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New York Botanical Garden Internship: From Photography to Policy

Christine Willeford

Professor John van Buren

Environmental Internship

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The History of Botanical Gardens

The creation of man began with a garden. According to the Mosaic tradition, it was named the Garden of Eden. The garden was a place of abundance, peace, and joy, for which men and women have yearned for since.¹ The Earl of Danby founded the first botanical garden at Oxford in 1621. The early botanical gardens strived to recreate this Garden of Eden and saw the image of God in every native and exotic plant species. The value of a botanical garden was that it conveyed a direct knowledge of God. Since each plant was a created thing, and God had revealed a part of himself in each thing that he created, a complete collection of all the things created by God must reveal God completely.² Since Eve's bite of the fruit from the Tree of Knowledge, the world had become corrupt, with nature included. In an effort to get closer to the life prior to sin and to achieve the ideal perfection of the Garden of Eden, the botanical gardens were created.

The gardens were constructed to have a regular shape because many people living in the disordered world of the seventeenth century believed that God had regularly laid out the earth in a neat structure. With an overall round organization, the gardens took on an absolute and perfect form.³ Ideally, the planned and regularly shaped garden should also be leveled and filled with good soil. During this period, mountains were thought of as imperfect growths on the land and many people believed that the world, when first

¹ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.

² Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

³ Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

created, was perfectly level and smooth. So, it followed that a garden modeled after the perfection of God must also be leveled.⁴

It has been a pattern of mankind throughout time to attempt to conquer something that is seen as wild or corrupt. In this way, botanical gardens were spaces in which the world was tamed and brought into a controlled area. The idea behind the gardens was the recovery of knowledge and of power over nature.⁵ Societies of the time cherished the idea of a truce between man and nature, to bring the world back to the great Eden. In effort to recreate this perfect nature, the whole world must be collected into a controllable compartment, where the environment could be manipulated to the visual wants to man. The theme within these great gardens is that of gathering plant species together from all over the world in a systematic fashion to be studied.⁶ By bringing all the plants into one place, men could name them and effectively communicate the nutritive and medicinal properties of the plants to each other.⁷ With this new found knowledge, it followed that because God created man with nature, the man who knew nature best, knew the most about himself and that the anatomy of man was the anatomy of the whole world.⁸ In knowing the anatomy of the whole world, man could organize the world as he pleased.

In the second half of the seventeenth century there was a shift from the gardener who had plants brought to him from all over the world to the model gardener as a

⁴ Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

⁵ Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

⁶ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.

⁷ Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

⁸ Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

traveling botanist. This new man was one who went to seek the plants out in their natural environment. The object now was to observe plants in their native habitats and see where they grew best.⁹ With this new objective, men's attitude towards nature changed. Nature was no longer corrupt, but innocent and something to enjoy in itself, without the organization of men. New gardens during this time were built where, instead of imposing order by means of straight walks lined by clipped hedges, the natural rise and fall of the land was respected.¹⁰

Early American Ideals of Botanical Gardens

Early attempts to found botanical gardens in America were in effort to form a living museum of plants and to create order in the natural world, just as museums did so with natural history objects.¹¹ Developments in ecology influenced the organization of botanical gardens and the history of botanical gardens in America reflects changes during the early nineteenth century in the perception of the natural world and in landscape aesthetics. In this way, there was greater knowledge about the natural habitats of plants as well as an aesthetic desire to see nature unrestrained.¹² In addition, the botanical garden in America developed as a response to new understanding of the influence of the environment on human life. The suggestion that man is part of the environment and

⁹ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.

¹⁰ Prest, John. *The Garden of Eden*. New Haven: Yale University Press, 1981.

¹¹ Meyers, Amy R. W. *Art and Science in America: Issues of Representation*. San Marino: Huntington Library, 1998.

¹² Meyers, Amy R. W. *Art and Science in America: Issues of Representation*. San Marino: Huntington Library, 1998.

entirely connected to the natural world was novel in the eighteenth century. Hector St.

Jean Crevecoeur illustrates this idea:

“Men are like plants, the goodness and flavor of the fruit proceeds from the peculiar soil and exposition in which they grow. We are nothing but what we derive from the air we breathe and the climate we inhabit.”¹³

Through this early notion of connectedness in nature, the botanical garden was a clear attempt to construct an improving environment.

The first step to increasing environmental awareness was through education. By means of gardens, educated or uneducated citizens could acquire knowledge of plants. Prior to the early nineteenth century, botanical gardens were primarily for medicinal purposes but they soon became museums of living plants that were centers for research, education, display, and delight.¹⁴ These gardens also created a new connection between nature and industry, where in learning about the environment and the land, America could become an agrarian force to be reckoned with. George Washington and Thomas Jefferson expressed their concern about the damaging agricultural methods practiced by the majority of farmers in the country at the end of the eighteenth century. These men pointed to the neglect of crop rotation and the poor condition of livestock and land as severe obstacles to American competitiveness within an agrarian economy. The need to

¹³ Meyers, Amy R. W. *Art and Science in America: Issues of Representation*. San Marino: Huntington Library, 1998.

¹⁴ Meyers, Amy R. W. *Art and Science in America: Issues of Representation*. San Marino: Huntington Library, 1998.

promote research and education in scientific agriculture, as well as to foster the taste for rural aesthetics, led to the organization of many agricultural societies immediately following the American Revolution.¹⁵ Botanic gardens were thus deemed essential for the purposes of civic improvement, education, scientific study, and conservation.

The Creation of the New York Botanical Garden

Legally established in 1891, The New York Botanical Garden, with its 250 acres of property, encompasses incomparable beauty and has become one of the oldest and largest historical gardens in the United States, as well as one of the leading botanical institutions in the world.¹⁶ Nathaniel Lord Britton and his wife Elizabeth Knight Britton founded The New York Botanical Garden and set forth an Act of Incorporation that outlined the purposes and objectives for which The New York Botanical Garden was established. There were four objectives that the institution was obligated to maintain and fully develop during the course of its growth:

- 1.) Establish and maintain a botanical garden, museum, and arboretum for the collection and cultivation of plants, flowers, shrubs, and trees.
- 2.) Advance the field of botany and scientific knowledge through original research, which would include the organization and leadership of expeditions for the better awareness and understanding of the earth's plant life.

¹⁵ Meyers, Amy R. W. *Art and Science in America: Issues of Representation*. San Marino: Huntington Library, 1998.

¹⁶ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.

- 3.) Offer courses of instruction in horticulture, gardening, and plant life.
- 4.) Provide a place of entertainment, where the public may recreate and learn about the beauties of plant life.¹⁷

In this way, The New York Botanical Garden was opened with the idea that in addition to scientific research, the garden would be a place of pleasant relaxation for the urban public.

The details of actually arranging the garden grounds fell to Nathaniel Lord Britton whose knowledge of contemporary botanical gardens was well developed. It was decided that the buildings and plantings would follow the natural contours of the park as much as possible. Britton was convinced that the design of The Garden should not interfere with the natural features of the park and actually, the geologic elements of the area were found to lend themselves to improvements without any loss of the original natural beauty.¹⁸

This notion of conservation would be prevalent in The New York Botanical Garden in years to come.

One of the great symbols of the New York Botanical Garden is The Enid A. Haupt Conservatory. Upon opening in June of 1900, it attracted thousands of people with its elegant proportions and delicate water gardens set behind the main building. This picturesque structure now houses “A World of Plants” where one visitor can travel from

¹⁷ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

¹⁸ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

orchid-draped jungle trees to Old and New World deserts.¹⁹ The basic message of the conservatory, as of the entire Garden, is one of connectedness between man and nature:

“Without green plants it is unlikely that there would be any other life on earth, without them and without the remarkable process of photosynthesis, which no scientist has been able to replicate in the laboratory, where would we get the oxygen in the air? Where would we obtain the foods that sustain us; the fuels that warm us; the roofs that shelter us; the wines for celebrating; or the medicines for treating pain and diseases of today and in the future?”²⁰

My Volunteering Experience

My passion is photographing nature and has been for the tens years of my life after I received my first camera. As a self-proclaimed landscape photographer, I am constantly viewing the landscape in an artistic way and have a special connection to the environment. There is nothing I enjoy more than being outside and capturing the beauty of the environment.

Throughout the forty hours of my internship at The New York Botanical Garden, I spent the majority of my time outside shooting. From trees to bees to flowers, I photographed a large amount of the garden grounds. Due to the fact my internship was during the spring, each day I would have a different plant or tree to shoot because everything was blossoming magnificently at that time. In addition to general shooting, I

¹⁹ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.

²⁰ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.ss

would also be assigned a certain plant species to shoot one day, if there was a need for a photograph for a new advertisement, for example. One photograph I shot for such an occasion was of a purple lilac that was then used as The New York Botanical Garden homepage (Figure 1) and also as an email (Figure 2).

On top of my photography responsibility, I was also tasked to upload the pictures onto the computer and catalog the flowers into species and common names. This was the hardest task I completed at The Garden due to the sheer volume of species and photographs within the database. Also, once the photographs were cataloged and saved, it was my job to post the photos on The New York Botanical Garden's "flickr" website where people from all over the world could view and enjoy the brilliance of the flowers.

Conservation within the New York Botanical Garden

It has been shown that botanical gardens have a history in sustainability and conservation, and one of the first efforts the New York Botanical Garden put forth to address to the public the role of plants in the life of the humans was during World War II. Throughout World War II, The New York Botanical Garden realized the importance of food in the war effort. Plans were established to provide special programs in the cultivation of vegetables.²¹ These programs were created to provide participants with an adequate understanding of land conservation, fertilization, planting, caring, and harvesting of the crops that provide an rich yield of nutritious food with little waste.²²

²¹ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

²² Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-*

The 1950s in America marked a turning point in the United States concerning environmental conservation. In 1953 Eugene P. Odum released the first Ecology textbook, *The Fundamentals of Ecology*, in which he wrote, “Living organisms and their nonliving environments are inseparably interrelated and interact upon each other.” This interrelatedness of nature was exemplified in the release of Rachel Carson’s *Silent Spring*, which detailed the impact of pesticides, specifically DDT, on the environment. Carson illustrated the connectedness of nature and was responsible for the launched an entire environmentalism movement.

The New York Botanical Garden also became involved with concern for the extinction and endangerment of plants through the creation of a Native Plant Garden in 1958. There was a vital need to preserve native flora and a special habitat was required to sustain the magnificent, increasingly rare, and endangered plants of the Northeastern part of the United States.²³ A garden was developed that largely cultivated and represented a collection of those plants. A three acre area was created as habitat for plants native to within one hundred miles of New York City and this was divided into four parts:

- 1.) A woodland section with flowering plants native to the Northeast
- 2.) An area designed for plants that like alkaline soil
- 3.) The New Jersey Pine Barrens for plants that require sandy soil

1980. Lanham: University Press of America, 2007.

²³ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

- 4.) A carefully maintained meadowland area for plants that need a sunny, damp habitat²⁴

The New York Botanical Garden thus raised a campaign to establish a new ethic among Americans, an ethic of worldwide concern for the environment and the science of botany. There was established new realization that many species are extinct or are heading towards extinction because of changes in the environment or the actions of man.²⁵ The New York Botanical Garden's vice president Brian M. Boom commented on the great need for environment conservation in stating that, "Today we are witnessing the greatest mass extinction since a giant meteorite crashed into our planet."

At the rate we are destroying habitats and burning forests, the 300,000 species of plants that exist today may be reduced by a third by 2050. To save biodiversity, land must be set aside as protected areas and institutions, such as The New York Botanical Garden, must conduct the basic research that is done nowhere else.²⁶ The New York Botanical Garden has 150 ongoing research projects in twenty countries, involving more than 160 scientists and graduate students. The New York Botanical Garden is home to hundreds of varieties of plants that are endangered or extinct in the wild. In all, 18,000

²⁴ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

²⁵ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

²⁶ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

scientific groups of plants and 40,000 individual plants are represented in the living collections, while the herbarium has 6,500,000 specimens.²⁷

Something can and must be done when a species is threatened with extinction, whether as a result of environmental changes or the random, harmful actions of man. It must be recognized however, that no matter how ecologically minded humanity may become, certain species are headed for extinction.²⁸ These threatened species almost certainly can remain cultivated in places, such as the New York Botanical Garden, long after the wild varieties have vanished. Thus, the human race can and must learn to conserve and preserve all species of life, for replacing them is impossible once they are extinct.²⁹

Conservation Efforts Within Photography

Nancy Newhall, author of *This is the American Earth*, defines conservation as humans fighting for the future and photography since the early twentieth century has played a key role in environmental conservation efforts. The most inspiring of these early twentieth century environmentalists was the photographer Ansel Adams. Adams' pictures do not merely portray the beauty and aesthetic value of the landscape, but they extend to a deeper significance. There is a certain feel in his photographs that makes it

²⁷ Soderstrom, Mary. *Recreating Eden: A Natural History of Botanical Gardens*. Quebec: Vehicule Press, 2001.

²⁸ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

²⁹ Dunkak, Harry M. *Knowledge, truth, and service: the New York Botanical Garden, 1891-1980*. Lanham: University Press of America, 2007.

possible to experience the interdependence of the environment and feel a sense of sacredness within the landscape. I firmly believe that the beauty of nature is the greatest gift ever bestowed on this earth, not only because it gives us visually pleasing sites, but because we are able to experience it intimately on account of we are a part of it, and Ansel Adams reveals this within his photography.

Throughout his photography career, Ansel Adams used his mesmerizing photographs of the western American wilderness in petitions to preserve the land he so admired. In the winter of 1936, the Sierra Club board asked him to act as its representative at a conference on the national and state parks. In Washington, Ansel Adams was to lobby for the park bill, with his most persuasive evidence being his photographs of the Kings Canyon region. Adams went armed with his photographs and with the knowledge that the photographer Carlton Watkins had help establish Yosemite as state park in 1864 and the photographer William Henry Jackson had helped to establish Yellowstone as the first national park in 1872.³⁰ Ansel Adams' landscape photographs give the viewer a feeling of peace and a wanting to be there in that moment. In viewing the picture, one feels as if they were meant to be there, a place one has been looking for their whole life, and his photography is what I strive to match within my own photographs.

³⁰ Spaulding, Jonathan. *Ansel Adams and the American Landscape: A Biography*. Berkeley: University of California Press, 1998.

Nature photography is something I feel very strongly about. It is not just the beauty of the photographs that makes it special to me, but within the photographs it is possible to see just how magnificent nature is. The plants and mountains work together to create amazing photographs. Adams worked his whole life to protect the source of his inspiration and the preservation of the American wilderness was successful because Ansel Adams created a love of the landscape within the American public. Having love and appreciation for nature can grow into respect and admiration for the land. It can also help us see how beneficial it is to cooperate with nature in order to make our lives better.

Photography has the ability to move people, to instill a sense of longing for nature. Photos can have a great impact on how people view nature and can be unprecedented in helping environmental legislation be passed. Just as botanical gardens contribute to the public's delight and enjoyment of the environment, photography is also something that can inspire people to have an appreciation for nature. Photography within a botanical garden allows people to see beauty in the plants that they might not directly perceive. An artistic twist on a set of flowers can create a whole new perspective of magnificence for the viewer. In today's society, it can be hard pressed to convince people that a certain species of flower is worth saving from extinction, but something that people always respond to is beauty. Once the public sees how visually pleasing an animal or a plant is, it becomes exponentially easier to create a case for its persistence. A photograph of an endangered plant within a botanical garden has the ability to can be used in

environmental legislation. The affects of pollution and global warming are far reaching, from affecting caribou herds in Alaska, to the growing seasons of crops in Oklahoma, to the early flowering of delicate blossoms. A photograph of an endangered plant affected by climate within a botanical garden has the ability to can be used in environmental legislation for the fight to create less pollution or to construct laws for carbon dioxide emissions. In this way, the beauty of nature captured by photography, makes people realize the environment is worth saving, even if it is for the sake of its aesthetic value.

My Evaluation of the New York Botanical Garden

The service the New York Botanical Garden is doing for the city of New York is unparalleled. The beauty and splendor displayed within the Garden is one of a kind, and it is a special luxury that urban citizens are given. As more people are moving into cities every year, I think it is important to have places where the public can go and still be able to enjoy the pleasures of nature. The New York Botanical Garden offers a natural aesthetic escape from chaotic urban life.

The most effective way of creating interest in The New York Botanical Garden among the urban residents is through The Creative Services Department where I worked. I found it incredible how much work is put it in taking care of advertising for The Garden. However, I soon realized this work was necessary in capturing the attention of New York City residents. In order to capture a resident's attention, advertisements need to be to colorful and beautiful, which is what the photography within these advertisements does. I was quite unaware of the power of photographs until I came to the

New York Botanical Garden. The photographs of the rolling daffodil hills and purple lilacs create visually stimulating and attractive presentations in effort to encourage people to come and enjoy these sites in person.

Connecting with people through the advertisements put out by the New York Botanical Garden is the most important part of The Garden because it creates an interest within the public and they become intrigued by all that The Garden has to offer. Hundreds of thousands of photographs have their home on The New York Botanical Garden's computers and a collection of that magnitude can only show how dedicated the New York Botanical Garden is in displaying the garden's magnificence through photography.

The Future for The New York Botanical Garden

The New York Botanical Garden does an exceptional job with photography advertisements within the Bronx as well as in conversation efforts. However, I think that there would be an increase in the amount of advertisements within Manhattan. Although there are Garden advertisements on buses and bus stops in the Bronx, there are close to none within Manhattan. Due to the fact that there are millions of tourists and residents traveling through Manhattan everyday, The New York Botanical Garden should take advantage of this fact and advertise more in Manhattan. One photograph has the ability to change a person's perspective of nature and create in them love and affection for the environment and with this idea The Garden should try to advertise as much as possible, in effort to get the entire city interested in conserving the environment.

When I arrived at The New York Botanical Garden on the first day of my internship, I was completely shocked to learn that there was only one main photographer for all 250 acres of garden land. Not only was I appalled by the amount of work this one man must do, but I was surprised that The Garden would allow such one dimensionality to all its photographs. I think it is necessary for The New York Botanical Garden to hire one or two more full time photographers. In having only one photographer, the viewer gets only one perspective of the land. This does not do justice to the complexity of the environment and creates a static perspective. It is important to get different photographic perspectives because when people view the photographs, it is only drawing in one type of person. Having different perspectives of the land can captivate different types people and form to their different visual interests. In this way, through attracting different people, it is possible to create more concern within the public about the persistence of the environment and our world.

The Affect of My Internship on My Future

This school year I emerged myself into courses of environmental science, environmental history, and environmental ethics. My interest and passion for learning about the environment has grown exponentially stronger throughout this year. However, the experience at The New York Botanical Garden has had the most intense impact on my life. Since I was in sixth grade I have been in love with photographing nature and at that age I told my parents I wanted to be a photographer. My parents' reaction to this statement was less than encouraging in that they told me that being a photographer was not a career, it was just a hobby. Therefore, for the past ten years I had put photography

to the side and focused on getting a “real career.” I took photos from time to time of course, just because it was something I loved to do. Upon looking for an internship this semester, I happened upon The New York Botanical Garden web page for volunteer positions and saw that there was an opportunity in the photography department. I hadn’t known such an opportunity could exist. Through working as a photographer for The Garden, I have come to see that it is a completely legitimate career option. In discovering that one could have a career in photographing nature, I went full force this semester and established my very own photography website (<http://willeford.ifp3.com>) and even made business cards to advertise my expertise.

To have the privilege to work outside in the company of nature is a remarkable thing, and to be able to capture it all on my camera is definitely a dream come true for me in every sense of the word. My experience at The New York Botanical Garden has opened up to me a whole world of photograph opportunities to which I was naive enough to think did not exist. This summer I will be working as an Urban Park Ranger for the NYC Parks Department and also still volunteering my photography services to The Garden. Next year I plan to move to Denver, Colorado in hopes of landing a photography job at the Denver Botanical Garden. However, if this does not work out, I will be working as a Park Ranger, because in order to be happy, the only thing I need is to be outside, being part of the environment.

Appendix



Figure 1: My photograph on the New York Botanical Garden website

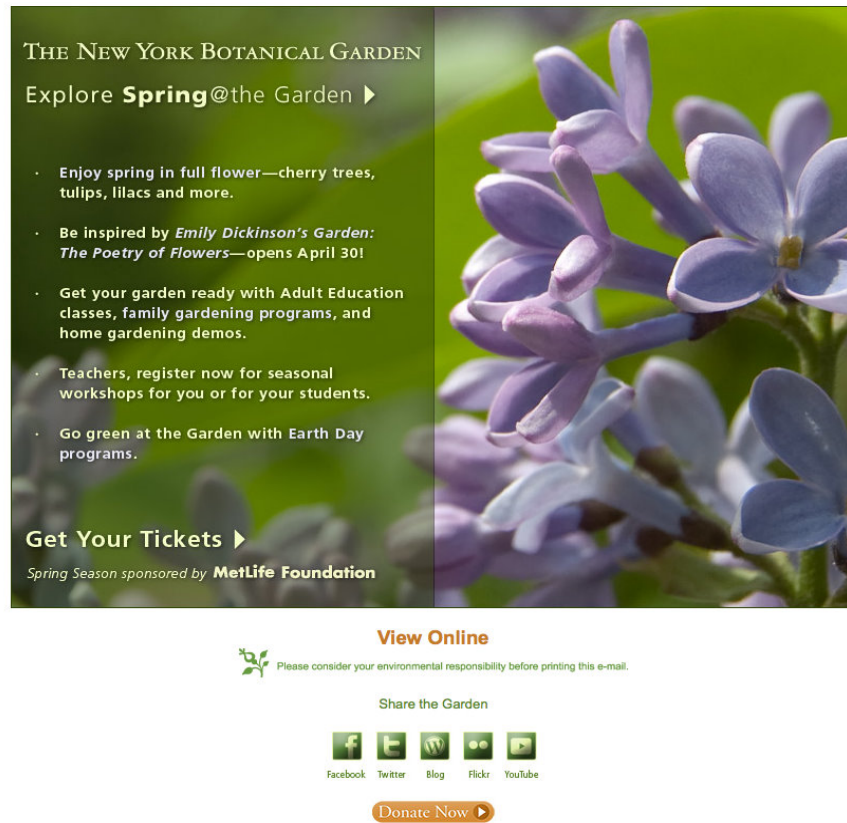


Figure 2: My photograph on an email sent out by the New York Botanical Garden



Figure 3: flowering cherry, *Prunus* 'Dream Catcher'

Photo by Christine Willeford



Figure 4: flowering cherry, *Prunus* 'Dream Catcher'

Photo by Christine Willeford



Figure 5: forsythia, *Forsythia sp*

Photo by Christine Willeford



Figure 6: Newport plum, *Prunus* 'Newport'

Photo by Christine Willeford



Figure 7: Newport plum, *Prunus* 'Newport'

Photo by Christine Willeford



Figure 8: star magnolia, *Magnolia stellata*

Photo by Christine Willeford



Figure 9: flowering cherry, *Prunus sargentii* 'Princeton Snowcloud'

Photo by Christine Willeford



Figure 10: flowering cherry, *Prunus sargentii* 'Princeton Snowcloud'

Photo by Christine Willeford

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