Garden Association (APGA) separates gardens by size. Which of these categories would be the best fit for your garden?
 - ☐ Large Garden (Annual budgets of more then \$2 million)
 - ☐ Mid-Sized Garden (Annual budgets of \$1 to 2 million)
 - ☐ Small Garden (Annual budgets up to \$1 million)
 - ☐ Don't Know
 - ☐ No Answer

3. How long have you held your current position or job title?
 - 0-2 years
 - 3-5 years
 - 6-10 years
 - 11-15 years
 - 16-20 years
 - 21 years +
4. How long have you worked for your current institution in any capacity?
 - 0-2 years
 - 3-5 years
 - 6-10 years
 - 11-15 years
 - 16-20 years
 - 21 years +
5. Please tell me about an experience that influenced you to be in the field of public horticulture.
6. How satisfied or dissatisfied are you with what your garden is doing to foster leadership development of your staff?
 - Very dissatisfied
 - Somewhat dissatisfied
 - Neither satisfied nor dissatisfied
 - Somewhat satisfied
 - Very satisfied
 - No Answer
7. How important is it for your garden to foster leadership development of your staff?
 - Not important
 - Slightly important
 - Somewhat important
 - Important
 - Very important
 - No Answer

8. Please indicate the activities your garden supports/ offers to foster leadership development of your staff? (Please check all that apply)
- ☐ Team building activities
 - ☐ Mentoring programs
 - ☐ Involvement with strategic planning
 - ☐ Encouragement to develop vision and goals for their area
 - ☐ Provide financial support for leadership development
 - ☐ Provide leave time for leadership development
 - ☐ None of the Above
 - ☐ No Answer
9. Are there any other activities your garden offers to foster leadership development of your staff? (if none leave blank)
10. To what extent do you agree or disagree with the following statement:
“Leadership is a skill that can be learned over time.”
- ☐ Strongly disagree
 - ☐ Disagree
 - ☐ Undecided
 - ☐ Agree
 - ☐ Strongly agree
11. How would you describe the training you have had in leadership development?
- ☐ No training
 - ☐ A little training
 - ☐ Some training
 - ☐ Quite a bit of training
 - ☐ Extensive training
12. What continuing education topics or programs about leadership would you like to see offered through APGA or other sources? Please be specific.
13. In order to train future professionals for leadership jobs like yours, what should universities emphasize in their coursework? Please be specific.
14. Did you do an internship, of any kind, at a public garden or arboretum?
- ☐ Yes
 - ☐ No
15. Did you ever participate in a formal or informal internship of any kind?
- ☐ Yes
 - ☐ No
 - ☐ No Answer

16. Please briefly describe your formal or informal internship experience, include where and when you did your internship, as well as your duties as an intern.
17. Was the garden/arboretum where you did your internship in the U.S.?
- ☐ Yes
 - ☐ No
18. In what country did you do your internship?
19. What was the name of the garden/arboretum where you did your internship?
20. In what city and state was the garden/ arboretum where you did your internship?
21. What year did you start your internship there?
22. Please briefly describe your internship experience, including your duties as an intern.
23. Was this internship required or optional?
- ☐ Required
 - ☐ Optional
 - ☐ No Answer
24. When you worked as an intern, what level of school were you in?
- ☐ High School
 - ☐ Undergraduate/Post High School
 - ☐ Graduate School
 - ☐ Other:
25. Did you participate in a second internship at a garden or arboretum in the U.S.?
- ☐ Yes
 - ☐ No
 - ☐ No Answer
26. What was the name of the other garden/arboretum where you did your internship?
27. What was the name of the city and state where you worked during your other internship?
28. What year did you start your internship there?
29. Was this internship required or optional?
- ☐ Required
 - ☐ Optional
 - ☐ No Answer

30. When you worked as an intern the second time, what level of school were you in?

- ☐ High School
- ☐ Undergraduate/Post High School
- ☐ Graduate School
- ☐ Other:

31. How important was each of these reasons for doing your internship(s)?

	Not important	Slightly important	Somewhat important	Important	Very important	Not applicable
Gain experience in the field	☐	☐	☐	☐	☐	☐
Experience horticulture in a different setting	☐	☐	☐	☐	☐	☐
To find out if I should continue in the field of horticulture	☐	☐	☐	☐	☐	☐
Resume builder	☐	☐	☐	☐	☐	☐
Make contacts within the field	☐	☐	☐	☐	☐	☐
Fulfill degree requirements	☐	☐	☐	☐	☐	☐

32. Was there any other reason that doing an internship(s) was important to you?

33. How influential was your internship experience in determining your current career?

- ☐ Not influential at all
- ☐ Slightly influential
- ☐ Moderately influential
- ☐ Very influential
- ☐ Extremely influential
- ☐ Unsure

34. Does the institution where you now work have an internship program?

- ☐ Yes
- ☐ No

35. How important is it to you that your garden have an internship program?

- ☐ Not important
- ☐ Slightly important
- ☐ Important
- ☐ Very important
- ☐ Do not know

36. To what extent does your internship program:

	No benefits	Slight benefits	Some benefits	Benefits	Greatly benefits	Unsure
Benefit your garden	☐	☐	☐	☐	☐	☐
Benefit your interns	☐	☐	☐	☐	☐	☐

37. Briefly describe why your garden has an internship program.

38. The following questions deal with your leadership style: Answer the following questions, keeping in mind what you have done, or think you would do.

	Mostly True	Mostly False
I am more likely to take care of a high-impact assignment myself than turn it over to a group member.	☐	☐
I would prefer the analytical aspects of a manager's job rather than working directly with group members.	☐	☐
An important part of my approach to managing a group is to keep the members informed almost daily of any information that could affect their work.	☐	☐
It's a good idea to give two people in a group the same problem, and then choose what appears to be the best solution.	☐	☐
It makes good sense for the leader or manager to stay somewhat aloof from the group, so you can make a tough decision when necessary.	☐	☐
I look for opportunities to obtain group input before making a decision, even on straightforward issues.	☐	☐
I would reverse a decision if several of the group members presented evidence that I was wrong.	☐	☐
Differences of opinion in the work group are healthy.	☐	☐
I think that activities to build team spirit, like the team fixing up a poor family's house on a Saturday, are an excellent investment of time.	☐	☐
If I were hiring a new employee, I would like the person to be interviewed by several key people.	☐	☐
An effective leader uses email for about 98% of communication with other employees.	☐	☐
Some of the best ideas are likely to come from employees other than the manager.	☐	☐
If our group were going to have a banquet, I would get input from each member on what type of food should be served.	☐	☐

	Mostly True	Mostly False
I have never seen a statue of a committee in a museum or park, so why bother making decisions by a committee if you want to be recognized?	☐	☐
I dislike it intensely when a group member challenges my position on an issue.	☐	☐
I typically explain to group members how (what method) they should use to accomplish an assigned task.	☐	☐
If I were out of the office for a week, most of the important work in the department would get accomplished anyway.	☐	☐
Delegation of important tasks is something that would be (or is) very difficult for me.	☐	☐
When a group member comes to me with a problem, I tend to jump right in with a proposed solution.	☐	☐
When a group member comes to me with a problem, I typically ask that person something like, "What alternative solutions have you thought of so far?"	☐	☐

39. How confident are you in your knowledge and skill(s) in each of the following areas?

	Not confident	Slightly confident	Somewhat confident	Confident	Very Confident	Do not know
General horticulture	☐	☐	☐	☐	☐	☐
Development and fundraising	☐	☐	☐	☐	☐	☐
Human resources or personnel management	☐	☐	☐	☐	☐	☐
Adult education	☐	☐	☐	☐	☐	☐
Youth education	☐	☐	☐	☐	☐	☐
General marketing/branding	☐	☐	☐	☐	☐	☐
Special event coordination	☐	☐	☐	☐	☐	☐
Long-term planning	☐	☐	☐	☐	☐	☐
Safety practices	☐	☐	☐	☐	☐	☐
Conflict resolution	☐	☐	☐	☐	☐	☐
Written communication	☐	☐	☐	☐	☐	☐
Internet technology	☐	☐	☐	☐	☐	☐
Verbal communication	☐	☐	☐	☐	☐	☐
Working with a board of directors	☐	☐	☐	☐	☐	☐
Mentoring	☐	☐	☐	☐	☐	☐
Garden interpretation and signage	☐	☐	☐	☐	☐	☐
Volunteer management	☐	☐	☐	☐	☐	☐

40. In your current leadership position at your garden or arboretum, how important is it for you to have knowledge and/or skill(s) in each of the following areas?

	Not important	Slightly important	Somewhat important	Important	Very important	Not applicable
General horticulture	☐	☐	☐	☐	☐	☐
Development and fundraising	☐	☐	☐	☐	☐	☐
Human resources or personnel management	☐	☐	☐	☐	☐	☐
Adult education	☐	☐	☐	☐	☐	☐
Youth education	☐	☐	☐	☐	☐	☐
General marketing/branding	☐	☐	☐	☐	☐	☐
Special event coordination	☐	☐	☐	☐	☐	☐
Long-term planning	☐	☐	☐	☐	☐	☐
Safety practices	☐	☐	☐	☐	☐	☐
Conflict resolution	☐	☐	☐	☐	☐	☐
Written communication	☐	☐	☐	☐	☐	☐
Internet technology	☐	☐	☐	☐	☐	☐
Verbal communication	☐	☐	☐	☐	☐	☐
Working with a board of directors	☐	☐	☐	☐	☐	☐
Mentoring	☐	☐	☐	☐	☐	☐
Garden interpretation and signage	☐	☐	☐	☐	☐	☐
Volunteer management	☐	☐	☐	☐	☐	☐

41. Which of the following best describes the highest level of school you completed?
- ☐ 8 years or less
 - ☐ 9-11 years
 - ☐ High School graduate/GED
 - ☐ Vocational/Technical training
 - ☐ Some College
 - ☐ Associates degree (2 years college)
 - ☐ Bachelors degree
 - ☐ Masters degree
 - ☐ Doctoral degree
42. From what school or institution did you receive your doctoral degree?
43. Where was this school or institution located (city/state)?
44. What degree did you earn and what was your area of study?
45. From what school or institution did you receive your masters degree? If none leave blank.
46. Where was this school or institution located (city/state)? If none leave blank.
47. What degree did you earn and what was your area of study? If none leave blank.
48. From what school or institution did you receive your undergraduate degree?
49. Where was this school or institution located (city/state)?
50. What degree did you earn and what was your area of study?

Finally, we would like to ask a few questions about you for research purposes only. Your responses will remain confidential and are for statistical purposes only. Your responses will not be associated with you name or garden.

51. What is your gender?
52. In what year were you born?
53. How many siblings do you have?

54. Which of the following best describes your birth order in your family?

- ☐ Only Child
- ☐ First Born (oldest child)
- ☐ A Middle Child
- ☐ Youngest
- ☐ No Answer

55. If you have any comments about this survey or on leadership in the public garden field, please share them with us by using the space below. When you are finished, click on the “NEXT” button to submit your survey.

A-3: Second Survey Letter

**Survey of Public Garden Leaders:
The University of Tennessee
Department of Plant Sciences**

Last week you received an email from The University of Tennessee asking for your participation in a study on leadership in public gardens. This survey is a part of my masters thesis and I appreciate your participation.

If you have already completed this 10 – 15 minute survey, please accept my sincere thanks. If not, please complete the online survey today by clicking on the following link:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=SURVERYOFPUBLICG>

Your participation in this survey will be beneficial to the field of public horticulture and we thank you for your assistance. I will be sure to send you a summary of the results.

If you have further questions please contact me by phone at (865) 974-8820 or email at apulte@utk.edu.

Thanks for your help,

Andrew J Pulte
Graduate Teaching Assistant – Public Horticulture
The University of Tennessee Knoxville, TN

(Your name was provided by the American Public Garden Association, this survey is intended for the executive leader of your organization, if you do not wish to receive future emails, please let me know by replying to this message)

A-4: Third Survey Letter

**Survey of Public Garden Leaders:
The University of Tennessee
Department of Plant Sciences**

Last week, a survey seeking information on leaders in public gardens was emailed to you. The comments of leaders like you who have already responded included information that is important to understanding leadership in the field of public horticulture. We believe the results are going to be very useful for the field of horticulture as a whole. We are writing to you again because the study's usefulness depends on receiving a survey from as many people as possible. I also hope to present these results at the national meeting of the APGA.

If you have already completed this confidential 10 - 15 minute survey, please accept my sincere thanks. I know all of you have a busy schedule so I appreciate your time very much!

Please complete the online survey today by clicking on the following link:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=SURVERYOFPUBLICG>

I will be sure to send you a summary of the results. If you have further questions, please contact me by phone at (865) 974-8820 or email at apulte@utk.edu.

Thanks for your help,

Andrew J Pulte
Graduate Teaching Assistant - Public Horticulture
The University of Tennessee
Knoxville, TN

(Your name was provided by the American Public Garden Association. This survey is intended for the executive leader of your organization. If you are not the correct person, please forward this email to the right person. If you do not wish to receive future emails, please let me know by replying to this message. If there is a particular reason why you cannot or do not wish to complete the survey, it would be helpful to know for research purposes.)

A-5: Final Survey Letter

**Survey of Public Garden Leaders:
The University of Tennessee
Department of Plant Sciences**

Hello! Participation in our survey on public garden leadership has been very good with over 41% of garden leaders responding. We know you are very busy and the holiday season is upon us, so this is the last reminder you will receive. If you have been planning to do the survey and just have not been able to get to it, we hope you will take a few minutes to complete it. We were hoping to have a response rate of 50% or better so the surveys we receive from the final reminder may push us over the top. In any case, the response has been excellent, and we greatly appreciate everyone's patience.

If you have already completed the survey, you have our sincere thanks. If you have not, please complete the online survey soon by clicking on the survey web link below. The purpose of the survey is to help us to understand the status of public garden leadership in the U.S. and related education and training needs. The results will be provided to APGA leaders and made available as a presentation at the annual meeting.

As you may know from previous emails, your name was provided by the American Public Garden Association as the executive leader of your organization. If you are not the correct person, please forward this email to the right person. This survey is confidential and the research team has no way of tracking who has and who has not successfully completed the survey. If there is a particular reason why you cannot or do not wish to complete the survey, it would be helpful to know why for research purposes.

SURVEY LINK:

<http://survey.utk.edu/mrIWeb/mrIWeb.dll?I.Project=SURVERYOFPUBLICG>

Thanks again for your patience,

Andrew J Pulte
Graduate Teaching Assistant – Public Horticulture
The University of Tennessee
Knoxville, TN

Appendix B – Figures

B-1

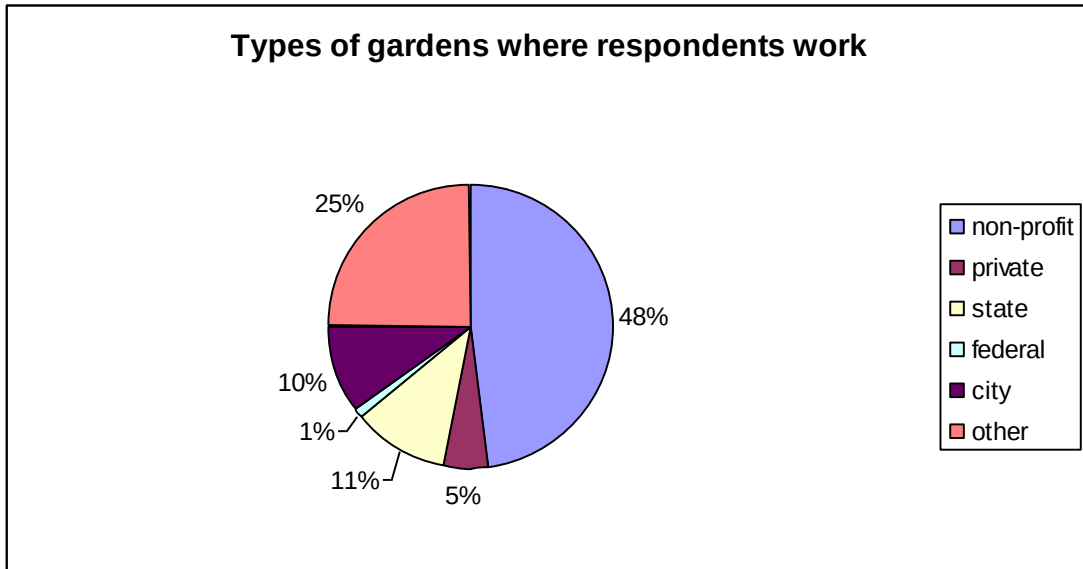


Figure 3: Types of gardens where respondents work

B-2

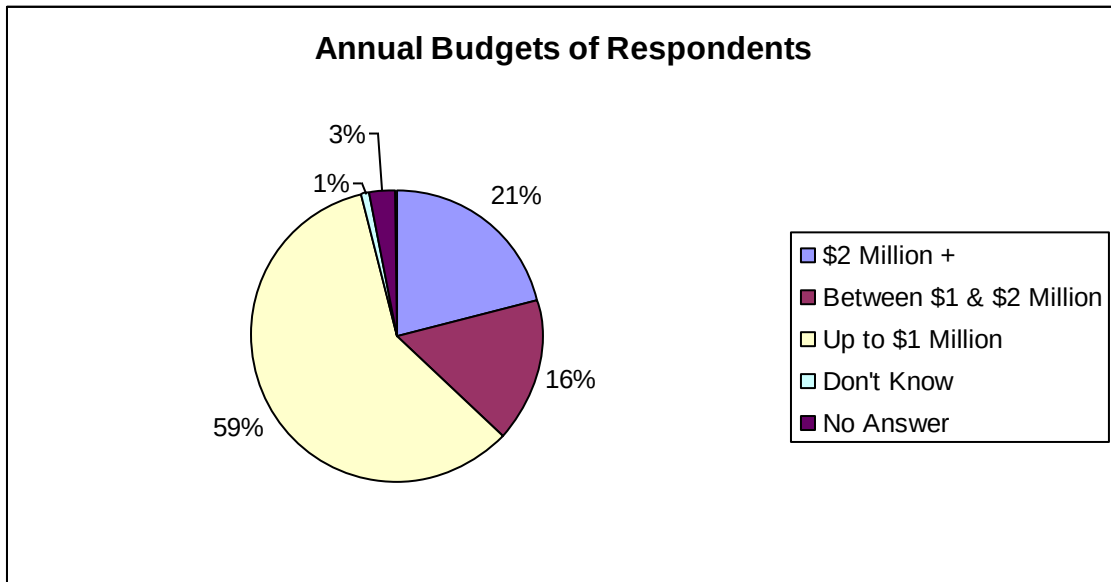


Figure 4: Annual budgets of respondents

B-3

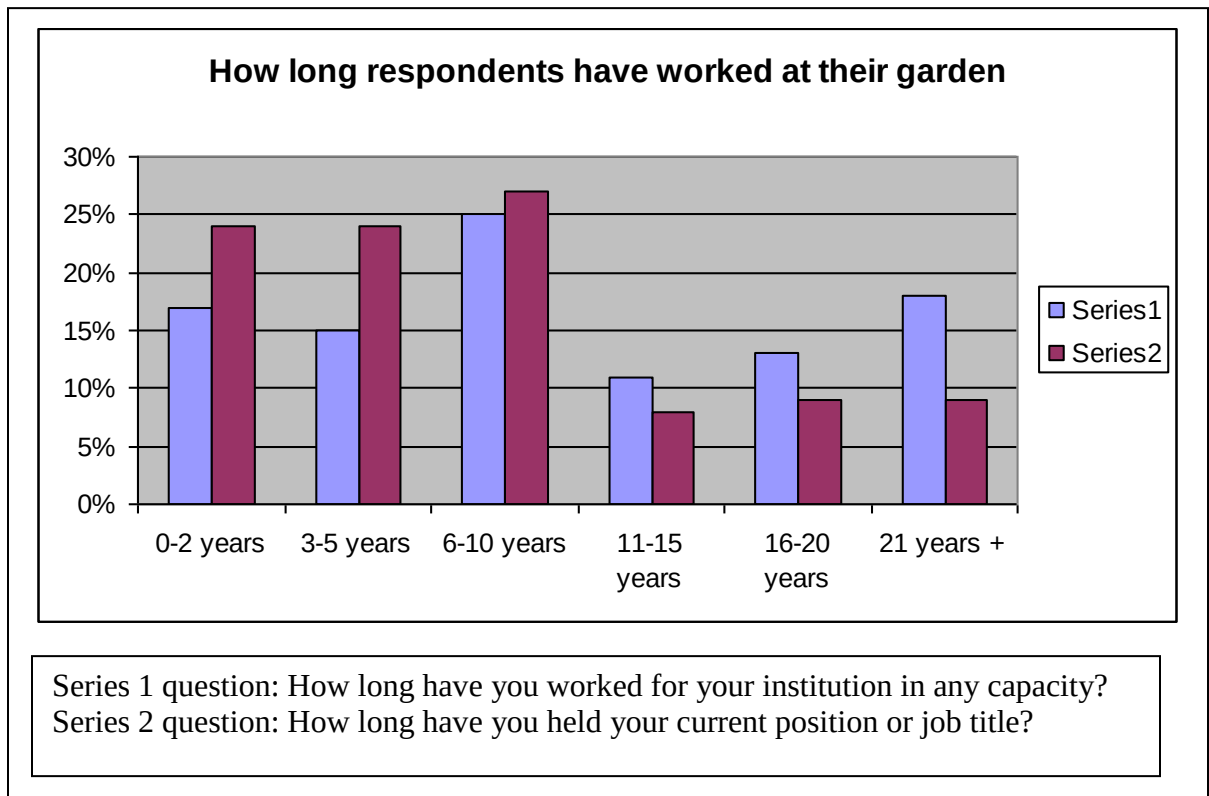


Figure 5: How long respondents have worked at their garden

B-4

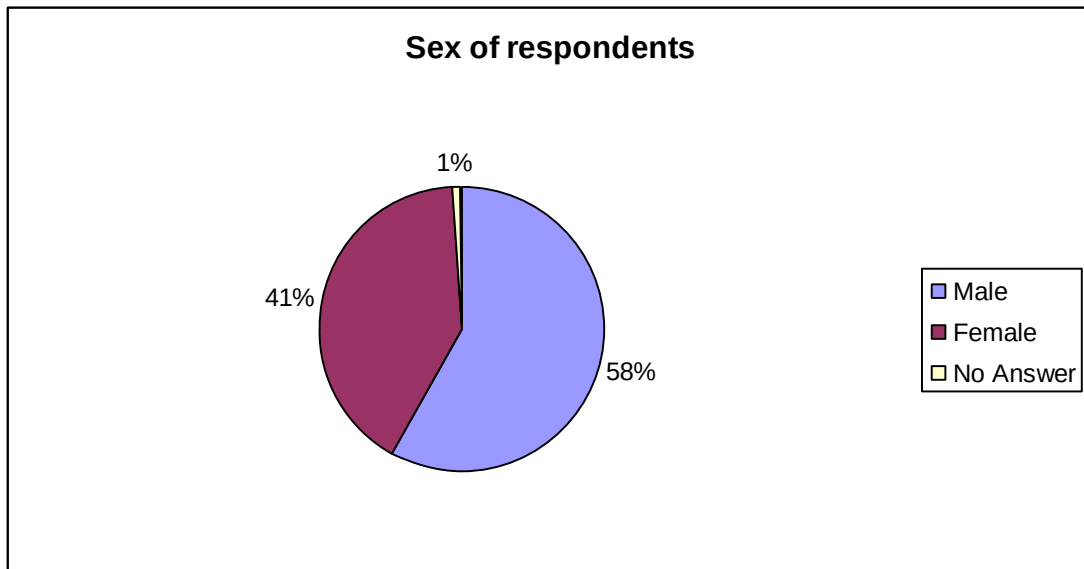


Figure 6: Sex of respondents

B-5

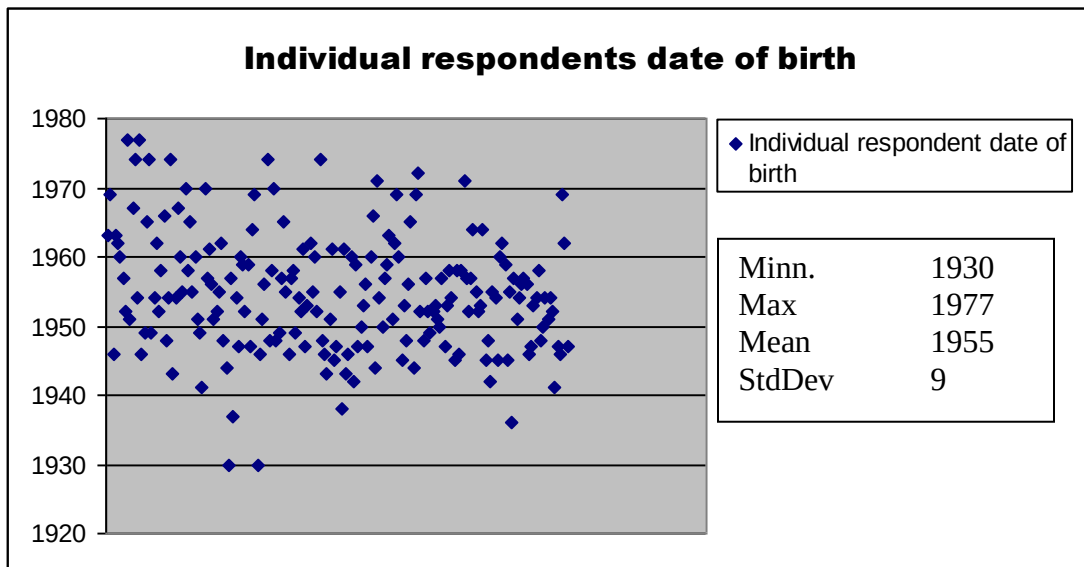


Figure 7: Individual respondents date of birth

B-6

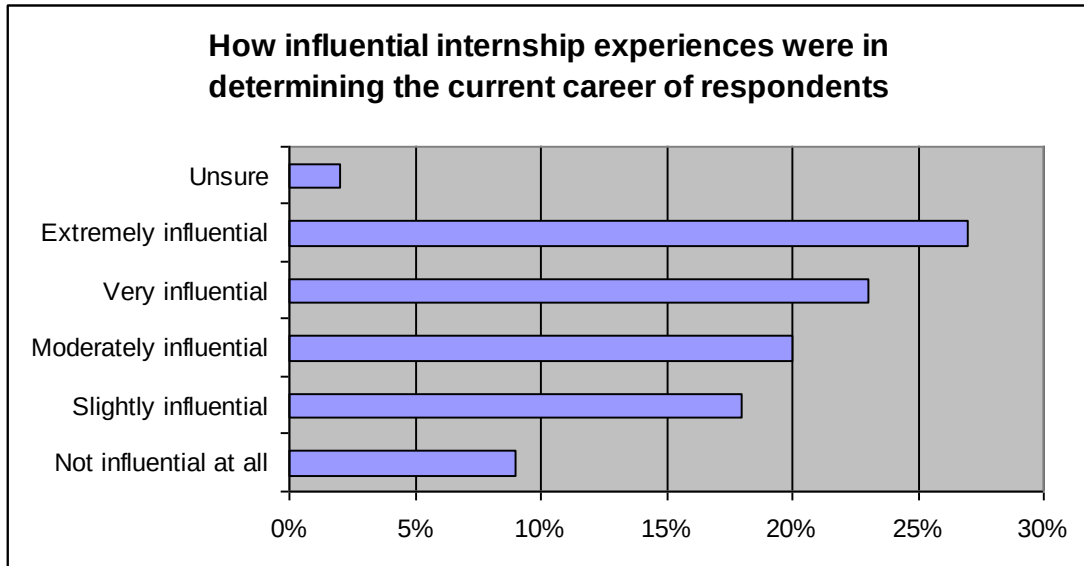


Figure 8: How influential internship experiences were in determining the current career of respondents

B-7

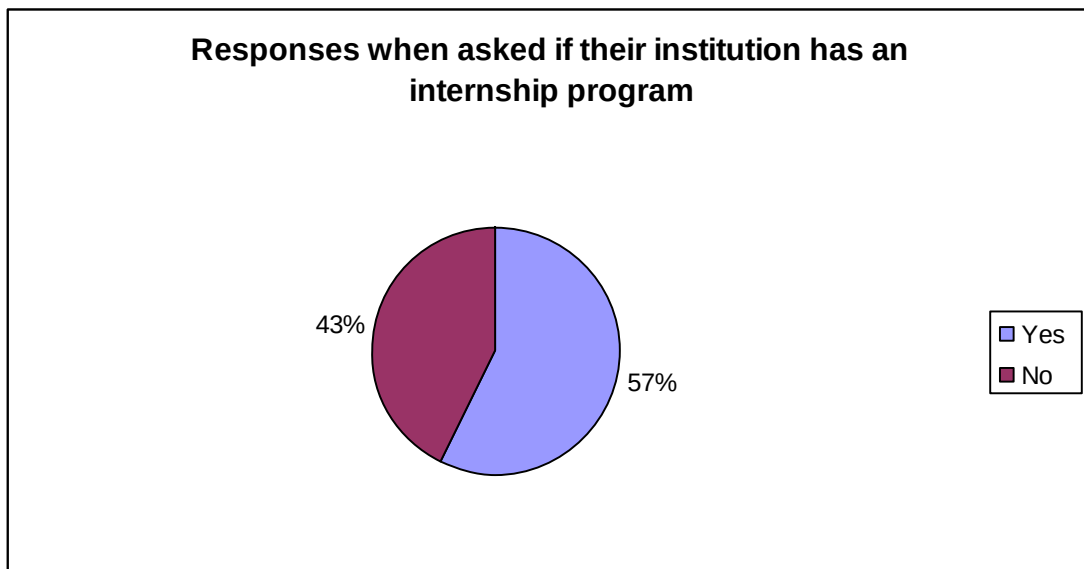


Figure 9: Responses when asked if their institution has an internship program

B-8

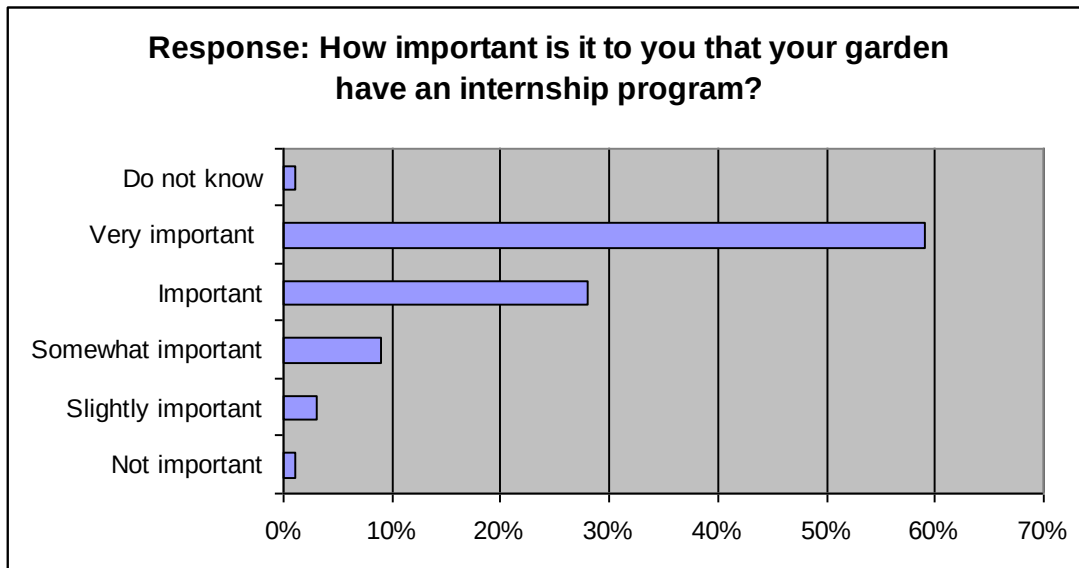


Figure 10: Response: How important is it to you that your garden have an internship program?

B-9

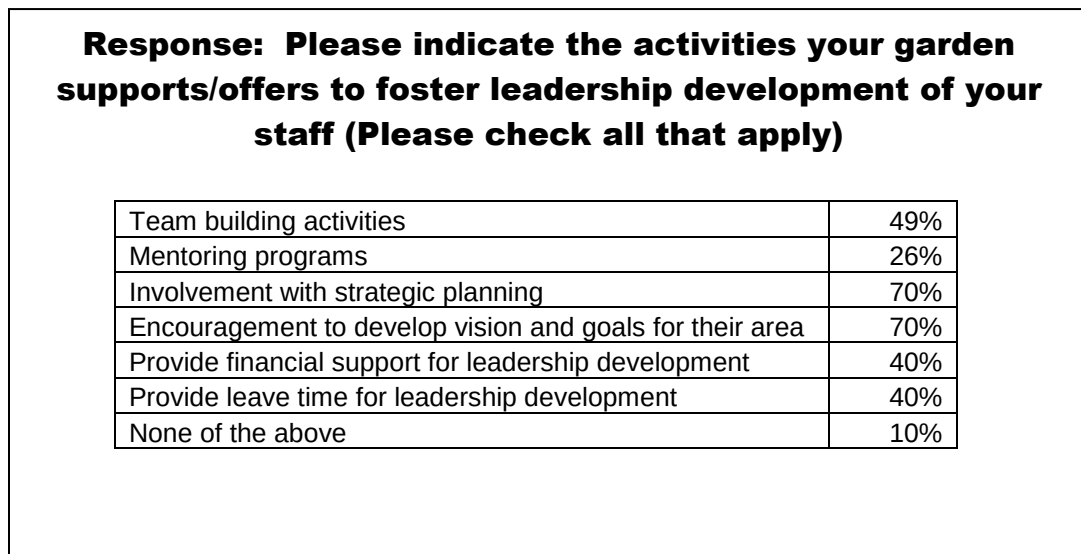


Figure 11: Response: Please indicate the activities your garden supports/offers to foster leadership development of your staff

Appendix C – Response and comment documentation

Notes on Appendix C:

The following comments are presented as written by the respondents to the survey. No changes have been made in grammar, spelling or sentence structure.

C-1: Responses to question 5

Please tell me about an experience that influenced you to be in the field of public horticulture.

- My parents co-founded the Bickelahupt Arboretum and when my father suffered a stroke, I returned to my home town to direct the foundation/garden. This was not a choice, but an obligation; however, since I have returned I see our garden as a place to change the world. Children are inside all the time. People are in a rat race from one obligation to another. The garden I direct provides education, retreat space and most importantly, a way to connect plants and people.
- In 2000 I took Dr. Bijan Dehgan's course Public Gardens at the University of Florida.
- I have always been in the non-profit sector, and I love Gamble Garden. I was a volunteer here when I was younger as my mom was on the board.
- After working in the retail sector for years I began volunteering and then teaching in a natural history museum. I think my passion for teaching people how to create organic, native environments came from my background of teaching about healthy ecosystems. I believe we can positively impact the global pollution problems by changing how we maintain our own environments (yards).
- Visits to public gardens
- Too open ended.
- I stumbled into it really. I am a landscape architect/planner by training, and when I recommended that we develop the campus as a botanic garden, the administration loved the idea, and thus I have been involved in public horticulture ever since.
- Life long gardener. I started early.
- Field work in college that involved studying distinct plant communities. It was fascinating and now planning and growing habitats is what I get to do.
- Opportunity presented itself
- This garden in particular resonated with my personal sense of mission: it's in the right place, doing the right things, trying to do right in an imperfect world. You don't need the details of the narrative that led me to realize that.

- My first job at of college was as a gardener in a small public garden. I knew very soon in that job, that I wanted to be in a leadership role in a public garden. My experience in the Longwood Graduate Program was a tremendous influence for me. Each subsequent position has shaped my career. My current position as Director of Horticulture for Hillwood Estate, Museum & Garden is my 'dream' job.
- Dr. Edward Hasselkus At the U. of Wis. Madison was my landscape woody plant teacher. I was extremely impressed by him and worked for him during vacations in the Longenecker Gardens where he was and still is curator. We talked a lot and became lifetime friends. Although my career was in a different field, when I moved to my present location in 1975 I started a private arboretum. By 2000 the plantings here were extensive and I was urged to turn it into a public garden, which I did. Many of the woody species here were obtained through Edward. I have been volunteer Director here since 2000.
- Both my grandmother and my father were/are lifelong gardeners, both plants and vegetables. My grandmother, when she was alive, had her entire front and side yard in roses and her backyard in vegetables. Gardening was her passion and she passed that passion to her son, my father. At 86 he still gardens and we have wonderful early year phone conversations about who has the first home grown tomatoes of the year!
- Working with autistic children in a public garden
- Interesting challenges, ability to be creative, make a difference
- My father was executive director of the University of Wisconsin Arboretum for 30+ years from its inception. I have had an abiding interest in plants since 4th grade when I identified and labeled 165 wildflowers in our yard.
- personal love of gardening and design
- Actually I am a landscape architect who is currently the Director of the Landscape Programs (Master of Landscape Architecture and Master of Arts in Landscape Studies) at Chatham University and the Director of the Chatham Arboretum. I have worked since 1982 in the private sector of landscape architecture, in the public sector as a Project Landscape Architect for the City of Pittsburgh and now in academia. With this academic position I also became the Director of the Chatham Arboretum which is currently predominantly used as a learning lab.

- Grandmother introduce me to gardening as a child. Became a Master Gardener through the Extension Service in '89...went onto 2 yr degree in hort, the 4 yr degree, then Master's in Ag edu
- I operate a cemetery- Rural Garden Cemetery started in 1848 with many mature trees and in an arboretum setting. I was in the nursery business as a landscape designer and started at Cave Hill in 1974 and now am the Supt, Sec & Treas and do much more than deal with the plants but my degree is in Horticulture. I was in pre-vet but went to a lecture on landscaping and decided to go in that direction in 1966
- My current institution is a national historic landmark with 4 historic gardens featuring trees planted in the early 1900s -- I have a desire to maintain the historic landscape.
- Being a graduate of the Niagara Parks Commission School of Horticulture was a big influence in my path to public gardens
- New opportunity
- I had my own landscape maintenance business for 25 years before transitioning into the position of Landscape Manager at the retirement community I am currently employed at.
- Being a good steward of the land, protecting it and demonstrating what can be done to enhance its beauty.
- Being given a job at a retail nursery when I was 15.
- Attended AABGA meeting years ago.
- Conversations with Claude Barr of Smithwick, SD
- Horticulture education, teaching people how to garden and delighting in the results.
- Volunteers were needed to perpetuate a new Arboretum. The Board contacted our four Garden Clubs - 12 years later they are each tending their "own" gardens. I became a member of the not-for-profit Board of Directors . I'm not being boastful- just truthful - I see myself as the prod to keep things going with good and cooperative help. Please understand, I'm a volunteer.
- It was after studying Eco-Psychology and beginning to understand the importance of the natural world in relation to our mental and spiritual health.

- I have always gardened and the opportunity arose for me to do some sub contract work at this institution for a landscaping company because my gardening was well know. That turned into a full time job and then to become a manager or director of the arboretum.
- FOR THE LOVE OF THE EARTH AND THE MIRACLES THAT OCCUR EVERY MOMENT
- I did an internship in the gardens at Monticello and loved working not only in a historic garden but also with the public
- As a psychologist I was exposed to all religions. With in all religions is a perception of after-life and/or a heaven. Most of the heaven concepts were gardens or vistas of gardens., I took this knowledge and combined it with my intersts in various cultures and created what I call ' The Foxfire style of philosophical gardening', As a philosophical gardener, I was able to design a garden which features both the eastern and western philophies of gardening which are influenced by cultural and religious beliefs.
- I was a hobby gardener, that eventually opened our gardens to the public
- I began working in for the Horticulture as a student. After I graduated, I was asked to stay on.
- University teaching and outreach
- I am a forester. I was on the team which developed our arboretum and wrote the job description for the arboretum director. I liked it so well I interviewed and got the job.
- There's no one experience that influenced me. It's the memories of being amoung flowers and vegetables with grandparents and even great grandparents. , I worked in the retail end of the business for almost 10 years. I have to say that with the hands on experience and having the freedom to choose plants and designs I am learning and hopefully growing as a designer. So I feel like it is an ongoing experience.
- My student training at the Univ of Michigan as a botany grad student included working a great deal at the matthaei Botanical garden there. I came to love that sort of public garden work. Subsequent association with other garden directors i the then "small, up close and personal" AABGA clinched my interests. I have lost some interest as AABGA and APGA have gotten much larger and lost some focus on plants. Fewer people know plants - more people

know programs, procedures, business, gift shops, etc.--I hope we don't totally lose interest in plants as botanical subjects and not just "objects to be displayed."

- After completing my BS in Horticulture I realized that most jobs available didn't relate to education. I knew I wanted to be involved somehow in public education and horticulture, so decided to complete an MS also in horticulture to give more options in the field.,
- Sorry, there was no pivotal experience to lead me in this direction. There was just a love of the natural world and a desire to, in some way, help bring this beauty to others.
- Working at the garden as a volunteer while a student here at the university and my background in business and education. The combination of science, education and business and my love for the garden made everything click!
- This was an opportunity to get paid for something that most people do as a hobby.
- I was raised in a family of nurserymen, gardeners and florists. My interest in plants and history were combined in the rural or garden cemetery where I work.
- While watching an episode of "Victory Garden" ages ago, the segment was at a public garden and briefly went over what their garden was about and the programs they offered. That captured my attention and eventually steered me into public horticulture. I'm very glad that I made that choice..., Currently, this is the fourth public garden that I have worked in
- I'm the naturalist for the City of Stow and the Nature Center I operate is in a park with gardens and an arboretum. They were neglected for many years so I have been attempting to restore and maintain them.
- Background in biology, MSc.in botany. Hired as botanist, then promoted as curator and head of research and development department.
- Working at a public family theme park. I love the way you could change the personality of the space and the visitor's enjoyment but the use of plants.
- college classes focusing on plant taxonomy, ecology and conservation.
- love of plants plus value of public education equals this field

- studied wildlife and fisheries science in college but realized it all started with plants
- Learning to appreciate plants, vegetable and flowers from my wider family
- As a Land. Architect, I found teaching and education to be appealing; and working with a botanic garden gives me those opportunities.
- my two years of study at Longwood Gardens in the Professional Gardener Training Program was the catalyst for a career in public horticulture
- A lifetime of interest in plants, horticulture, and ecology. Masters in Landscape Arch, and Ph.D in Plant Ecology-- so I speak both science and design.
- A manager at the wholesale nursery I worked encouraged me. He went on to be the Director of Horticulture at a large botanical garden and hired me shortly after
- A love of trees, people, and their interactions
- People have an intense passion about horticulture, young and old alike relate to the plants and find joy and wonder there.
- I am a plant ecologist interested in conservation of species at risk and habitats in situ.
- The job opening for director of the arboretum came in the same package as curator of the herbarium. Since taking over I have used my interests and energy to take the opportunity to direct the arboretum towards the BGCI agenda and conservation of native species and away from a simple showpiece for a variety of cultivated trees.
- A Massachusetts Audubon employee came to my sixth grade class and handed out a key to common ornamental trees. I was able to go home and identify the trees in my yard. I became the family "tree expert."
- Desire to use knowledge gained in a number of positions to actually make things happen for the benefit general public. No pivotal experience occurred.
- General interest in forests, trees, woody plants, and appreciation of both natural areas and groomed gardens.

- My grandmother could "plant a telephone pole and make it grow" and I spent my childhood helping her in the garden. She was native American and seemed to be so in tune with nature. My hero.
- Undergraduate degree in Landscape Architecture and worked for public parks throughout college and professional life.
- My position as director of our Arboretum is just part of my greater responsibilities for operations and management of a research and education Center... it came with the job. However, the Arboretum, although only part of my responsibilities, is a very rewarding and definitely was consideration in taking the position.
- In teaching University courses in landscape plants, I visited public gardens for photography purposes. Becoming more familiar with the gardens, I developed further interest and over the years became increasingly involved as I discovered how important they can be in society.
- I have worked in museums all my working life. While making a job change about 10 years ago I took the opportunity to combine my interest/love of plants with my commitment to museum work in the form of public horticulture.
- always enjoyed working and playing outside. most of childhood vacations in state parks hiking and exploring nature with a strong appreciation for plants. grew up in a neighborhood on a river with plenty of natural lands to explore with friends. worked at a landscape nursery and "lawn guy" as a teenager. learned that ornamental horticulture was a profession during sophomore year of college, transferred to horticulture and never looked back.
- Talked into it.
- While in college I attended a lecture by a staff member from Callaway Gardens. I didn't decide at that moment to be in the field but it opened up the possibility.
- My most significant experience was the encouragement and mentoring of a colleague and professor of historic landscape architecture.
- Working with plants and nature. Making others aware of the beauty of nature and presenting that beauty to them.
- The job made it happen

- As a university professor, I had the opportunity to test the waters as a Director of Horticulture for a major garden. Someone took a risk on me since I had no prior management experience. That has turned into a career that has lasted almost thirty years.
- Personal interest in gardening
- Multiple visits throughout my life to public gardens. Also seeing visitors reading interpretive signage really inspired me.
- One day, while I was weeding in the annual garden, I heard a caperone reprimand a child for picking a pepper off a plant in the border. I realized the child was curious as to what it was, as he had probably never seen this growing before. I went over and explained to the child and the caperone what it was and THEN explained why you don't pick things in public gardens. But it was a turning point for me. I had always wanted to show kids in the city what their food looked like while it was growing but this was the first experience of that happening.
- This Garden is a treasure in the community in which I have lived for thirty years. I saw potential in it and applied when the previous Director retired.
- A PASSION FOR THE COLLECTION I CURATE, AND A DESIRE TO SHARE MY KNOWLEDGE AND PRESERVE THIS COLLECTION INTACT. ALSO, THIS IS A UNIQUE OPPORTUNITY TO BE IN ON THE BEGINNING OF AMERICA'S ONLY GARDEN OF ITS KIND.
- I can not think of a specific experience, but would like to comment that many employees in gardens do not come from a public horticulture background, with the general exception of those in the horticulture departments. Staff in other divisions, such as development, marketing, administration, education, executive, conservation, facilities, research are mostly trained and have gained work experience in areas outside of public horticulture per se.
- It started as a summer job - and I realized it could be an enjoyable career - now 37 years later...
- suggestion from undergraduate advisor and internship experience
- Have always been interested in plants and sharing that interest with others
- Personal love of gardening with background in natural communities management fit the field- using people's interest in home gardening and public

gardens to develop understanding and appreciation for living ecosystems and our ability to alter and affect it and care for our planet.

- Part time employment with Bartlett's Tree Experts took me to Arnold Arboretum in Boston
- Since childhood I have known that I would be involved in horticulture in some way. I worked in retail and commercial settings for years before going to college, I had topped out in those fields and felt like I could be doing something that gave more personal satisfaction. During my college education I considered many possibilities. I was most drawn to public gardening, teaching, and extension. Public gardening seemed to best address all my interests and skills.
- I have always gravitated towards this field because of the work being done.
- Wanted a job in a field related to my degree
- I have had a desire to serve the community and contribute knowledge and information. Public horticulture represents an important vehicle to do so and, in some cases, is replacing more traditional vehicles such as cooperative extension and the nursery trades.
- Serving on a trust/foundation that supported the garden and taking my family to visit the gardens and having such a great time.
- I'm at a college botanic garden, had been a regular faculty member in biology but converted to half-time director, half faculty. The botanic gardens are an amazing asset for the college; recognizing that as a faculty member made me want to take care of them.
- No specific experience. Love of facility and satisfaction of enhancing the lives of so many people.
- Family tradition-early exposure as a child to plant collections
- love of plants and desire to share that love
- I am from South America and my father was a very knowledgeable in horticulture, I love nature and all this made me interesting in horticulture. I study Gardens Design in Europe too and learn how the public gardens were a very important place for everybody.

- My internship through College
- My very first visit to a public garden was to see Longwood, Garden and that was all I needed.
- Basically it was my father's love of the outdoors that influenced me to enter the horticultural field.
- Spending weekends as a child gardening and working on invasive species removal.
- I entered the field of public horticulture via years of non-profit management; however, I have always had an abiding interest in botany and sustainable agriculture - am a Master Gardener, etc.
- As a lifetime academic, I realized one day I was burned out on teaching. Working in the museum-zoo-garden setting was the natural place to gravitate.
- I was in a graduate botany program at school that had an arboretum and was asked to join the staff upon graduation.
- I worked as a County Extension Agent housed at another public Botanical Garden for 14 years.
- I love to be outdoors and always have been. I am happiest there. My mother took us camping and my father is an avid vegetable gardening. So I chose something where I could be outside the most. And I love plants! , And, green was the color given to me when a child....and I had a green toothbrush, green plastic cup, green towel and little green dots sewn on my socks and underwear! I developed a green thumb, worked in a green house, studied horticulture, started working at a botanical garden, went to graduate school and studied public finance (another kind of green!). I am simply following a pre-ordained path! (And this is a true story....my mother gave each of the six of us a color.....)
- A summer internship at an arboretum got me hooked.
- I was pursuing a career in landscape design and contracting and happened to be at the right place at the right time and was hired in the infancy of this garden.
- I grew up working in the nursery/ landscape industry, and I have always had a passion for plants and plant conservation. I want to share my enthusiasm

about the green world. The public garden is a good tool to educate and promote these ideas, and to raise the level of plant, horticulture, and conservation knowledge.

- I have wonderful memories of working with my great grandfather in his garden in Clearwater Florida, and selling the bounty at his roadside stand. As local folks drove up I remember stuffing brown paper bags full of giant purple eggplants and fresh tomatoes that smelled of rain and warm July sun. I recall picking lady finger bananas right from the tree, and climbing the grapefruit trees, smelling orange blossoms, and being fascinated by the many species of spectacularly adorned thorny spiders that made their home in the citrus grove. My connection to plants and horticulture started at an early age and was propagated by an early understanding of how plants fed and nourished not only people, but provided for the entire web of life. From the earthworms in my mother's garden to the spiders in the citrus grove, plants provided the basis for all life -- even me as I played between the rows of peppers growing in the sandy Florida soil. Even then I knew we were all connected.
- Working with colleagues who share a common passion and witnessing public interest in, enthusiasm for, and enjoyment of plants.
- My background is in landscape architecture, historic preservation planning and organizational development. I worked for a national nonprofit prior to my experience in public horticulture.
- As a biologist having a broad interest in the natural world and a family background in farm/greenhouse/nursery business.
- While at the University, got opportunity to work in a germplasm project particularly on medicinal plants. Then on I found myself interested in working with plant collections, their display and creating awareness.
- I came into public horticulture by the back door, starting as curator of a herbarium in a botanical garden; through encounters with people from other botanical gardens, especially in other countries, I realized what an important role public horticulture can play in helping people appreciate plants and their importance in the environment.
- Gardening as a child, great memories, fulfillment
- I recall walking behind my Grandmother as she worked in her garden. Later in life, my parents influenced me in gardening. Still later, I found that gardening was a solstice for me, and then even later, found joy in growing roses, and even later yet began working on some public gardens in Washington, DC.

- An interest in plants from childhood, then reading Rachel Carson's Silent Spring in college along with coursework in botany and ecology.
- It came about from my job.
- I grew up on the east coast where there are many public gardens and when I moved to Owensboro, KY there were none. When I was asked to be on the Board many years ago, I thought I would be able to contribute something important to the community. visiting public gardens as a child
- a love of the outdoors and working with plants.
- No single experience
- What brought me into this work is based on many experiences and perceptions....one of them doesn't seem to stand out. Most of them are remarkable. , I think that putting it all together and having a high expectation of success and then realizing most of it will qualify as one.
- Having Dr. Harrison Flint as my major undergraduate adviser. He developed a public horticulture options in the horticulture department at Purdue University. I was lucky enough to stumble into his sphere of influence as an undergraduate.
- Growing up, I helped my dad clear invasives and other unwanted plants from a half acre of woods behind our house. Despite the fact that I got a whooper of a case of poison ivy, I was forever hooked on the world of plants.
- Visiting conservation-oriented, native plant gardens, and seeing the vision that a garden should influence the world beyond its boundaries. , Working at the Missouri Botanical Garden as a postdoc--an institution that shows how serious and important botanical gardens can be.
- I was studying botany in college and I took a dendrology course. Ever since I was hooked on trees and knew that I wanted to work in the industry. I did two summer internships at a Botanical Garden during my undergraduate years and I knew that this was the place/industry for me.
- Mostly, I fell in love with our Arboretum site and wanted to be involved in its management and protection

- I wished to improve the quality of life and education for a much larger population than was possible in more former job, which was President of a residential design/build firm.
- Visiting the gardens & greenhouses at Smith College. There I met with and had many discussions with Greg Armstrong, the Director.
- The dynamic nature of working in a public facility, fund raising and live plants.
- Sheer desperation. After the Alaska pipeline was built, tourism skyrocketed and there weren't that many places to take visitors. Buses began showing up at the Experiment Station and hundreds of visitors tromped through our research plots-- no signs, no nice pathways, nothing! We made the decision to become a botanical garden simply as a move to accommodate growing numbers of visitors.
- It's what I've always wanted to do
- My roommate in college completed an internship at a public garden. I thought this sounded like an interesting track within Horticulture so when I completed my degree I applied for positions within public gardens. I have not regretted taking this track in all of my years of work within Horticulture.
- When I was a horticulture student at Penn State I worked as a summer student at Longwood Gardens. That is when I made the decision to work in the field of Public Horticulture.
- I was interested in horticulture with a diversity of opportunities. Public Gardens offer a wide magnitude of opportunities, from research to garden design, education, exhibits, production, etc. During my undergraduate studies, I was introduced to many possibilities in the horticultural field which greatly assisted in directing my career path.
- As a Landscape Architect and Project Manager working for a landscape construction company I was involved in construction of a new exhibit at the Oregon Zoo. While we were under construction I came to the Zoo to check on our progress almost every day. I loved the atmosphere and enjoyed meeting some of the staff, so when an opening came up later I decided to apply.
- reading of Dr. Fairchild's botanical experiences as well as pursuing a career in horticulture

- My background is not in public horticulture. My experience is in the areas of fund development, marketing/promotions, and public administration.
- I am faculty that teaches Landscape Architecture. My appointment is 80% teaching faculty and 20% Associate Dir of University garden. I was always interested in creating places in urban areas for people to find peace and a place where they could get back in touch with nature.
- Long-held desire to create a space of beauty and peace for others ...
- Worked with a fabulous Professor that was an inspiration to everyone with the slightest interest in horticulture. Together, this professor, 30 Master Gardeners and a Hort tech. turned a dump into a 3 acre wonderland for the benefit of the students, public and commercial enterprises.
- I made a mid-career move from commercial landscape construction to public garden administration after taking continuing education classes at the New York Botanical Garden where I decided I wanted to spend the rest of my career in public gardens work.
- I was raised in close proximity to the Brooklyn Botanic Garden and frequent visits to the Japanese Garden and the Conservatory probably influenced how I felt about the living world and particularly plants
- Since we are also a museum of photography and film, there are many digital images taken of the gardens by visitors and professionals. The art photographers and cinematographers prefer garden plant labeling system that is not visible, i.e. does not appear in images. This is in conflict with the garden enthusiasts who would like every plant identified. We have developed an internet and on-site accessible visitor friendly interactive program that identifies plants by image, culture, and location. This internet site will be launched in the near future.
- High School FFA project in greenhouses and Landscape Design.
- I needed a job
- I took horticulture in high school
- I didn't choose the field of public horticulture but rather took on my current job because of my business expertise. However, I have come to value the public horticulture field because of the importance of plants and greenspaces for the physical and mental health of our communities, and as places that inspire them to take the plant world seriously.

- Consulting with major, international conservation organization., Lifelong amateur interest in science, evolutionary biology, conservation., Lifelong aquarium hobbyist.
- I've always enjoyed visiting botanical gardens and arboreta and when faced with the loss of a faculty research job found employment in the field of botanical gardens. I consider myself a botanist, not a horticulturist.
- The love of plants and the love of teaching and the love of gardens. No one particular experience. Inspired by highschool horticulture teacher to pursue horticulture teaching career. The teaching passion is what took me into public gardens, particularly a university garden.
- Love of deserts and desert plants.
- My interest in public horticulture stem from an interest in plants and education. These combined to motivate me to build a botanic garden at the University of Delaware.
- An interesting question. I would say that it was my realization that public gardens combine my interests in horticulture, education, design, and concern for the environment.
- I was a student at Purdue University and my advisor Dr Harrison Flint encouraged me to pursue public horticulture.
- Was very influenced by my parents to be a good steward of the land. Mother was very involved in local conservation and design efforts. I then studied landscape architecture in college and, after completing my BLA, decided I'd like to work for public parks or gardens. Got my MS in Applied Health Sciences with a focus on admin.
- I volunteered for an after school gardening program at the South Carolina Botanical Garden, and was later hired to lead the program. At the same time I was pursuing a secondary science teaching certificate. I found I enjoyed informal education far more than formal education, and steered my career in that direction.
- I've always been interested in the natural world, having had many experiences in nature as a child. As a family, we visited the Rocky Mountains every summer, and that greatly influenced my love of nature and the outdoors. I have always been interested in educating people about important issues, so I connected the two passions for my work.

- An opportunity arose about 15 years ago to join an arboretum as research director. After some stints in academia and government, I was ready for a job in which I could actually touch plants again!
- Working an internship at a public garden, helped me realizing that I enjoyed the variety of work within the field of horticulture that was available. This became very appealing to me once I worked in a large wholesale nursery doing the same task for weeks at a time.
- I am interested, trained and experienced in all aspects of botanical collections. Tying conservation, global climate change, threatened and endangered plants, and loss of biodiversity to public education and the importance of botanical gardens and collections is paramount as to my motivations within this field
- Always interested since childhood, college BS degree in Forestry and always interested in Arboretums.
- I was hired by Cornell Plantations for money and I needed employment.
- Public Horticulture and the associated arboretum is an excellent educational tool and, along with accessory activities, an excellent form of community outreach.
- Volunteering led to the job. My degrees are not in horticulture
- I was influenced by my experiences as an undergraduate at the University of Wisconsin where I developed a love of plants and the desire to share that love with others.
- I can't identify a single experience, but I love how public horticulture allows me to work across a wide range of disciplines--botany, horticulture, ecology, education, community development.
- have worked in the Zoo horticulture business for a very long time. Decided on horticulture rather than biology because of an incident with an elephant as a relief keeper.
- An accident of fate. The position that I was offered was as the director of a research institute. The institute also runs a nature center and botanical gardens. I have done all my learning about public horticulture in the field!
- I am a developer of outdoor education programs and this was the next step in my professional development.
- Working with plants

- Local garden in a downtown setting which provides significant display, educational and scientific amenities to the local community.
- Dumb luck.
- Working at retail nurseries showed me the excitement and enthusiasm people have for plants. That experience inspired me to dedicate myself to public horticulture with the goal of sharing my passion for the world of plants with a broad audience.
- The public garden we have is a living laboratory for our college students to study and learn about all aspects of horticulture. By teaching students the natural progression was to become involved in the actual "doing" that we were teaching.
- This was a default retirement position: friends of ours asked us to head this garden at the time they donated it to Muhlenberg College
- Always wanted to be in Public Horticulture -- ever since reading the Secret Garden as a child.
- While courting my future wife in the early 1970's in Amherst, MA., I visited Smith College's Lyman Plant House and met with and befriended Gregory Armstrong, the Director of the Smith College Botanic Garden.
- I have always loved plants since a very young age. I decided even before college that I wanted to have a career that always kept me surrounded by plant material.
- Have worked at various gardens before receiving graduate degrees; then as a faculty member had the opportunity to direct a university garden. The "public" part is a natural extension of my teaching.
- As an Ohio State University graduate, I had the opportunity to have Dr. Steve Still as my advisor and teacher for plant ID. I did an internship at OSU Chadwick Arboretum and had always wanted to be in a public garden setting.
- I had lots of good introduction from grand mothers and growing up in the Chicago area had much to be impressed by zoos, botanical gardens and museums.
- I was encouraged by my undergraduate adviser to look into a career in public hort. Prior to that, I had not considered it.

C-2: Responses to question 9

Are there any other activities your garden offers to foster leadership development of your staff?

- I think directing and teaching volunteers is a wonderful leadership opportunity, as each volunteer returns to the community with raves about our staff and the gardens.
- Succession planning
- Many ongoing opportunities for additional training are always available, and the staff are encouraged to partake of these services.
- We don't do ropes courses. It's a small organization, with limited ability to do other than mentor, provide funds for some professional development, etc.
- I'll reiterate - I'm a volunteer. The Town owns the Arboretum and we have a part time staff. This may not be appropriate to your survey. Our Board is a working Board and our mission is to raise money for trees, bridges, some program(administered by Parks and Recreation staff), master plan and other plantings. We have many and varied ways of generating finances.
- directly working with and shadowing the work of the director until familiar with plants and procedures
- I am a small garden with a board of directors and only one other staff member. I mentor college students through our fellowship program. Weekly, I believe I influence a number of visitors from all walks of life-so my mentorship is more abstract than perhaps you are referring to
- Offer increasing levels of responsibility. Especially leading a project team. That teaches processes that can't be learned elsewhere. Project leaders are mentored.
- I am the staff and work very independently.
- Staff mentoring summer student staff in leadership skills development. , Staff, over time become empowered to mentor volunteers who, in turn, gain leadership skills
- Job shadowing,
- Senior staff have responsibilities for leading Advisory Council committee work.

- We have a very small staff of 2.5 person days a week (including the director). Day to day operations in tree care and management are done by grounds staff and are outside the control of the arboretum.
- (Note - I am the entire staff.)
- It must be understood, we have no professional staff directly responsible for the garden/arboretum other than myself. However, we do foster training opportunities for non-professional staff.
- We hire from within frequently, which fosters a sense that developing leadership skills will be rewarded. We have a continuous improvement, team process culture and frequently assign staff leadership functions related to teams. We also have many of our staff participate in a weekly television spot, which gives them exposure to speaking, presentation and public visibility. We encourage other media engagement, as well. We support staff leadership participation in organizations beyond ours, and we encourage staff to take university courses that support their career goals in relation to their employment with us. We engage many staff in the hiring/interview process, and include them in presentations and tours involving visiting professionals.
- I am the only employee at a new university botanical garden. the university and supporting foundation support leadership development through funding site visits to other gardens, attending national conferences, and programs on campus
- Unfortunately, the skill level among my employees along with current motivation causes me to think that the second tier will remain at this level. All of the above are important for the success of this and all other organizations. A strategy that we will follow is to hire an assistant director and do all of the above in preparation for a transition in leadership.
- Much of this is new to my administration and was not in place under the previous Director which explains in part why they went outside to get me.
- I strongly encourage staff involvement in presentation at annual professional meetings, mentoring of interns, and peer review opportunities such as MAP and AAM accreditation
- Encouraging staff to participate in professional organizations and act as ambassadors of our organization.
- This is a very small, young public garden in the formative stages of budget and infrastructure development; they have had high Exec. Director turnover until I

arrived this past year. I am dedicated to fostering leadership development of the staff - need to "build organizational capacity" first, however.

- Attendance at APGA meetings. Participation in committee work with board members.
- Encouragement to attend Board of Trustees meetings.
- off site conferences are encouraged
- Encouragement to pursue leadership opportunities in affiliated organizations, e.g. horticultural plant societies, native plant societies.
- We are part of a University that offers many training classes in leadership development.
- the state just implemented a facility training program. However, that is for individuals that have already been hired to a higher position of management. There is no training program that I am aware with that state for up and coming staffers looking to be promoted.
- Monthly leadership training.
- We had a very dynamic program that fit most of your categories above, plus we would send 4-5 staff together to areas of the country to view several gardens. All of this has stopped due to budget cuts.
- We are so tiny, we have no time for leadership development. We all have leadership responsibilities, and we work as a team. We have been around so long, we all have reached the top pay scale and top ranking at the university, so there is no motivation to improve into another job level.
- Staff are encouraged to become active members of APGA; to serve on committees; to present presentations at professional conferences; to lead committees and activities both within our garden's organization and outside of the organization.
- Although we do the above, we need to do more and better leadership development. We need to prepare the next generation to run this garden.
- Each staff sets goals annually and also requests any professional development they would like. We try to budget for reasonable requests when we are financially able.

- Our City provides leadership development through a program offered through the City called the Mayor's Leadership Development Roundtable. It's a fairly involved program with several high quality components. All employees are encouraged to participate.
- Constant interaction with Board of Trustees., Encouragement (within budget/time limitations) to participate in APGA and other professional organizations.
- We have a very small staff on only 2 full-time employees, however I do direct an undergraduate program with a focus on training students interested in a career in botanic gardens. My programming is more focused on curatorial duties, but we do address issues of development and management.
- Professional Improvement Fund to support enrollment in classes, workshops, etc.
- Ask staff to assist in development of annual work plan and setting work goals for coming year based on review of past year.
- The first and fifth items are offered by the Park Authority and are available to my staff.
- We offer regular leadership development training experiences for the entire staff as a group and in teams.
- Planning and leading activities and special events.
- lectures, research initiatives,
- We provide financial support for staff development - through our private partner - for every permanent staff member whether they work for the private partner or the public partner.
- We have tapped into some of the programs that the Chamber of Commerce has provided
- as an entity belonging to Muhlenberg College, we have a fairly free rein in what we choose to do, and what enrichment activities we choose to participate in

C-3: Responses to question 12

What continuing education topics or programs about leadership would you like to see offered through APGA or other sources? Please be specific.

- My training was with thirty years in the non-profit arena. As a small garden, I have been unable to travel to your conferences, although I read every word of PUBLIC GARDEN magazine and use many of the ideas in my newspaper columns and magazine articles, myself. , 1. Working with non-traditional volunteers - community service, physically /mentally challenged/one time corporate volunteers, 2. Fostering leadership in a passive garden, 3. Involvement in community (this has been done, but can always be re-done)
- I think anything on motivating and managing are important. So much can be done with a motivated and appreciated staff, and volunteers.
- ~Succession planning, ~Financial management, ~Human resource management
- Budgeting for a garden - what are the real issues - capital investments, operating budgets, staffing, etc
- Conveying the importance of plants and botanical gardens to the public.
- I believe APGA could offer leadership seminars for mid-level staff in public gardens. A workshop on job transitions (losing your job or a position being eliminated) for all staff.
- How to deal with difficult people., How to manage/encourage/nurture volunteers., Defining board vs staff roles., Dealing with micromanaging by board.
- Personal mentoring from the community outside the Botanical Garden would be helpful., There are so many sessions offered by APGA that are of benefit; the problem being that those of us from small gardens have to pay our own way and the conferences are usually held in expensive locations.
- Problems for small gardens -- creative ways to deal with problems, etc.
- grant writing, volunteer program development
- have not thought about it but it is important at a botanical garden
- Probably there aren't too many programs for a 32.5 acre arboretum with a very modest budget.

- Sacred Ecology, Experiential stewardship
- LEADERSHIP SHOULD BE PART OF EVERY INDIVIDUAL., MORE THAN LEADERS WE NEED PEOPLE WITH RESPONSIBILITY AND INITIATIF.
- I am developmentally based-I think you either have leadership tendencies or you do not. There is a very small percentage of the population that make for good leaders. At best-one can hope to train and develop better complimentary workers-identifying strenghts and weaknesses which may allow for leadership in one area but perhaps not in another. A good leader is also a good observer., Programs on self awareness, knowing your strengths and weaknesses and how that knowledge can be applied to better programing. For example: Perhaps one staff member loves to organize and present events, but you have that employee handling the volunteers and the childrens programs. Allow this employee to become active with your next 'fund raising' black tie event, or your bridal program or perhaps your next edible flower lunch and learn., Evaluate all your staff-ask them where their passions and interests are-and then fit programing around staffing and volunteers
- Decision-making processes, hiring, total quality management
- Mananging staff, planning for staff, evaluating staff
- motivation, recognition and retention
- Project management (for construction or reconstruction projects and site improvements), Budget development and projections, Time management and priority setting
- APGA has done a very good job at addressing leadership topics. Unfortunately, small garden budgets don't allow for a lot of outside travel. Regional efforts could possibly be a better way to address leadership programs. I was very active in the Bay Area Garden Network (BAGNET) at my previous garden and we looked at leadership issues at almost every quarterly meeting.
- Managing high qualified personal;, How to stimulate interest of employees after several years of service;
- organizational skills, training and planning skills - for garden staff , staff evaluations
- staff leading volunteers, younger staff leading older participants, volunteer leadership development

- How to be a good mentor; general introductory leadership skills
- Leading from Any Chair - promoting leadership in all levels of the public garden
- Budgeting, Grant Preparation, Interdisciplinary workshops with design professional and green industry business people.
- Personnel Management, Public Speaking,, Strategic Palnning, Team goal setting
- I would probably not be in a position to take advantage of any programs offered.
- Grant writing, funding sources, employee professional development.
- Role of the Executive Director in encouraging Board leadership development.
- Building a team., Setting and getting buy-in for goals., Increasing development activities and revenues.
- Seminars on how and where to obtain grants.
- Developing and working with Board of Trustees., Human Resource management., Garden leaders and the fund development process., Operational planning for gardens or implementing the strategic plan.
- Not certain if APGA would be the organization I would look to for training for our staff...
- In our state, ethics issues are significant, so training in this area relative to garden governance issues would be timely., 2. We utilize volunteer boards and work force, so training in this leadership realm would be helpful., 3. Non-profit financial management as influenced by recent changes in accounting standards., 4. Training to expose garden professionals to the many ways their institution can participate & lead in community development and economic development strategies, thus becoming more relevant to community needs and building public support., 5. Emerging issues training -- i. e. sustainability, climate change, invasive exotic issues, etc. to keep garden professionals abreast of societal challenges and opportunities., 6. Management training to assist with contemporary developments in management best practices that would be most relevant to the public garden sector.
- Education topics and programs are important and there are a number of valuable programs out there (I cannot remember specific program names at this point). I believe APGA could "tap" into some of those programs. However, I think some of the best leadership training experiences have come from interacting in small

roundtable sessions with my peers. Mike Riska at Delaware Nature Society used a method of a group of people sitting in a circle, selecting a leadership issue, and allowing each person to express one thought on the subject, this continued until no new comments are made, and then moving on to another topic., In short; smaller groups in interactive sessions allow all to be engaged.

- Soliciting funds sessions at every national meeting.
- Perhaps this may fall more under management but I would like to learn more about how other gardens are structured in regard to responsibilities.
- Regional seminars on various aspects of public garden management that have been addressed by individual gardens and how it has been addressed - mission vs. income, board development, staff development, strategic planning process., Identify and make other gardens aware of professional development programs (noon-garden sponsored) that have proven to be beneficial to senior staff members.
- Leadership! That's the deal. Too many times, organizations/conferences say they are providing leadership training and don't actually get to it. It gets lost in other areas. What are the characteristics of a successful leader? How do you inspire others etc. Sometimes I think the best method is to arrange institutional staff exchanges so staff can work with other successful and inspirational leaders and see first hand, what makes them successful.
- Management, Finance, Marketing
- Training in governance vs administrative responsibilities, Financial training for administrators
- An introduction to supervision. Project management.
- Financial accounting principles applicable to non-profit organizations for executive management and best practices within our industry, Best practices in dealing with cash controls and fraud prevention, Long range planning models using new approaches successfully
- Leadership can be developed but the foundation must be there. It is important to distinguish between management and leadership. Managers do things right, Leaders do the right thing.
- I WAS AT THE APGA EVENT IN BOSTON RECENTLY, AND IT WAS EXCELLENT AS FAR AS IT WENT. THE PORTION OF THE PROGRAM DEVOTED TO LABELING WAS WEAK--NO ROUNDTABLE DISCUSSION

OF WHY GARDENS CHOSE THE LABELING SYSTEMS THEY DO USE, WHAT WORKS AND WHAT DOESN'T, OPPORTUNITY TO TAKE SOME LABELING SYSTEMS OUT FOR A TEST DRIVE OR AT LEAST SEE THEM IN ACTION. PART OF WHAT GARDEN STAFF DOES IS DIRECT BOARDS ON HOW TO SPEND MONEY AND WHAT PROJECTS TO WRITE GRANTS FOR, YET LABELLING--SO BASIC TO INTERFACING WITH THE PUBLIC, IS SO HARD TO GET USEFUL INFORMATION ABOUT, ESPECIALLY ON THE WEST COAST. EDUCATION ABOUT A GARDEN STARTS WITH THE LABELS ON THE PLANTS. THE GARDEN I WORK FOR IS SO NEW, AND WE WANT TO GET THE LABELS RIGHT, OR NEARLY SO, NOW AT THE START., BOARD DEVELOPMENT WOULD BE A USEFUL TOPIC.

- I believe the Museum Trustee group as well as the American Association of Museums offers supplemental programs to APGA. APGA should work to build partnerships with associate or affiliated societies
- Leadership styles, Traits of great leaders
- *Advanced CEO (global trends, benchmarking, etc), *Training for mid-level management to groom for CEO role, *Opportunities for students to learn from or be mentored by CEO's, *Public Relations
- Programs to offer framework for structuring a leadership position in a growing garden- how to turn project implementors into program leaders- teaching budgeting, planning, supervision of staff.
- Strategic Planning, Community Education Leadership, Developing partnerships with local entities of similar interests
- I don't feel the urgency for developing leadership programs via APGA.
- More cross training - many new CEOs come out of business world and have great organizational and management abilities but often don't really understand bot gardens and on the flip side it is difficult for staff from the mission side to get a good understanding of the businesses that we run
- big-picture planning, writing annual reports, prioritizing and budgeting
- Training focused on the needs of new CEO's or Executive Directors in strategic planning, management, board relations etc.
- How to set a goal-one at the time and follow through., how to achieve the goal or goals with the board or chair of the committee in a non profit organization?

- Being a smaller garden in a larger organization(Zoo), leadership training often goes to individuals that handle more of the financial responsibilities. We have over a 20 million dollar budget but I am only responsible for about 3 to 4% of that total. With that said I think training would be best geared to that situation. I would like to see training in Development, and/or how do you best deal with a Development Director, Marketing...., Master Planning, and who is critically involved that you need to be in contact with such as the Architects, Engineers, managing contractors, ect. , Each institution is different and has different needs but there are a lot of similarities such as the need for money to operate. Financial Management at institutions would be another good core course.
- I not sure how to best describe what we need, but an alarming trend nation wide as well as within public gardens is the "Instant VP Syndrome". We need basic course in how to be an effective, efficient and responsive employee. In most cases we see many who can't live up to their resumes'
- Mentorship, finance and accounting, cross-training with AAM.
- Managing / Leading Through Organizational Change (i.e. how to bring "founders" along as an organization professionalizes and responds to changing demands on Public Gardens).
- Something on "Sharing the Credit for Success", Helping Others Succeed.
- How to develop staff management skills, How to evaluate employee performance, Tips on how to prioritize (time, money, projects, etc.)
- I'm not sure, but I will say that there is often a disconnect between being a horticultural expert, and a good manager. It seems that just because you are a professional doesn't mean you are a leader/ manager, so classes in garden management would be nice.
- Team building, Diversity training, Conflict resolution, Business management
- Sharing experiences; Outcome of Challenging projects;Lectures/discussion on problem solving
- Leadership beyond the garden wall--providing leadership within your community (e.g., how to foster relationships with your government reps, business colleagues, educational organizations), Looking beyond the next curve--positioning your organization to meet the needs and take advantage of opportunities 10, 20, 30 years from now (Getting information and forecasts of demographic changes, visitor interests, tourist patterns, learning patterns, etc.), Valuing the trees in the forest. Learning how to use the individual components in your programs to build

strength for your organization. Size isn't always the most important thing.,
Leading by example--how to encourage leadership within your organization.

- How to become a effective supervisor/manager., How to keep employees motivated.
- I would like to see the APGA offer two types of leadership programs:, 1. General leadership. Teaching people to "pull" not "push", teaching the psychology of leadership. Teaching good old fashioned Dale Carnige style leadership, just right out of "How to win friends and influence people.", 2. Specific leadership clinics for people who are employeeed as:, a. Grounds Maintenance Directors (Gardening), b. Horticulturist Directors, c. Section leaders, d. Education dept. leaders, f. Specialty program leaders (such as Dtr. of a Butterfly House, for example.), g. Of course, Gardens Director leadership (people who have a Director position of the entire enterprise.
- Succession planning in leadership roles.
- What benefits other than monetary can be offered to non-profit leaders who are receiving very little money for their efforts.
- Board Leadership!! Our boards are lacking leadership skills and they need standards and training that comes from someone other than their Executive Director.
- Distance education certificates and one week residences at major gardens in a wide range of areas.
- Planning methods., Program analysis and assessment. , Evaluation methodology.
- Public speaking (I've attended many seminars where the speaker had a great deal of knowledge but had terrible speaking skills.)
- Ethics and values, Human resources--making the best out of evaluations, Team work, How to run effective meetings, Strategic Planning
- Board management, Membership development, Strategic planning
- Fostering and promoting the study of plants- from leaders down. , I am continually dissappointed with the diffusion of leadership from different disciplines(other than botany and horticulture) taking the high administration positions in botanical gardens. I believe, we as an industry, should be promoting those indivudals with backgrounds in botany and horticulture. As a nation, we are losing college departments in botany because there are less and less students enrolling in this discipline because of lack of jobs. We are not helping matters by

not hiring those who have studied this discipline. Thus we need to foster leadership early in students careers to be prepared for leading our organizations.

- native garden management (ie, naturalistic gardens using native plants), horticultural staff oversight--(perhaps sharing various models of management and organization)
- I learned my leadership roles by trial and error, and by watching others that were successful leaders. It would be of great interest to learn leadership techniques which affect volunteers. Since we are affiliated with a University, programs on working with and providing 'leadership' for students would also be helpful.
- Dealing with difficult boards., Personnel development, Financial management for the non-financial manager, Negotiations skills
- Budget Management, basic leadership skills, working to assure smooth transition/succession between administrations, dealing with change
- Leadership development topics such as a session on showing those staff in the trenches that they really are leaders in their own way whether it is leading volunteers or leading a committee through a project., In addition, I feel that APGA or someone should offer a certification program for public garden professionals.
- The hardest jobs to fill are in Horticulture Management. This requires skill in the creative part of horticulture, the scientific part of horticulture, applied horticulture, and the ability to be good with people and get them to want to work with you and your organization. We have had a very hard time finding those skills in one person - perhaps not possible. At least the manager needs to understand these areas and hire to insure that all are covered.
- Leadership is the apex of many diverse skills and experiences. Managing & developing resources, Human resources as well as financial, sound business acumen, mentoring opportunities, new technologies and their applications in botanical gardens. Setting professional standards (attainable, measurable) for public gardens and public garden employees.....just a few rambling ideas...as well as continuing the professional development topics currently offered through APGA.
- How to lead meetings effectively., How to encourage staff when there is not always monetary means for reward.
- --public garden management at a mid-level basis for operations management, not so much for leaders of national-level organizations, --more emphasis on local

issues rather than global climate change, --stick more to running gardens, rather than public education trends, --more information on grant writing and funding issues, rather than one small session, --course programs on cross-level communications and translations from grounds level to operations level to management level to administration level, handled as a single symposium session set, not scattered courses. Wording and ideologies are different at each level, and need to be more unified to make gardens run smoothly at every level. Many levels are too discrete and need to understand the other levels

- Leadership through Collaboration
- Managers need to know how to manage people not just plant collections since even curators need to work with many staff members. Knowing how to manage volunteers so that the experience is mutually beneficial is crucial.
- Leading, Training, and working with Adults , Working with foundations and developing relationships, Conflict resolution, Shadow leadership
- Organizing a volunteer program for the garden
- How to understand financial statements., Approaches to planning., Interacting with volunteer trustees/directors and theories of governance., Problem-solving in a public context., The strengths (and weaknesses) of teams., Theory of decision-making., Emotional quotient as well as intellectual and content-mastery quotient., Marketing, public relations and branding., Spokesperson skill development., Collins's "Good to Great" in the context of the public garden.
- Pre-conference workshops similar to what has been offered in the area of curatorial training, but with a focus on issues related to directing gardens.
- Servant leadership, how to be a better leader, traits of good leadership, how to deal with difficult people
- More symposia and local programs for our staff to attend.
- These programs are typically too expensive for my existing budget. I pursue within university opportunities and other less expensive programs.
- Please be aware that a group of public garden directors is currently working on developing strategies to better meet the leadership development needs of young professionals in our field. For more information, you might contact Paul Redman, director of Longwood Gardens.
- Team Building, Budgeting, Mentoring

- Good question. I just became involved in APGA this summer and have not looked at the programs to any extent. Mentoring, supervisor exchange programs, workshops, institutes, etc. have been important to me over my 25 years of management work, training, and experience., Unfortunately, I can't be specific about APGA at this time.
- Working with staff to develop vision, goals and objectives., Supervisor training., Making change that is accepted by staff.
- Strengths-Based Management- based on Gallup research
- As much as I would like to see some mentoring of new directors by experienced ones, I find that each person is unique and has special capabilities. Defining a "recipe" or ingredients that make a great leader is difficult. There are activities (fundraising, public relations, accounting, etc.) that we could use some training in. I have also found that taking a leadership training course is often viewed as a boondoggle by administrators.
- Methods to learn leadership skills.
- Political tact
- Leadership training in dealing with arboretum volunteers and developing fund-raising activities.
- I am very interested in long term succession strategies - particularly in public sector strategies.
- As a director, I would value training to enable me to better mentor my staff and to bring out their best on the job.
- Conflict resolution, Measuring and monitoring performance, Maintaining self esteem
- Practical everyday aspects which are developed to highlight a "best practices" scenario.
- How to conduct a successful meeting from agendas to meeting notes and action items.
- Museum Management Institute type trainings that extend over a week or more.
- Strategic planning, Supervising a diverse workforce, External relations

- Conflict management, Planning, Developing staff, reducing resistance to Change
- our particular problem here is leading "up", not down: getting the College interested in garden-related (not just research-related) activities
- Some kind of program where Directors of university gardens or arboreta are given chance to share hints about working with the administration of the universities who may have financial and political agendas that could impact the gardens.
- Negotiations, Dealing With Difficult People, Financial Management For The Non-Financial Manager, Managing Up
- Dealing with change, Personnel management, Team-building
- Leadership and Delegation, Leadership vs. Managing
- don't have any specific programs or topics to recommend but there are people who have specialized in providing seminars and courses of this kind and they should be sought out.

C-4: Responses to question 13

In order to train future professionals for leadership jobs like yours, what should universities emphasize in their coursework? Please be specific.

- Understanding that job satisfaction in this field far outweighs salary. making a difference is irreplaceable.
- Multidisciplinary courses in curriculum. Encouraging students in horticulture to take classes offered by other departments in communication, human resources, leadership development, etc will better prepare them for future roles.
- non-profit financials, motivating staff and volunteers, working with volunteers, strategic planning, communications - oral and written, time management
- Conflict resolution/employee relations
- ~Fundraising , ~Human resource management, ~Strategic planning, ~Financial analysis, ~Horticulture (leaders of public gardens need to have a fundamental understanding of the mission of the organization in order to be successful)
- Public relations skills. Fundraising is becoming the major role of any garden director, and these skills essential: public speaking, writing a coherent sentence, communication skills (how to tell someone what you want or need. The technical skills are there, the others are always left off the curriculum.
- employee-management relations , time management, planning strategies
- I'm lateral entry, so I would be more interested in Executive Sessions as a certificate or continuing ed., For someone to pursue in a linear fashion classroom training for the job I have?, Botany, Hort, Environmental Studies, Master Planning, Design, Facilities & environmental systems, Development / fundraising: annual & capital, Marketing & Public Relations, Management:, Strategic Planning, Financial management, budgeting & risk management, Human Resources, Education: , Learning styles, informal learning, adult learners, Recreation, Department, Conflict resolution, Inventory principles, Effective listening
- I believe courses that are offered at the graduate level (management & leadership, financial management, strategic planning & general non-profit classes) should be offered at the undergraduate level.
- Have professors that radiate a passion for what they do and a love for plants. If the student has the right character he will gravitate to leadership. Leadership

qualities are a matter of character and independence. A really good leader is born, not made.

- Cultural differences in the workforce and how to make it work for you., Nurturing talents in those who work for you/work with you., Succession planning.
- Botanical Gardens/Arboreta/Public Gardens are all service organizations and must function as such. Some are oriented towards display and some towards education so their functions vary. It would be helpful to have models for each approach.
- plant courses
- Business management, business law,
- visiting many botanical gardens during school trips, learn how to 'team work' w/ other students (prep for volunteer leadership), internships in various areas of hort., business classes & strategic planning, grant writing classes
- labor issues, psychological analysis of humans, substance abuse situations, legal issues, worker's comp claims
- Internships. Communication skills, fundraising skills.
- Non profit management, money management, human resource management, fund raising skills
- Business finance
- Supervisory and management skill sets and an understanding and managing multiple personalities.
- A well balanced curriculum that includes finance, accounting, management and written communication skills.
- Financial management, Effective writing/speaking
- integrity, dedication, discipline, compassion
- I think it would be incorrect to assume that leaders are naturally borne from Universities.
- Budgeting, Time Management, Project Development

- Possibly I was born with some of these qualities (strong parents who supported community with the thick - if you have an education, you have an obligation, Boarding School, Girl Scouts especially have cultivated these qualities, I am blessed with a sense of humor but I can be truthful that way!
- the basics of landscaping, gardening and love of the earth
- RESPONSIBILITY
- cultural philosophy-anthropology, religion, communication-awareness wheel, conflict resolution, tourism, smart-growth and ecology, business, finance and business law
- Teamwork, communications, technical expertise, listening.
- communication skills
- Botany, Taxonomy, Ecology that is useful, e.g. biomes, plant physiology that is useful to gardener, landscape design, greenhouse management, propagation, courses that help understand the broad public, Economic Botany, History of Science
- non profit management, development (fund raising), media relations
- Budgeting, Research skills, Effective communication with/education of others, Public speaking, Technical writing
- management, plant taxonomy, GIS mapping, plant ecology, plant conservation, natural and the newest/safest forms of pest control
- include business skills, public speaking, writing skills, face-to-face charettes, (operational) fundraising skills
- budget, people skills, etc. - same as in all leadership fields
- ethics
- Perhaps budgets and managing people...
- Internship
- Management/teambuilding and leadership of people - look at as many leadership styles as possible. I am a big believer in MBTI (Myer's-Briggs) as a beginning

point for team building. , Budget and fiscal training, understanding workplace law/ protected categories/ disability acts etc

- Technical training in horticulture, Biogeography, Ecology, Business management for non-profits, Grantsmanship
- You get a lot of technical skills at the university in your major but I think most schools miss training their students on people skills, business management, and team development.
- Landscape architects should be trained more in plant material and Horticulturists should be trained more in design.
- Communications skills, written and oral presentation.
- INCLUSIVENESS WITH STAFF, BUILDING ON CONSENSUS, DIFFERENT WAYS TO SHARE YOUR VISION WITH OTHERS
- Plant taxonomy is a dying art/science. Biodiversity is one of the major crises facing the world and most people have no idea of how to even begin measuring losses in biodiversity. Botanical leadership could come out of love of plants based firmly on a deep knowledge of plants and their diversity of structure, function, interactions, lifestyles and so on.
- Management, vision, execution
- Diversity of course work, seminars, etc.
- Nonprofit management., Strategic planning., Organization and reorganization., Institutional assessment.
- teamwork, strategic planning, goal setting, building friends and development
- Most college graduates that have been hired here have no or almost knowledge or experiences within turf management. Usually they have knowledge and experience with other plants.
- Topics related to the previous questions answers
- this really does not apply to our garden...
- Public speaking, writing, persuasion., 2. Business management, including contracts, HR, cash flow, interpreting financial statements, accounting..., 3. Decision processing, problem solving., 4. Non profit governance, 5. Creative

exposure -- art, design, drama, etc., 6. Computing applications for business management and presentation., 7. Publication development and processing -- layout, graphics, printing process, etc., 8. Planning, i.e. masterplanning, organizational development, strategy, etc.

- General programs in museology should offer courses on non-profit administration and fund-raising, which becomes a major part of administrative work in public gardens.
- Field experience, internships, and interaction with the professional community (APGA and other organizations). I interact with potential donors (individuals, corporations, and foundations) on a daily basis and an understanding of the people "factor" is essential.,
- Training in soil science, botany, and environmental issues is also important.
- fundraising, budget management , personnel management, customer service, marketing
- Personality types. Examples of real life leadership styles - their pros and cons.
- Management skills, knowledge of IT possibilites including financial programs, GIS, etc.
- financial management, fund raising, board development, personell management, strategic planning, human relations and some more fund raising skills.
- Fiscal management, Employment law, Public speaking, and this should all be on top of a strong horticultural foundation. I also feel strongly that Universities should do much more to connect students with inidustry; state, regional and national nursery industry groups, IPPS, ASHS, PPA etc. I consider these connections as essential and completely separate from APGA connection.
- Basic understanding of investment strategies; accounting for not-for-profit; fund raising skills. I am not totally sure that universities can train leadership. Leadership begins with a strong desire to accomplish excellence and a commitment to one's profession. These traits are probably inherent in individuals or taught by one's parents. But obviously knowledge of one's subject matter along with management training is important.
- Administrator and Board: division of responsibilities, working together to serve the organization, Crisis management in gardens, Finance basics for administrators, Public garden marketing and public relations , Visitor services- food, facilities,amenities for visitors, (what does the market suggest every garden

should have / allvisitors want? Gift shop, orientation area, food service -in house or out-sourced, hands on learning opportunities?

- Communications. Non-Profit Accounting. Human Resource Management.
- They should have to study gardens without significant endowments who are operating successfully, so that if they have no endowment they can understand what it takes to be in the black; and if they do have a large endowment, and the market goes south, how funds can be recouped so that important programs or personnel are not lost as a result.
- First, part of the skill set for this position can't be learned. It is the love for gardens that directs the curriculum I use in my institution. We can teach people technical skills and some design but the inspiration needs to come from within. This comes from growing up in nature. This is a limited experience for the upcoming leaders. I don't know how this love will be disseminated in the future., I would also like to see universities begin to teach Plant Health Care instead of conventional methods. If we are to have a future in horticulture we need to get closer to working with the natural systems and get away from attempting to control it through chemistry.
- Leadership, Ethics, Human Resource Training
- THE GARDEN I WORK FOR IS BUILT AROUND ONE LARGE GENUS OF PLANTS, WHICH WAS HELD IN PRIVATE HANDS UNTIL NOW. DEVELOPING DISPLAY GARDENS WHICH A BOTANICALLY MEANINGFUL AND WHICH ALSO BEAUTIFULLY DISPLAY THE PLANTS TO INSPIRE HOME GARDENERS IS A BIG CHALLENGE. DEPARTMENTS OF HORTICULTURE SEEM TO ONLY WANT TO PROVIDE INTERNS FOR COMMERCIAL OPERATIONS, AT LEAST IN OREGON--BOTANY AND RESEARCH ARE ONLY PURSUED WHEN THERE IS A COMMERCIAL COMPONENT. I DON'T SEE OSU OR THE LOCAL COMMUNITY COLLEGES PROVIDING ENCOURAGEMENT FOR INTERNS IN NON-PROFIT GARDENING ENDEAVORS.
- leadership jobs like yours In my case this is the CEO position. Very difficult to train in a university undergraduate curriculum for top management positions. This is typically a post graduate curriculum or midcareer training program. Important not to raise the expectations of high level administrative positions for undergraduates entering the job market.
- business classes, writing classes

- *COMMUNICATION on all levels, *Verbal communication development & public speaking (the ability to identify & articulate strategy & position can't be taken lightly...very few get it), *Written communication, *Marketing, *Public Relations, *Vision & Strategy Development, *Global Business
- Communications skills are generally dismal. Programs should emphasize writing and presentation skills.
- Financial planning and responsibility, Understanding of funding and grantwriting needs for nonprofits, understanding how to manage various personality types (and draw the best performance from them), focus on both long term and short term needs/ issues, time management/ prioritizing, These all relate to management skills that are taught in the business school but are missed by many horticulture students. Knowledge of plants and culture is not enough to develop a strong leader. Management skills and experience are also needed
- Provide as much real world experience as possible within the framework of courses.
- Not for profit accounting; fund raising; collections; conservation; education; marketing; retail; food service; media relations; contracts; corporate relations; strategic planning
- Interpersonal relations, organizational management, budget/finance, employee relations, strategic planning
- Business and Financial management skills
- people management - organizing around common goals, budget management, basics of fundraising/development
- Difficult to answer. Public garden directors come from many different backgrounds. Simply a strong, solid academic background, diverse, and an education that develops self confidence. Communication skills, appreciation for diversity, and interpersonal relationship skills.
- Management, Contract management, Community dynamics, Social entrepreneurship, Conservation and sustainable living
- development of individuals with strong professional skills
- I think leadership is in you. and it shows as you get involve in high school project or other activities., The universities should emphasis on how important is to be the leader of a project at the beginning of their first semester.example the students

have to be responsible for individual and group projects and be able to present it to a class giving the same value.

- Human resources management; fundraising & development; long-range planning; financial management
- Good organizational skills, good communication skills, Financial skills, and good planning skills. Horticulture is the easy part of the job. How we show value in what it is that we do will help out tremendously.
- Basic courses in how to be an effective, efficient and responsive employee. In most cases we see many who can't live up to their resumes' and have no grasp of the reality of the work place.
- Business Management for all areas of horticulture
- basic finance and accounting courses (business school 101) being mandatory for everyone
- there tends to be a dearth of coursework in managing people - how to manage for transition and change, how to deal with institutionalized bad habits, difficult employees, etc.
- More human relationship training, psychology, how to motivate people, and ethics.
- In addition to actual subject area knowledge and experience (i.e. horticulture, botany, ecology, etc.) there should be some psychology and group dynamics courses as well as marketing.
- Marketing, Public Relations, Fund Raising , Board Development, Volunteer Development, Education/Curriculum Development, Accounting Basics
- Basic business courses (accounting, HR, employee law, marketing, strategic planning, communications), Non-profit fundraising, tourism studies, collections management
- Management classes in addition to Horticulture, botany and garden design work.
- Marketing, Accounting
- Would like the opportunity to review current curriculum.

- (areas that aren't standard fare...) Budgeting and basic accounting, personnel management, strategic organizational planning,
- Management, administration, fundraising projects; Internships in public gardens
- I don't know what the current programs, e.g. at Longwood and Cornell, include. Leaders need better training in staff management, legal issues, financial management including investment, working effectively with volunteers including Boards, as well as strategic thinking and planning. My guess is that leaders fail either because their relationship with their Board goes south or they have allowed their staff to devolve into ineffectiveness.
- management skills, grant writing basics, knowledge about grants and foundations, working with volunteers
- Arguing in a constructive manner.
- 1. Be very flexible in decision making, 2. Learn how to work with other departments in the , organization., 3. There's more to running a public garden than knowing, plant material and how to grow it. You must know how a , garden operates from below ground up. What makes things, operate and how they operate., 4. You must know how to trouble shoot electrical, HVAC,, construction, facility inspections.
- Volunteerism and how it affects the community.
- How to lead, How to delegate, What makes community interest in a garden grow , Keeping proper records, If there is no actual plan, get one, then follow it., Communication with Board members and volunteers, How to communicate with local schools
- Corporate management. Non-profit leaders need to be more savvy about what works in the for-profit arena - the tools and models are adaptable and useful.
- a systematic approach to sustainability combining environmental, business, leadership and applied horticulture management .
- Good genetics
- In all disciplines, emphasize the integration of created spaces and natural ecology places. , Focus more on space creation for the purpose of educating the public about their own place....not to the expense of what else is going on...a nibble from all of them., Require serious ecological training for landscape architects., Require serious ecological training in all curricula involving land use...from farming to

civil engineering, to architecture, building science, land management and development..... , For all: Seminars and/or courses on: land use impact, philosophy, and history; ecological surveying; creative and effective ways to spread ecological knowledge and perspectives;etc.

- Field experience for special projects. , Internships. , Broad based experience and coaching., Volunteer programming., Board development and staff development., Communications skills--writing and public speaking. , HR skills., Emotional intelligence skills.
- Public speaking courses., Writing skills, presentation skills.
- There aren't enough university programs in museum or garden administration and leadership.
- Communication skills, Budget analysis
- Non-profit management, Fundraising and development, Master planning, Strategic planning, Fiscal management, Personnel management
- required internships for credit- on the job mentoring , master planning/ strategic planning courses specifically geared for arboretums, parks and gardens, working with boards/ communication procedures
- strategic planning, human resource management skills, development
- Case studies which detail the results of different leadership techniques.
- Financial management, Personnel management
- Projects. Both team and individual projects develop leadership. Extracurricular activities also - involvement in professional groups.
- Strategic plans for working in a political environment
- Personnel management, The art of negotiation, Grantsmanship, Public speaking
- Business management, social relationships, anthropology and culture, changing paradigms in business and non-profits, basic tax and trust law
- Horticulture and staff management

- Business management within the context of public horticulture. Should include development, finance, board management, human resource management and of course horticulture.
- Strategic Planning, Financial Management, Human Resource Management - Communication skills, Partnership Management, How to vision and plan yet still get efficient results
- HR and business development, non-profit management.
- Leadership versus management. Both are important but are different and require some different skills for each.
- Relations with corporate business, nonprofits, federal agencies, labor unions, professional associations, plant societies and educational institutions.
- horticulture curricula should include basic skills ets in horticulture practices, basic garden administration, human resources management, grounds management, and basic building skills., Add to this curriculum some public communication skills, and I believe you'd have the basic skills needed to manage a public garden at an introductory level.
- Basic business skills are critical., Inter personal communication and persuasion are important., Organizational theory and strategic planning would also be key.
- management, team building, etc.
- Budget management, Conflict resolution, Team work, Negotiation skills
- Interdisciplinary communication skills
- Working with the public, Government - Understanding regulations, politics, etc, How to educate adults - Government officials, donors, etc. , Communication - Written and Oral
- management, budget, personnel, planning
- Professionalism, Problem solving, employee management/relations, budget management
- Business planning, basic accounting, project management, Board leadership & management, personnel management,
- See previous answer.

- We have a Museum Studies program which I require students to take if they are in the undergraduate botanical gardens study track. This program provides a good overview and introduction into the issues affiliated with the structure and management of museums including botanic gardens and arboreta. I would think a graduate level course with a more specific focus on Museum Management from a directorial perspective would be very useful. Such a course would also cover issues related to personal management. The big challenge is bridging the gap of small gardens where the director needs to cover most duties vs a larger garden where there maybe an entire HR department and Development department. It is difficult to bring a undergraduate student up to the level of directorial leadership without the perspective of the structure and function of a botanic garden or arboretum.
- fundraising and development, strategic planning, leadership 101, fiscal/budget mgt., non-profit mgt., personnel mgt., interpersonal communication, professionalism, working with volunteers
- Classical approach to botany as well as some programs in field studies. Today everything is so lab oriented and these types of programs are being lost.
- Personnel management, fund raising, financial management, basic horticultural training.
- Courses in: - leadership, - personnel management, - organizational communications, - public speaking
- Supervision Skills for a diverse staff,, Budgeting/accounting
- Teambuilding, problem solving, employee dynamics, business methods, art of negotiation, mentoring, interpersonal and public communication skills
- facilitation training, employee evaluation training, program evaluation training, guiding and writing short term plans
- Leadership Development, Strategic Planning, Resource Development (fundraising and human resource development), Community Development
- Fiscal management of non-profits, Introduction to construction management (from design development to budgeting), Master site planning, Strategic planning, Facilitation techniques
- Non-profit management, working with donors, what is public horticulture and its role in a community.

- MBA, Communication, developing and fostering partnerships, Collaborations, interdisciplinary studies, Conservation
- Political Tact, Public Speaking
- on the job training
- Courses in collections management (accessions), Practical experience in organizing and implementing fund- , raising events, Internships at arboreta
- working with boards and bureaucracies
- I was fortunate to have a very well-rounded education. I think that horticulture professionals interested in administration should be taking classes through established business schools -- rather than classes rehashed from business schools for the not for profit sector. Obviously there may be a need to focus on not for profit or museums in some areas, when it comes to accounting, statistics, marketing, etc - there is a rigorous curriculum developed in business schools.
- Nonprofit leadership training (working with a board; fund raising; financial management)
- Management classes, communication classes, marketing classes, how to set and evaluate measureable objectives
- Creative problem solving.
- Supervision skills. Business management.
- External relations, Public speaking\Communications, Strategic planning, Human relations, Business skills
- Communication skills to include verbal and written steps to , allow all staff to understand job expectations. , Vision training...how to open your mind to new ideas and see the opportunities.
- Interpersonal psychology, public speaking, public relations
- Understanding nonprofit accounting, Strategic planning, Goal setting
- team-building, creative vision, how to get things done in non-traditional ways
- Fundraising basics

- Financial Management, Personnel Management and Development
- Buisness Management / Administration, Non profit leadership development, Public Relations, Strategic planning, Public Administration
- Working with many support groups, be they plant societies, a friends group, (board of the friends group), staff, community. Good PR skills, working with the public, customer service, good horticulture practices--using your institution as an outdoor classroom

C-5: Where respondents had done public garden internships

Museum of Science in Boston	Boston
The Arnold Arboretum	Boston, MA
Arnold Arboretum	boston, ma
The New York Botanical Garden	Bronx, NY
Fernwood Gardens	Buchanan, Michigan
Walt Disney World	Buena Vista
Monticello	Charlottesville, Va
National Tropical Botanical Garden (twice)	Chicago, Illinois
Cincinnati Zoo & Botanical Garden	Cincinnati Ohio
SC Botanical Garden/Heirloom Garden	Clemson SC
Cleveland Botanical Garden	Cleveland ohio
Cleveland Botanical Garden	Cleveland, Ohio
OSU Chadwick Arboretum	Columbus, Ohio
Cox Arboretum	Dayton ohio
Callaway Garden	Georgia
Henry Foundation for Botanical Research	Gladwyne, PA
metro gardens	granville, ohio and westerville, ohio
Jacksonville Zoo and Gardens	Jacksonville, FL
National Tropical Botanical Garden	Kalaheo, Kauai, Hawaii
Private gardens in France.	Kennett Square PA
Longwood Gardens	Kennett Square PA
Longwood Gardens	Kennett Square PA
Longwood Gardens	Kennett Square, PA
Longwood Gardens	Kennett Square, PA
Longwood Gardens	Kennett Square, PA
Longwood Gardens	Kennett Square, PA
longwood gardens	kennett square, PA
Longwood Gardens	Kennett Square, Pennsylvania
Landon Hall Country House	Kitchener , Ontario
National (Pacific) Tropical Botanical Garden	Lawai, Kauai, HI
University of Kentucky Arboretum	Lexington, KY
Lake County, IL Forest Preserves	Libertyville, IL
Kingwood Center	Mansfield, Ohio
Medford Leas - The Lewis W. Barton arboretum	medford nj
Fairchild Tropical Botanical Garden	Miami, FL
Dow Gardens	Michigan
Dow Gardens, Grand Traverse Resort Village	Midland Michigan, Traverse City Michigan
Opryland Hotel	Nashville, TN
Institute of Eco. St. Mary Flagler Arb.	New York State
The Dawes Arboretum	Newark, Ohio
Paine Arboretum	Oshkosh, WI
Paine Art Center and Gardens	Oshkosh, Wi

Longwood Gardens
Sandhills Horticultural Gardens
Shambhala Mountain Center
(1) Oxford (2) Brighton Parks Department
City of Stillwater Parks
Oklahoma State University Arboretum
grand traverse resort village
Mepkin Abbey, Moncks Corner, SC
Washington National Cathedral
Royal Botanic Gardens, Kew
Parks and Gardens of Zaragoza
Duis Nursery, Bedford VA
Cypress Gardens, SC
Chicago Botanical Garden
Lawai, Kauai, Hawaii
Kingwood Center
Longwood Gardens
Kalmthout Arboretum, Belgium
Mansfield Ohio
Opryland theme park

Philadelphia
Pinehurst, NC
Red Feather Lakes Colorado
Did not report
Stillwater Oklahoma
Stillwater, Oklahoma
traverse city michigan
VA & SC
Washington DC
West Sussex
Zaragoza
Did not report
Did not report
Did not report
Did not report
Did not report
Did not report
Did not report
Did not report
Did not report

C-6: Responses to question 37

Briefly describe why your garden has an internship program.

- The internship program fulfills many needs: additional summer help, brings professionalism to the department, and has brought in future fulltime employees.
- To stimulate our staff, to benefit from the interns' help, to share our experiences with the interns
- It is the right thing to do for the organization and students, future public garden employees.
- to help train future hort. leaders; to bring in youthful energy to the garden; to help find interested workers
- We train professionals in horticultural therapy and professionals in therapeutic garden design. We have the greatest expertise in this area.
- It allows gifted students to learn from your operation as well as contribute to one's organization. If done well, the program is mutually beneficial.
- It has offered us the chance to expand our staff while encouraging the possible career aspirations of the interns. Also something to promote as an educational opportunity as well as a chance to partner with schools.
- To assist the horticulture department during the growing season and to provide meaningful work to those interested in pursuing careers in horticulture.
- Extension of our education mission. Desire to provide opportunities for students interested in public gardens.
- To enrich our education and horticulture departments through the study and effort provided by these interns and to benefit them with work in a fast-paced environment with measurement and accountability
- This is the part of the job that needs to happen in the field and I have a field to work in and plenty to do.
- Because of its mutual benefits....
- WE HAVE AN INTERN PROGRAM TO ENCOURAGE THE SPREAD OF KNOWLEDGE ABOUT OUR COLLECTION AND TO ASSIST STAFF IN SPECIAL PROJECTS. THE PROGRAM IS VERY NEW, AND

UNFORTUNATELY WE HAVE YET TO HAVE A STUDENT SIGN-ON AS AN INTERN, AS THEY PURSUE COMMERCIAL OPPORTUNITIES FIRST.

- We have both paid and non paid internships as well as internships for university credit and non credit. In each case the reason for selection is different, but in all cases we offer internship programs for those seeking life experience and/or degree requirements
- It is important to expose potential candidates to the field of Public gardens
- A core institutional value and part of mission.
- Provide students with a way to learn more about plants and to meet degree requirements.
- partnership with local university horticulture program, mutually beneficial, and greatly benefits students. We can offer a well rounded hort experience that cannot be gained at a retail or production setting, that has a need to focus activity on narrower purpose-
- circulate ideas, enjoy student energy
- We are very small and new garden. Interns are vital to our daily operations because of extremely limited staff and funds. Interns serve important functions at our garden.
- To provide hands on experience for the student, and assistance for paid staff.
- It is a duty and provides staff at a key time in the year
- To teach the next generation of professionals the skills needed to engage the public in our unique mission and broaden an understanding of its complexity so that it can be appreciated more fully.
- Great source of seasonal labor; we learn from them; train people for the future; find future permanent staff members
- to cultivate students' interests in plants, ecology, and the natural world
- To provide educational opportunities to students
- Training the next generation of horticulturists and bringing new brains and new approaches to the garden

- help develop future professionals
- Right now we have an intern that is researching the History of the gardens, this public garden is a hundred years old
- Provide learning opportunities for the students, while providing labor to the institution.
- We look for the best in the field through our internship program. We feel we have a lot to offer teaching interns at our institution. We have hired several of our full time position with interns that have gone through our program. We know what to expect from the employee and they know what they are getting into.
- to introduce students to our field
- To foster an understanding of exactly what goes into running and managing a nonprofit garden. They not only work on the grounds, but also assist with fundraisers and public programs.
- To support individuals' growth and generational continuation of knowledge, skills, and the field
- We are just forming the internship program now, so it is not fully developed; however we intend for it to become a training ground for future botanists and horticulturists, and to "ignite the spark" for an under-marketed field of study to young people.
- Community outreach; public education; foster growth of a garden/zoo professional community of the future.
- Mainly to add positions we can't afford to make real jobs.
- To give students practical, hands-on horticultural experience., To assist our one, full-time horticulturist.
- To foster exchange between people. To help assist with providing the services this public garden provides.
- Our internship program exists to provide upper-level college students, as well as recent graduates, a broad exposure to the field of public horticulture.
- We give two university scholarships each year and the recipients are required to intern with us for six weeks.

- To help us with projects, and to provide a meaningful learning experience to the interns
- To give students hands-on horticultural experiences and expose them to the culture of the public garden
- Interns often bring new solutions from school to solve old challenges and complete projects of benefit to our arboretum. Internships are a good way to recruit and evaluate potential employees. We have hired staff who have completed their internship. Interns provide us with a cost-effective work force.
- Because it is important to foster the education of the next generation of people - whether in public horticulture, environmental issues, or some other field.
- Mission is partly education and outside funding sources fund these which adds to hort staffing
- There are several projects to be accomplished through interns
- The goal of the internship program is to introduce students to gardening in this northwest coast climate; the garden has it also to introduce fresh ideas to the staff and to have additional workers in the growing season.
- To help Hort students learn the good, bad and ugly of public gardening and to help them get a feel of hort in the "real" world.
- We are a non profit and need to cultivate people for future positions, and we also are an educational facility. Interns like coming here because it helps them with their coursework, and they like coming here because we do pay them so they have a summer job. Our intern program exists because we need to tap into a pool of educated workers on a seasonal basis, and the intern fills that role beautifully. For example, we hire three interns to work a split shift in the summer time: 1/2 the week is spent in our Butterfly House and 1/2 is spent out in the Gardens working with the gardeners.
- I believe in the value of the cumulative knowledge of our staff, and the value of sharing that knowledge in the day to day workplace with the next generation of garden leaders.
- How to interact with the public., To obtain college credit hours., To learn how to correct mistakes., To learn crisis management., How to operate a variety of equipment., To learn how to be inventive and flexible., To do manual and administrative work.

- We provide an entry place for young, aspiring professionals. Our work is unique to most public gardens, so the experience is very unique. We are growing the future of public horticulture for the long-term, and we get the short-term benefit of inspired, enthusiastic young minds and bodies to accomplish the immediate goals of the garden.
- Education is a primary goal of our garden. Providing a working experience to horticulture students fulfills our mission. Former students become important contacts and garden supporters.
- to cultivate future horticulturists
- To increase perspectives
- To fulfill our mission in horticultural education in a deep way with a few individuals; to gain staff support to fulfill our mission with our work.
- We need the fresh and new voices, We need to extend what we do to several audiences we don't otherwise reach, We want to help enthuse the next generation of educators and conservationists
- As a University sponsored Arboretum students are our primary labor source, and an internship is a way to offer some benefit (college credits) beyond normal salary. Internships usually involve some specific project above and beyond the normal day to day maintenance jobs in the Arboretum.
- educate students and provide a high quality, modest cost addition to the work force
- Desire to contribute to student training and education in botanical gardens and public gardening
- our program is small right now due to budget limitations and housing. I hope to expand the program. Primarily we have used interns for plant documentation.
- Both to provide training for students from the University interested in the work we do and to allow us access to some of the very creative talents within the University
- It is the primary work force in the gardens. It needs to be better coupled to education.
- Potential employees, Mentoring, Getting important work done during our busy season, Spreading the word of our institution

- it helps us to get laborers that we would not otherwise have
- We had a wonderful, very tight program that had 8 students. It's been cut to one student, and I just got a \$100,000 endowment gift to get the internship program back on track.
- We are a university. It is our job to teach and provide opportunities for students to learn outside the classroom.
- We need the extra labor, but as part of a university we also feel a responsibility to provide a good working environment for students to expand their horizons
- Training as a precursor to Kew Diploma and as part of our mission to share knowledge
- Both to educate the intern and our staff members. Interns bring new ideas and a facet of energy to staff members and the day-to-day work.
- We want to offer the experience to students and we benefit from their work if they are skilled.
- To provide hands on public garden experience to undergraduates enrolled in the plant sciences degree programs at the local University and College campuses
- We see ourselves as an education facility. To include internships as a part of that picture is essential.
- We try to prepare college interns for real world experiences and utilize them in necessary tasks which benefit the garden while they are here.
- Provides somewhat trained summer employees. It is part of the mission of our academic department.
- To help with the many programs and responsibilities of the garden as well as training experience for the intern.
- It is both a State University and a local Jr. college on the same campus that both tries to provide ongoing education for its students so they can step into the professional workforce.
- to further the educational mission of our garden both for the interns and for our staff who benefit from the experience as well

- For practical reasons we benefit from the achievements of the students and from a political standpoint it puts us in a position as educators and more easily justifies the existence of our facility.
- We have the internship program to augment summer garden maintenance, historical research, existing conditions documentation and future preservation planning.
- Help train new Horticulture student in public gardening. Give them hands on experience. Give them a well rounded look at the public garden profession. , Give us help during the busy growing season.
- Being located on a college campus is one reason. We have a built in supply of individuals wanting to learn and are willing to work.
- To foster hands on learning in horticulture and expose students to arboretum maintenance
- To accomplish projects for which we have no staff available. To serve the area colleges & universities. To connect to people entering the public horticulture field and develop long-term relationships that may benefit our institution. To be able to tell donors that we have internship program.
- Fresh blood. Economical and informed labor. Special projects. Spreads the word. Gives us a look at potential employees. Builds relationships with important institutions. Appeals to funders. Helps current employees understand the "state of the field"--transplant new information.
- It is part of our undergraduate study track in Botanic Gardens and Arboreta and is affiliated with our Museum Studies program.
- We have a small staff so garden interns are important to us to achieving all of our goals. Also, we recognize what a valuable learning experience their contributions to our Gardens provides them as well.
- Part of the education process for the students. Give student a chance to begin to enjoy plants just for the plants alone.
- It is part of our mission.
- To contribute to the education and experience of students at our university.
- Our main reason is to have students interested in horticulture who can assist the Bishops Gardener in a highly evolved landscape. This serves a number of

purposes - 1. it allows us to have an extra set of hands in the garden. 2. It allows the student to get hands on experience in a garden setting.

- Desire to introduce students to dynamics of field through practical application and problem solving in a variety of settings.
- We believe that young professionals need a wide variety of opportunities to learn about the field they have chosen to be able to make sound career decisions. It also provides us with an additional source of support for our programs.
- Our internship program meets both our needs as a university garden to provide educational experience for our students and the garden's need to involve more people in implementing our plans. Students make great interns because they can take on specific projects that relate to their learning. This greatly enhances our capabilities as an institution.
- To nurture new public horticulture professionals; identify potential candidates (even if several years off) for garden positions.
- To both provide a place to gain practical working knowledge to the student and to employee summer staff.
- to interact with and train university students
- Because we can. We have funds, we have the population to get interns.
- to train future staff, to educate students, to assess potential, to get work done
- The internship program develops leadership skills and practical knowledge for our students. It also provides an excellent financial package for qualified candidates.
- to get students interested in the multifaceted opportunities and excitement of working in a public garden
- It's a good labor source and provides opportunities to meet potential future employees.
- successional development, mentoring next generation of zoo managers, helps get work done that wouldn't normally get done, fresh new ideas and skills, better qualified employees and candidate pool, networking
- We need the help and we are working to foster stronger relations with our local university.

- To allow us to meet one of our missions involved in education.
- to share our expertise in sustainable garden techniques
- To exchange ideas, to expand scientific knowledge and to help people advance their careers.
- To get things done and stay connected to young people.
- To introduce people to the institution, provide further training, and to keep relevant.
- exposure to some of the colleges;, prep for hire later
- That is the main focus of the gardens is for internships to train students in all aspects of horticulture. Without internships the gardens would not be a viable institution.
- our garden has no internship program, but Muhlenberg College offers many botany/biology related internship programs. any program occurring here at the Arboretum is for research purposes only.
- We are a university garden/campus arboretum and students work on all aspects of the collections management.
- Mentor students re public gardens, Develop possible future staff, Extra hands during our busiest season
- Ability to learn from each other
- To fulfill our mission as an Educational institution, and to provide a practical learning experience for area students in related fields.
- To advance our mission of education; our horticulture department requires each student to complete an internship; and to provide seasonal help for the garden.
- It helps us obtain people that are interested in horticulture and public gardening and they might turn into permanent employees.
- It provides an opportunity for those considering a career in public horticulture and also we get good service from the help

C-7: Final/additional comments of respondents

If you have any comments about this survey or on leadership in the public garden field, please share them with us by using the space below.

- Interesting exercise. Not must get to work on monthly Board Report, meeting with County Extension director to get the Master Gardener recruitment program going, then to Rotary lunch, Eco-Center Board meeting and finalize calendar with arb pictures for hospital., Thanks for the opportunity,
- As a young director of a public garden I feel it important for experienced mentors within the industry and especially members of the APGA to serve as leaders for the younger generation and offer mentoring opportunities. It would help me as I oversee a small organization with limited staff and a limited budget.
- A very interesting survey! I just fell into the public garden field, and am thrilled!!
- Many of the current directors of large public gardens have a background in the field of horticulture. I am concerned by the trend at universities of teaching students to become "non-profit leaders" without having a fundamental love of horticulture. Leading a non-profit organization is challenging. It is often the passion for the mission that sustains us during the difficult times (e.g. financial, etc.). I think the more appropriate educational direction is for universities to identify students with a love of horticulture, a heart for human beings and a business sense. These are the candidates who should be nurtured as the future leaders in our industry. This is the approach we are taking at our garden through our succession planning program.
- Good luck! Well designed survey. Very easy to follow and answer.
- I am very interested in your research. I hope to offer an internship program at Hillwood in the future. If you are in the Washington, D.C area, please come to visit us at Hillwood.
- Prior executive directors have had more horticulture experience than I do; However, membership and attendance have been waning and the board decided that fundraising and nonprofit management experience were more important characteristics for the executive director to possess., I'm guessing that this is a trend or will soon become one.
- There are a number of backgrounds that might lead one to a public garden leadership position other than horticulture. Many of the questions were slanted directly to horticulture and the responses to individual backgrounds in other areas may skew or distort the results. , It would seem appropriate to ask for specific

information on the various degrees people have completed. This would be more helpful than just the school and its' location., It appears that you are making an assumption that horticultural training and degrees are the only important or feasible ways to become the Executive Director of a public garden. Large gardens are big businesses (more so than small ones) and a because of this an MBA would be very appropriate.

- Our public garden is not typical in that it is designated 32 acre campus. The grounds crew and several students with tuition waivers tend to the grounds. It is basically used within the academic realm as a learning lab. Next year we will have our 10th anniversary as a designated arboretum. As Director I plan on upgrading the signage for each tree and to improve on a GIS map created in the classroom. Hopefully we will engage in an extensive marketing campaign., Best of luck on your thesis., I look forward to your results.
- Good question , & excellent survey...maybe more clarite on 1st degree, 2nd degree, or specific under grad/grad b/c I answered too much in initial que& then next que covered grad level...oops!
- I hope my position isn't considered as hired staff!!!
- These are VERY important skills - I hope your survey leads to some action.
- Interesting slant on birth order determining general leadership skills...
- wish APGA offered a course for those outside the hort field who are now in a leadership position; think we will need to be recruiting outside the field for leaders
- You might ascertain how many of us had to fight a family perception that professional horticulture was no different than mowing lawns at the lowest level of blue-collar employment.
- I am not sure how relevant the questionnaire is for a very small operation based on University grounds. Our annual operating budget is <\$4,000. There isn't much man-power or money to do much. Much of my time is spent on outreach programs on species at risk conservation and education.
- This is an important area of focus for the public garden community. Our institutions are finding themselves at the heart of many public issues. Our organizational leaders can have important influence in these issues, but only if they are well prepared to understand and interpret the issues and to mobilize others behind their leadership. , A key, current issue in leadership is related to being able to adapt to rapidly changing dynamics in a knowledge economy. One

aspect of our preparation of leaders has to do with this new emphasis on the nimble institution.

- It can be difficult to separate items that are "important" because of staff weaknesses from items that are important because of the role those items play in public gardening.
- No thanks.
- I am not a Horticulturist, I am a Manager(Leader). My predecessor was a Horticulturist and in the evolution of this organization, our Trustees made a conscious decision to move from a management emphasis on plants to an emphasis on people. I am fortunate to have a staff of talented Horticulturists which makes this model work.
- OUR GROUP/GARDEN NEEDS BIG HELP FUND-RAISING AND LEARNING ABOUT GRANT WRITING. OUR BOARD DOESN'T THINK THIS HAS TO BE DONE BY STAFF ALONE, BUT WE (STAFF AND BOARD) ALL NEED A CRASH COURSE IN GRANT WRITING, AND THE SOONER THE BETTER!!!!
- Thanks for doing this survey. Looking forward to the summary.
- Good luck...I hope you will share your information at a future APGA conference.
- An interesting survey. Have you read Frank Sulloway's book on birth order and personality development, Born To Rebel?, I look forward to seeing your results
- Effective Public garden leaders should take every opportunity to encourage and develop the skills and abilities of the employees in their charge. Strong teams are always more effective than weak teams or individuals. , Seeking credit or recognition at the expense of employees or without recognition of their contributions undermines the foundation of a strong team.
- There seems to be quite a buzz about this topic in our field of late. I'm not so sure there is shortage of individuals with the ability to lead, but there may be an up and coming shortage of leaders to fill leadership positions due to the retiring baby boomers and the growing impact of lifestyle decisions on mobility. For example, individuals are placing more value on relationships and family than on the need to move to get a better job. I have not heard much from anyone about specific leadership traits that are lacking....I'm not sure anyone can speak to an impending disappearance of leaders without providing evidence of what we are missing now or in the future.

- Need to improve layout-particularly regarding internships. Very wide range of questions that could be interpreted as a lack of focus., Anyhow best of luck and hope this generates some useful results
- I had work in different public gardens, the one that I am working at the present time have giving me the opportunity to share my knowledge and learns from others. My prior working experience in public garden was not that pleasing, the leader hardy ever give any of their group of employees to advance , recognize good ideas it was the same routine year after year.
- I think we have done a poor job in our industry promoting the quality of life that we bring. We tend not to promote the value of what we bring to the table. We could take a lesson from Marketing on this area.
- I think that APGA's efforts in this area are superb but we should de-emphasize our look at just garden leaders and administrators. We are living museums, and therefore should look more intently to art museums, natural history museums, and zoos to find sophisticated leaders rather than limiting the focus and networking and training options to gardens., I'd be happy to help facilitate this (as I come from outside the agrden world) and a partnership with AAM is critical., -Sophia Siskel, President and CEO, Chicago Botanic Garden
- I disagree with the APGA's definition of Garden size. My garden has a \$3 million budget. I consider it a mid-sized garden. There is a world of difference between this garden and the really big ones. My garden is also located in NYC and the cost of living is higher here so the \$ definitions, in my opinion, are really different., I'm the #2 child, one of the two oldest of six children. I don't consider myself a "middle child." , I'm swamped with all sorts of email requests.....so this is what you'll get from me. I answered because it is from the field.....and it's a field I so appreciate.
- I hope this information helps.
- I feel like some of the questions were designed to elicit a prefered answer, and were specifically weighted toward the favoring of a "consensus" style of management. Questions revolving around a consensus style seemed to be consistently framed in a positive light while the individualistic style was put in a more negative light. There were 5 or 6 examples (maybe more)of this but one among several comes to mind to illustrate my point:"I have never seen a statue of a committee in a museum or park, so why bother making decisions by a committee if you want to be recognized?", This is an all or nothing straw-man argument designed to elicit a specific desired response. Sometimes in order to be effective or reach an optimal conclusion a manager may decide that a consensus

or committee decision is not necessary. It has little to do with recognition and who gets credit, as the question implies.

- Would have liked to have had the choice to say "no answer" on a number of the questions
- I would like to receive a copy of the results. I am impressed with your questions, the way you used them, and the way you will obviously make comparisons. For example, I like the section on self evaluation of leadership and then asking those same questions again but this time asking if I feel those attributes are necessary., I do want everything I report here to be kept confidential., Thank you.
- The fact we are a staff of only two full-time employees, within a parent organization (college), with very limited budget, affects a number of answers to your questions., In our area, horticulture is only taught at technical high schools, which is not the choice of school for the brighter students. I would like to see opportunities for high school students to understand the wonderful mix of science, technology, art, and more that are part of many positions in the field of horticulture. I think even fewer students are aware of the varied career opportunities in public gardening. It seems horticulture is viewed by young people as either flower arranging or landscaping, and that is a shame.
- I think the most pressing problem for leaders in the public garden field today is making citizens realize how important horticulture, biodiversity, botany, etc. is to everyone and especially to the many children who don't even know what a nut looks like in its shell, or have never smelled fresh soil, or understand that a seed turns into a plant.
- I found some of the questions were not worded so that a yes or no answer was valid. In several cases, the answer needed a qualifier, which was not permitted, i.e. the reply about questioning a decision. The answer would be different if it were a decision about garden management as opposed to a project decision. The question about employees coming to you with a problem was another one that comes to mind. If an employee comes to me problem, I assume that the employee did not have a solution. If so, they would have solved the problem themselves. These are a few of the concerns that I had with the questions. I hope this helps.
- I want to reinforce my opinion regarding the need to train and HIRE leaders in Botanical Gardens and Arboreta trained in our disciplines. Specifically, I think boards accross the country need to be educated about the need to hire those indivudals that have studied plants either in undergraduate or graduate programs. How can we expect to promote learning about plants when we ourselves are not hiring those individuals with these skill sets? It is absolutley absurd. I recognize that there are many facets to being a good leader and performing horticulture/botany on a daily basis is not neccessarily a skill set most leaders

draw on on a daily basis. Rather, the skill sets become focused on running an organization and raising money. There are other organizations devoted to many areas of science- we need to stay focused on botany and horticulture to keep our sense of identity and protect an ever dissolving discipline. Hopefully we can change the tide.

- So what in the world does birth order have to do with garden leadership????
- The survey took longer than 15 minutes.
- It is an interesting survey and I would like to read the results or the follow up report.
- The last few questions seem personal and the relevance is not explained. What does the number of my siblings have to do with all of this. , Survey was missing a key area, How large is your staff - that impacts how skilled I must be. If I have 124 staff members I may not need to know much about interpretive signage but if I actually have a staff so small I need to compose some of the signage or fill in for my Manager of Education when she is on vacation than my skills in this area are important., Also, you do not know what the reporting lines or structure of my institution are so you cannot interpret some of my answers since they are dependent on, e.g., what power the Board has over me. In my case, very little. In some other gardens, they rule.
- Again, I urge you to learn about the efforts already underway by public garden directors, working in conjunction with APGA, on developing the leadership skills of young professionals in our field.
- I found the survey quite interesting. Good luck with your project.
- Good luck with your research., A symposium on basic planning targeted to young professionals, less than 5 years in the field, would be excellent.
- Great job! Good luck with your research. I hope that APGA can take a more strategic role in developing leaders for the future. This is a particular interest area of mine, so I'd be happy to help in any way I can., Thanks!,
- The "Mostly True" and "Mostly False" questions were, in my opinion, silly. There is no such dichotomy. Furthermore, the issues were so vague. There are so many variables involved in how I would respond to each. THAT is part of being a leader... I tried not to answer any of them, but that was not an option, apparently. Also, the questions about my education, # siblings, etc. are in some ways, none of your business. If you want to know what I think are good university programs in horticulture, management, etc., then I could offer some

suggestions, but I don't know why you care where/when I went to school, where I was born, and whether I have 0 or 20 siblings. I responded with "20," but that's not true. The latter part of the survey was better (what skills or knowledge are important to my job).

- Yes, the results should be very interesting to review. I would be interested in seeing them., Thank you for your work.
- Too long
- I believe that garden leadership should keep in mind that their constituents use the gardens for various reasons. More than half are casual visitors...meaning just to enjoy the experience of walking through a beautiful garden; some want SOME information. The visit is a perfect opportunity to educate the public if they do it in an interesting way.
- In order to be a good leader in public gardens you need a combination of excellent horticultural knowledge with leadership and teaching skills. In other words you need to be a plant person and a people person all rolled into one.
- As I have tried to indicate, we do not operate like most other gardens. Muhlenberg College uses Graver Arboretum for educational purposes. The garden aspects interest the College very little--but we make the best of it!
- I will be interested in learning the results of your survey. This was easy to fill out.

Vita

Andrew Pulte grew up in the nursery industry in Grand Island, NE. He received his bachelors of science in horticulture from the University of Nebraska in December, 2000. During college he participated in several internship programs including internships at the Polly Hill Arboretum in Martha's Vineyard, Massachusetts , and the Arnold Arboretum of Harvard University in Boston. Andy has also spent time in the Netherlands working for a tulip bulb exportation company. Following graduation he worked first for the National Arbor Day Foundation, in the education department. This was followed by work at the Henry Doorly Zoo in Omaha, Nebraska. While at the zoo Andy was in charge of recruitment and training for the zoo's 650 full-time and seasonal employees. Andy began attending graduate school at the University of Tennessee in Knoxville, TN. in the Plant Sciences Department in 2005. While at UT he further developed his skill in the area of public horticulture and coordinated the volunteers at The University of Tennessee Gardens. While at UT, Andy also contributed to the extension efforts of the university through publishing in area newspapers, answering gardening questions regularly on local radio, as well as several garden related television appearances. In May of 2008 Andy received a masters of science degree from The University of Tennessee in the Department of Plant Sciences with an emphasis in the area of public horticulture.