

A STAND 4 - TREES

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Junior Division

Process Paper

474 Word Count

A STAND 4 -TREES

The inspiration for this topic was my parent's work in regenerative design for buildings using forest waste. They helped me to appreciate nature. We traveled to Ephesus in Turkey and Tikal in Guatemala where guides talked about how those civilizations were uprooted and had to move away from beautiful cities. This was because the people devastated their forests and surrounding area for power and growth.

This is an important topic because trees are major anchors for environmental systems. Without them we would have no clean air, water or soil, which upholds all life on this planet. Our forests are under threat again due to climate and political changes.

My research began talking with my parents about how scientific forestry actually got its start in the United States in Asheville, North Carolina near my home. We watched the movie, *America's First Forest*. It got me thinking about the beginnings of forestry. People rejected the idea that forests were not endless and that we needed to protect them. People were cutting far too many trees to fuel the growth in America after the Civil War ended and during the Industrial Revolution.

There are primary resources available in NC to research the history of forestry that includes: The Forest History Society, The Cradle of Forestry and Biltmore Estate. The last two are a living example where you can walk in the forest and see their importance.

I chose a display because I could use recycled and biodegradable materials. This shows how we can protect forests today. I chose the bark because we can directly touch the trees. The paper tree is a good example of how good social change happens like natural change. It starts in the soil. Then with the roots that are small and unseen but important. The roots connect and grow into the trunk that gives the tree strength. From that strength, branches grow then leaves and flowers.

I chose the title because the definition of a stand of trees needs three trees or more. Plus, trees kind-of speak for themselves to people. I read a lot about that in early research in how poets and artists felt.

The men who took risks, spoke up and figured out a way to protect trees in this country ensured that we could have a life here. These risks were financial, social and political. They gave birth to "America's First Forests", the idea that scientific forestry was sustainable, and conservation at a minimum is necessary.

The Biltmore Estate came to be known as the Great Experiment. As I researched this topic, I came to appreciate just how much of an experiment it was. There were many parts and different ideas with a lack of proof of successes. This experiment lives on today as we continue to learn many important lessons from nature's patterns.

A STAND 4 - TREES

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Individual Exhibit
500 Word Count

A STAND OF TREES

The technical definition for a stand of trees is a grouping of trees that are similar in their parts related to size, age and shape. But when looked at by an experienced Forester, it becomes something much more. A Forester measures the space that is occupied and the growth that is possible, so he understands the whole system.

BARON SOIL

In 1888, George Vanderbilt visited Asheville, North Carolina with his mother and liked the area. Well traveled, Vanderbilt found the populated areas similar to other cities in the East. Much of the forest had been cleared for crops or livestock, and to provide timber for houses, barns, fences, and firewood. This land was steep and the soil eroding. Livestock grazed in the woodlands and fires were set to increase human habitat.

Because landowners cut their best remaining timber for income to feed their families, the land was wearing out. Locals were selling it cheap. The son of a wealthy railroad and shipping baron, Vanderbilt quietly purchased thousands of acres that were in the hands of real estate speculators for what would become the largest private residence and estate in the United States. He had a grand vision to create a beautiful park around his home. So, he hired Frederick Law Olmsted for the job.

THE ROOTS OF CONSERVATION

It was at Biltmore that Frederick Law Olmsted, a mature and acclaimed American born landscape architect, convinced the 26 year old Vanderbilt to support the nation's first forest management program. Olmsted had been important to the conservation movement from its early beginnings, and had a vision of its importance to the entire nation. He demanded that the forester he chose for this important job, have a plan for his work.

QUOTE

“This disorganized body has been masquerading before the public, a headless trunk, without policy, without order, without self-defined purpose.” Olmsted, Frederick Law. Spoils of the Park. Self-Published Pamphlet, February 1882: p3.

PORTRAIT

Fredrick Olmsted at Biltmore-Estate

A TRUNK WITH A HEAD

Olmsted hired Gifford Pinchot, American born Yale graduate who was trained in French and German Forestry for the job of Head Forester at the Biltmore Estate. Pinchot created a scientific forest management plan for 5,000 acres, often working without pay. It was the first of its kind in America and served as a national model.

He is credited with turning conservation into a public issue and creating the national forests. Appointed by President Theodore Roosevelt, he was the first chief of the Reconstituted Forest Service and US Division of Forestry in 1898. He became Roosevelt's closest advisor on conservation issues and strongly believed that the earth should belong to all people, not just the wealthy.

FIRST BRANCHES OF CONSERVATION

After 1901, conservation was becoming a bigger concern for President Theodore Roosevelt. He established the United States Forest Service, 150 national forests, 51 federal bird reserves, 5 national parks, and 18 national monuments via the 1906 American Antiquities Act. The Act for the Preservation of American Antiquities, allowed the president to have the ability to declare that any site of historical or scientific importance to be a national monument.

MATERIALS

Materials were chosen for recycled, recyclable and biodegradable content.

BIBLIOGRAPHY

PRIMARY SOURCE

REPUBLISHED PAMPHLET

Olmsted, Frederick Law. *Spoils of the Park*. Self-Published Pamphlet, February 1882.

This is a self-published pamphlet. Central Park had taken on a "slovenly and neglected aspect," Olmsted charged, because city politicians and their "ignorant" appointed commissioners had surrendered park service to "that form of tyranny known as influence and advice and that form of bribery known as patronage."

The pamphlet is criticized that in focusing on freeing the park from politicians, Olmsted and others ignored the more fundamental cause of the deterioration of the landscape. Public institutions required public money.

Olmsted was referring to the conservation movement. The quote tells about his idea that a plan was needed. Although the pamphlet did not focus on the need of money to get things done, Olmsted later tells a young Vanderbilt in a separate letter that wealth can change the nation for better.

BOOK

Olmstead, Fredrick Law. *Frederick Law Olmsted: Writings on Landscape, Culture, and Society*. Central Park Conservancy, 2015, The Library of America.

This is a collection of Olmsted's personal letters and writings. His words are direct and not trying to be politically correct. Some of the letters are confusing because the characters are not fully identified.

This source listed Olmsted's date and place of birth. In a letter to George Vanderbilt, Olmsted shared a vision of the importance that a large, wealthy estate had for the nation.

BOOK

Pinchot, Gifford. *The Conservation Diaries of Gifford Pinchot*. Edited by Steen, Harold.K. Forest History Society, 2001, Durham, North Carolina.

From 1889, one year after George Vanderbilt comes to Asheville for the first time - until 1946, the year of Pinchot's death, he kept a diary in which he recorded details of his daily activities and encounters. The book has an introduction by the editor that offers important context and background for each section. During the ten years of its writing, Pinchot worked with a range of experts and assistants to recreate the conservation story and his role in it.

Tells the story of Pinchot's role in conservation.

MAGAZINE

Snyder, Michael. What Is Forest Stand Structure and How Is It Measured. Northern Woodlands Magazine, Issue No. 64, Center for Northern Woodlands Education, , March 1, 2010, Vermont.

Northern Woodlands magazine is a quarterly magazine for landowners, forestry professionals, conservationists, and outdoor enthusiasts published by the Center for Northern Woodlands Education, Inc.

This article was written by a professional Forester who shows a forest as a bigger picture, not broken down in parts.

DIARY

Vanderbilt, George W. Diary on exhibition called "The Vanderbilts at Home and Abroad" at the Legacy Building in Antler Hill Village on Biltmore Estate, Asheville, NC.

The exhibit was a fascinating display on George Vanderbilt's travels to many lands. It included pages from his diary. It was an account of this life before coming to Asheville.

The diary shows that Vanderbilt was well traveled, so I presume the devastated land in Asheville was not shocking enough to him that he would not want to buy it.

WEBSITE

<https://barkhouse.com/products/>, 2017.

Creators of upcycled bark wall coverings and holders of the only Cradle to Cradle Platinum Certified Products in the world, Bark House is an expert in regenerative business. The website is for marketing purposes.

Recycled content and biodegradability of bark, limbs and twigs.

WEBSITE

<http://www.columbiaforestproducts.com/library/information/frequently-asked-questions/>

For over 50 years, *Columbia Forest Products* has been North America's largest manufacturer of quality hardwood plywood and veneers. They are an industry leader in sustainable forestry. The website is for marketing purposes.

Recycled content and biodegradability of plywood backing.

SECONDARY SOURCE

MAGAZINE

Alexander, Bill. The First American Forest. American Forests, American Forests Magazine, Vol. 3, No. 2, Summer 2005, Washington, DC.

American Forests has been protecting and restoring forests for more than 140 years. They claim that they may be the nation's oldest conservation organization and see their work more important than ever.

This article was about what Vanderbilt, Olmsted and Pinchot found in Asheville. Vanderbilt wanted a park. Olmsted convinced him to establish a program for forest management. Pinchot wrote the first forest management plan. It listed the age of Vanderbilt.

MAGAZINE

Elliston, Jon. Olmsted's Swan Song. Mountain Living in Western North Carolina, WNC Magazine, Gulfstream communications, March 2017 Asheville, North Carolina.

Reprint of an original portrait by John Singer Sargent at Biltmore Estate in 1895. It is currently on display at the estate.

NEWSLETTER

McQuillan, Alan G. Postmodern Forestry: Olmsted and Pinchot Began A Circular Century Of U.S. Forestry. Australian Forest History Society Inc., Newsletter No. 57, July 2011.

This is a newsletter published by The University of Montana. The resources for the articles are cited.

Olmsted demanded that Pinchot have a plan for his work at Biltmore.

BOOK

Norton, Bryan G Toward Unity Among Environmentalists. Oxford University Press, 1994.

This book offers an overview of the conservation movement -- its past as well as its present.

Mentioned the number of acres at Biltmore that Pinchot was to manage and that Olmsted suggested the experiment.

Today, the legacy of Theodore Roosevelt is found across the country. There are six national park sites dedicated, in part or whole, to our conservationist president.

This site lists the outcomes of President Theodore Roosevelt's work.

MAGAZINE

Stoll, Mark. Farms, Forests and Parks. Forest History Today Magazine, Vol 21, Forest History Society, 2015.

The Forest History Society is located in North Carolina. It is a nonprofit library and archive dedicated to collecting, preserving, and disseminating forest and conservation history for all to use.

This article also helped me to know that going back to the roots of Conservation was too much to cover in this project, but it did show how Olmstead was involved at this early level of conservation.

WEBSITE

<https://archive.epa.gov/wastes/conserve/materials/paper/web/html/faqs.html>, 2016.

The United States Environmental Protection Agency (EPA) is an agency of the Federal government of the United States which was created for the purpose of protecting human health and the environment by writing and enforcing regulations based on laws passed by Congress.

This page is about recycled content and biodegradability of paper.

WEBSITE

Brack, Chris. Forest Lands AMU. fennerschool-associated.anu.edu.au>stand

Fenner School of Environment & Society: ANU College of Medicine, Biology & Environment. The Fenner School of Environment & Society is unique in Australia. There are very few places in the world where economists and hydrologists, historians and ecologists, foresters, geographers and climatologists work together on the big environmental problems facing contemporary society.

This is one of the few educational sources that was available with a definition on a stand of trees.

WEBSITE

Chapman, Anne E. Nineteenth Century Trends in American Conservation.

https://www.nps.gov/nr/travel/massachusetts_conservation/Nineteenth_Century_Trends_in_%20American_Conservation.html

The website is by the National Park Service and lists dates of conservation events. It is a long list.

This article helped me to know that going back to the early roots of Conservation was too much to cover in this project.

WEBSITE

Estate History. <http://www.biltmore.com/visit/biltmore-house-gardens/estate-history>

This is a website for marketing purposes for the Biltmore Estate. Popular information should be verified with other sources.

This timeline confirms the date Vanderbilt first came to Asheville.

WEBSITE

Reckley, Aaron. Biltmore Estate: The Birth of US Forestry. November 4, 2011.

<https://www.nationalforests.org/blog/biltmore-estate-the-birth-of-forestry>

Published by the National Forest Foundation. Chartered by Congress, the National Forest Foundation was created in 1993 with a simple mission: bring people together to restore and enhance our National Forests and Grasslands. Education is a large part of this.

Shows that Olmsted hired Pinchot and how many acres Pinchot managed (5,000).

WEBSITE

Theodore Roosevelt and Conservation.<https://www.nps.gov/thro/learn/historyculture/10theodore-roosevelt-and-conservation.htm>.

The website is published by the National Park Service. The page shows how conservation increasingly became one of Roosevelt's main concerns. After becoming president in 1901, Roosevelt used his authority to protect wildlife and public lands by creating the United States Forest Service (USFS) and establishing 150 national forests, 51 federal bird reserves, 4 national game preserves, 5 national parks, and 18 national monuments by enabling the 1906 American Antiquities Act. During his presidency, Theodore Roosevelt protected approximately 230 million acres of public land.