

Crossing the Atlantic

Carl Schenck and the Formation of American
Forestry

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“We can learn from the woods better than we can learn from books, and we can do so, particularly, when we get together in an attempt to learn from nature.” – *Carl Schenck, 1908*

Abstract

This thesis explores the work of German forester Carl Alwin Schenck (1868-1955) in the United States at the beginning of the twentieth century and his contribution to the formation of American forestry. Crossing the Atlantic in 1895 to implement managed forestry at George Washington Vanderbilt's Biltmore Estate in North Carolina, Schenck created his own distinct model of private forestry that yoked German ideas to American realities and founded the first school of forestry in the United States. His work at the Biltmore came to a premature end in 1909 because of the vagaries of the U.S. market for timber and the financial woes of his employer. A victim of economic circumstances beyond his control, Schenck left the United States after over a decade of work and his school dissolved soon after. Over time, Schenck was written out of U.S. environmental and forestry history of the Progressive Era, as scholars focused their attention on Gifford Pinchot, Schenck's initial supervisor at Biltmore and eventual critic, who between 1898 and 1910 first headed the Division of Forestry and then the U.S. Forestry Service. Only recently have some historians begun to rediscover the importance of Schenck. They are doing so at a time when U.S. forestry policy has come to resemble the model of forestry that Schenck had fashioned at the dawn of the past century. This thesis re-establishes Schenck's presence in the historical timeline of the early conservation movement and argues for the important influence Schenck had on the foundations of forestry in the United States.

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Introduction



Carl Alwin Schenck's Memorial, Schenck Forest, North Carolina

At the entrance of a dusty gravel road near downtown Raleigh, North Carolina, across from acres of pasture, lies a sign for ‘Schenck Memorial Forest’. Merely a blip on Google Maps and completely nonexistent on state highway maps, a journey into this, North Carolina State University’s research forest, will take the curious traveler past row upon row of neatly planted pine until they reach a massive live oak. Underneath this centenarian tree rests a rock, and on that rock is a plaque dedicated almost a half century ago. The plaque reads: *“In memory of Carl Alwin Schenck, 1867-1955. This memorial forest is dedicated to honor a great teacher and founder of the Biltmore Forest School, the first school of forestry in the new world. His ashes have been spread here among the trees he loved.”*¹

¹ Schenck Memorial Forest (Raleigh, Wake County, North Carolina), Carl Alwin Schenck Memorial, personally photographed, 15 May 2016.

Carl Alwin Schenck was a native German. He was born in Darmstadt, was trained in forestry in Darmstadt, and died in Darmstadt. What, then, is his memorial doing in the middle of a North Carolina forest? While he remained a German citizen, Schenck spent a key part of his life, from age 27 to 41, actively working in forestry in the United States. This extended stay in North America had a significant influence on those whom it touched and on the formation of forestry in the United States as a whole.

This thesis examines Schenck's pursuits and experiences in the United States and how they effected the development of US forestry. His journey stands as an intriguing example of a late nineteenth century 'Atlantic crossing', to borrow the term from historian Daniel Rodgers's path-breaking study of U.S. social reform in the Progressive Age. Rodgers uses the term to refer to a unique period in American history in which, from the 1870s to 1930s, the industrializing United States dramatically shifted its attitude towards European ideas, technology, and practices.² Rather than approaching such things with suspicion or contempt, U.S. elites and reformers proved remarkably open to transatlantic ideas and influences. In many instances, the transfer of ideas involved Atlantic crossings by European individuals who brought their expertise to the United States on the direct behest of American institutions and individuals. Carl Schenck's story is one such example.

Carl Schenck was brought over in 1895 to implement managed forestry at George Washington Vanderbilt's Biltmore Estate in western North Carolina. Schenck's Atlantic crossing and his work at Biltmore are a telling example of the possibilities, challenges, and legacies involved in the transatlantic transfer of ideas and practices in the Progressive Era. From the start he was faced with the difficult task of adjusting a model of forestry learned in a country well

² Daniel T. Rodgers *Atlantic Crossings: Social Politics in a Progressive Age*. (Cambridge, MA: Belknap Press of Harvard University Press, 1998), 4

versed in the subject to a country where forestry was still a novel concept limited to academic journals and conferences. After some initial setbacks, Schenck was successful at developing a private forestry model drawn from German method but tailored to the American woods. Schenck predicted that his style of forestry, a model geared towards private landownership which he named ‘conservative forestry’, would be the best way forward for the United States. His reputation grew quickly, and he formed the first school of forestry in the United States, the Biltmore Forest School, to train aspiring private and public foresters in his model. Ironically, the American market eventually proved to be Schenck’s undoing as a series of economic crises and financial crashes at the turn of the century caused the price of lumber to plummet. This rendered his business model untenable as Schenck’s private management became too expensive for many lumbermen, let alone Vanderbilt, to undertake.

Markets change, however, and in the long run Schenck’s model has emerged successful. Today the American model of forestry mirrors that which Schenck advocated for at the beginning of the twentieth century. Private forestry dominates the United States today, and much of that which is practiced involves some form of intensive management, both hallmarks of Schenck’s approach.³

In telling the story of Schenck’s Atlantic crossing, this thesis directs attention to an important figure of early US environmental history that has largely been written out of the subject. One of the first and most highly influential works of environmental history, Samuel P. Hays’ *Conservation and the Gospel of Efficiency* (first published in 1959), set the tone by failing to mention Schenck even once in its account of the formation of conservation in the Progressive Era. His oversight was a product of the time: Hays wrote his groundbreaking work

³ For statistics, see Epilogue

when the forestry model dominating America was one developed by a contemporary of Schenck, Gifford Pinchot. Differing from Schenck's model in a key way, Pinchot's was based on the public management of the country's forests. Not until the 1960s did American forestry shift from this state-centered policy to a privately based model of forestry, and only in the past two to three decades has the private model begun to form the basis for US forestry.

In sum, with Hay's book serving as a foundational work, the field of U.S. environmental history emerged at a time in which Pinchot's model appeared to show lasting promise in the United States and Schenck's had been marginalized if not largely forgotten. Following Hay's lead, many historians focused on Pinchot's contributions and drew heavily from his works. Within his memoir, Pinchot has few kind words for Schenck. "We in the Division of Forestry fully recognized the necessity for professional education in Forestry in this country," he wrote, "but we had small confidence in the leadership of Dr. Fernow⁴ and Dr. Schenck. We distrusted them and their German lack of faith in American Forestry. What we wanted was American foresters trained by Americans in American ways for the work ahead in American forests."⁵ Such a dismissal of Schenck's work has had a lasting influence in the writing of US environmental and forest history.

Schenck's presence in written and published material is thus considerably lacking. Thanks to great efforts by the Forest History Society, North Carolina's public television channel produced a valuable documentary in 2015 on the Biltmore School and Carl Schenck. However, the documentary is based mainly on the personal accounts of Carl Schenck and lacks the critical analysis of an academic paper.

⁴ Dr. Fernow was a Prussian born Forester who established the US Forest Service. He was closely involved with Schenck and Pinchot, and created his own school of forestry at Cornell which failed after a few years. He worked only occasionally with Schenck, and shall thus be only occasionally mentioned in this thesis.

⁵ Pinchot, *Breaking New Ground*. (New York: Harcourt, Brace, 1947).152

Where authors have examined Schenck's life work, it tends to be as part of a larger historical narrative. James Lewis, chief historian of the forest history society, e.g., wrote a dissertation in the early 2000s that includes information on Schenck's Biltmore Forest School but frames it in a broader conversation on early forestry education in the United States.⁶ Char Miller, one of the leading environmental historians today, has also discussed the Biltmore Forest School, but in the context of the rise of Yale's school of forestry.⁷

Crossing the Atlantic: Carl Schenck and the formation of U.S. forestry offers the first broader study of Schenck's pursuits in the US apart from Schenck's own memoirs. In doing so, it draws on extensive research in a vast array of primary sources from three archival holdings. The first is an extensive collection of works donated by former Biltmore Forest School students to North Carolina State University in Raleigh, North Carolina. The second is the Gifford Pinchot collection, located at the Library of Congress in Washington, DC. Finally, this thesis draws from the collection within the Biltmore House itself, which contains much of the personal and outgoing correspondence from Schenck's time at the estate. In addition to archival sources, the memoirs of Carl Schenck, published posthumously in 1955, proved a particularly useful primary source.

Chapter I shows the challenges Schenck faced when crossing the Atlantic and how he overcame them. The chapter begins with an examination of the world Schenck was coming from in Germany. Particularly, it studies the causes for and techniques of German forestry in the late nineteenth century. After exploring where Schenck was coming from, the chapter examines the

⁶ James Lewis *Trained by Americans in American Ways: The Establishment of Forestry Education in the United States*. Dissertation. (Florida State University, Tallahassee, FL. 2001). 160.

⁷ Char Miller. "A Contested past - Forestry Education in the United States, 1838-1998." *Journal of Forestry* (97, no. 9 September 1999: 38-46.)

world Schenck was coming to. American forestry was in its very early stages when Schenck entered the United States at the invitation of George Vanderbilt and Gifford Pinchot. To create a parallel between the early life in forestry of Schenck and the pre-progressive experience of those interested in forestry in the United States, the chapter tells of the early education of Pinchot. Following this background on Schenck's Atlantic crossing, chapter one explores the challenges of such a crossing. Schenck was tasked with implementing forestry in a land he knew little about. After some minor conflict, however, Schenck was able to begin implementing German forestry in the United States.

Chapter II examines how, despite occasional setbacks, Schenck began to flourish in the United States. Carl Schenck's contribution to American forestry evolved as he continued to work at Biltmore. He began to form his own ideas on how forestry should best be implemented in America, and became a more and more vocal advocate for the merits of private forestry in the country. News of his work spread across the country, and Schenck eventually formed the first school of forestry in the United States from young men who had come to Biltmore to learn European forestry techniques. These actions created a rift between Schenck and his former supervisor, Pinchot, who had become the head of the newly formed US Division of Forestry. This chapter goes into detail about the differences between their two models and the conflict that arose from them.

Chapter III examines how, after reaching its pinnacle, Schenck's work in the United States met its end through sudden shifts in the market and Vanderbilt's collapsed investments. Things were going quite well for Schenck in the latter half of the 1900s. His style of forestry was finally beginning to produce a profit for Biltmore, and his school was growing and taking on more students. However, the Vanderbilt family itself lost a considerable amount of money during

this time due to faulty business ventures. This combined with a severe economic downturn to render Schenck's work in the United States financially impossible. The chapter ultimately argues that it was the failure of the market and a surplus of lumber in the United States that led to the short-term failure of Schenck's Atlantic crossing.

Crossing the Atlantic concludes with an epilogue on the legacies of Schenck's transatlantic journey. The Biltmore School traveled with Schenck back to Germany, and managed to carry on for four years before a lack of new applicants caused its closure. At the same time, the majority of land Schenck had worked on was sold to the federal government to pay the mounting debts of the Biltmore Estate. Despite this, however, I contend that Schenck's work in the United States was not for naught. Over time, American forestry evolved in such a way to quite closely resemble that which Schenck advocated for over one hundred years ago.

Carl Alwin Schenck's work to advance forestry in the United States is an often overlooked subject within the field of US environmental history. The goal of this thesis is to reconstruct Schenck's pursuits in the United States and to direct attention to the historical significance of his Atlantic crossing.

Chapter 1: Managing a Wilderness



The splash dam in the Pink Beds, 1896. Photo courtesy of the Forest History Society

On a particularly warm April day in 1895, Carl Alwin Schenck stepped onto the dock in Hoboken, New Jersey and began his journey into American forestry. This Atlantic crossing, like many at the time, was predicated on the idea that Schenck had something to contribute to the United States, in this instance American forestry, which could not otherwise be provided by Americans themselves. Forestry had been practiced in Germany for over a century when Schenck brought his skills across the Atlantic, and German forestry's reputation as a leader in the field was known throughout the western hemisphere. Those advocating for forestry in America thus had high expectations for his success, and the success of his employer, George Washington Vanderbilt, when it came to the job to be done: managing the Biltmore Estate in western North Carolina. Schenck came to discover, however, that his training in German forestry had left him

woefully unprepared for the task at hand in the wilds of southern Appalachia. The ruggedness of the terrain he was supposed to manage, the vagueness of the managerial hierarchy at the Biltmore Estate, and the unsustainable practices required of him during Schenck's first year at Biltmore soon shattered any dream of an easy transfer of forestry practices from Europe to America. Indeed, this period in the young German forester's time at Biltmore proves exemplary in how, on occasion, the American reliance on European experience did not always make for immediate positive change.

This chapter details Schenck's arrival to the United States and the first few years of his work at Biltmore. I argue that, in this period, Schenck overcame frustrations and setbacks by adapting and altering the German and American models of forestry in order to effectively implement managed forestry to Biltmore. In order to understand why German forestry was a hard fit for Biltmore, but why those in America actively sought out German expertise, this chapter first examines Schenck's background in German Forestry, along with the perception of this style of forestry in the United States. To highlight how vastly different forestry practices were in the United States at this time, the chapter then examines the early life and training of the man often considered to be the first American forester, Schenck's superior Gifford Pinchot. Finally, the chapter examines the specific challenges Schenck had in fitting the German model of forestry to the Biltmore estate and the things that held him back in his first years: existing unsustainable practices, problems with the management system, and early conflicts of ideology between himself and Pinchot. Ultimately, this early time saw the first conflicts regarding the future of forestry both at the Biltmore Estate and in the United States as a whole. As forestry sprouted in the United States, a debate emerged over the extent forestry could or should exist in

the private sector. Schenck began to advocate for private forestry in America, a direct result of his ability to overcome early challenges at the Biltmore Estate.

From Germany to America

Carl Schenck was raised at a time in Germany when forestry had been in practice in one form or another for decades, if not centuries. Germany's development of forestry was out of necessity. As the country industrialized in the 19th century, Germans looked to their forests as a means of fueling both the engines of mechanical change and feeding the region's booming population. Between 1830 and German unification in 1871, Prussia is estimated to have clear cut over 14% of its forests, and from 1700-1900 almost 50% of German forests were cut down.⁸ Such a rapid loss of forest land did not go unnoticed. As early as the late 18th century, schools of forestry had begun to emerge in various German states. With the rise of German nationalism came an earnest surge to protect the forests of Central Europe. The forest became a charged national symbol of the new German state.

However, while the Germans did halt deforestation and actually extended their country's forest range over the course of the late 19th century, these were not the 'wild' forests so often invoked in romantic literature. The forests Germany developed were also there to be profitable. The tracts planted by the German forest service were made to be highly manageable and thus highly extractable.⁹ A typical German 'forest' planted during the late 19th century would be a monoculture with no underbrush, roads carefully planned around the straight rows of trees to

⁸ Jeffrey K. Wilson *The German Forest: Nature, Identity, and the Contestation of a National Symbol, 1871-1914*. (Toronto: University of Toronto Press, 2012). 23.

⁹ For an example of such a technique in the United States, visit the White Pine Plantations at Carl Schenck Memorial Forest, Raleigh, North Carolina

maximize their effective harvesting.¹⁰ Despite the obvious lack of biodiversity and ‘wildness’ associated with such forests, the careful management of these tracts provided for a long term, sustainable source of state supply and revenue. In the year Schenck left for America, the timber industry accounted for 2% of the entire German GDP; the Prussian state employed over 150,000 workers annually to manage its forests.¹¹ Ultimately, the German forestry model was one designed for long term profit at the cost of wilderness.

Thus, when Schenck’s parents suggested that he, having developed lung problems in his youth, should look to becoming a forester, they were encouraging him to enter into a well-regarded position in the service of the state. An intense bout of tuberculosis at 18 ensured that Schenck’s life would be one in the woods, per his doctor’s recommendation.¹² He would have had plenty of options to choose from when finding a school; by 1890 there were over ten distinct universities for forestry in Germany.¹³ A degree from a German school of forestry carried respect, largely due to length of time and effort involved in obtaining one. After graduating from secondary school, a German forester candidate would have to spend a year working for the state forestry department, followed by a series of exams to determine eligibility for attendance at a forestry school.¹⁴ Forestry school itself meant six to twelve years of vigorous studying and field work, after which, if the candidate passed, they would be guaranteed a position in the German state forestry department.¹⁵ That Schenck obtained a degree was no easy task. Schenck’s service

¹⁰ Wilson, Jeffrey K. *The German Forest*: 24.

¹¹ Wilson, Jeffrey K. *The German Forest*: 54.

¹² Carl Schenck, *Letter to Charles Herty, October 8, 1908*. Biltmore Estate Forestry Department Manager's Records Series H Folder 4, The Biltmore Company, Museum Services Department, Archives Division, Asheville, North Carolina

¹³ “Forestry in Germany” *The New York Evangelist* 66, 39. (Sept. 1895) 34.

¹⁴ SW Powell. “Forestry Abroad.” *Christian Union* 44, 12. (1891) 525.

¹⁵ For more information on the German curriculum, see Chapter 2.

as a German forester was made all the more respectable by the fact that, under German law, he was made an officer in the army and obligated to spend two months of each year in its service.¹⁶

It was mainly through good connections and pure happenstance that Schenck found himself invited to work at what was to be the first ‘managed forest’ in America. Sir Dietrich Brandis, an Anglo-German forester in charge of Britain’s forests in India and one of Schenck’s personal mentors, was approached in 1895 by Gifford Pinchot, a rising star in the US conservation movement, on behalf of George Washington Vanderbilt.¹⁷ Vanderbilt sought a trained European forester to manage his mainly wooded property at the Biltmore Estate. As the current head of forestry at the estate, Pinchot was thus sent across the Atlantic to search for a suitable candidate.

Pinchot had emerged from a country with little regard for the natural world. Through years of expansionist rhetoric and manifest destiny, the United States had adopted a forestry policy that can be described as a grab-and-go one designed for quick profit. As settlers expanded the country’s boundaries westward, they cleared whatever forest they encountered and moved on. By the 1890s the few areas of old growth (never cut) forest that remained in the United States were almost entirely found in the western part of the country; those areas of the east that had escaped the lumberman’s saw did so by being so rugged as to be practically inaccessible to lumbering equipment.¹⁸

Pinchot’s family had, ironically, become incredibly wealthy through such unsustainable forestry practices. Gifford Pinchot’s father, James Pinchot, had acquired a significant fortune

¹⁶ Carl Alwin Schenck. *The Biltmore Story*, 5.

¹⁷ Gifford Pinchot *Letter to Sir Dietrich Brandis, 1894* in Gifford Pinchot Papers Box 550. (Library of Congress, Washington, DC.)

¹⁸ B. E. Fernow. *A Brief History of Forestry. In Europe, the United States and Other Countries*. (Toronto: University Press, 1911). 456.

from selling wallpaper and interior furnishings in New York City, but the Pinchot family itself had first become rich off of land speculation.¹⁹ This process encouraged profit through unsustainable forestry: the Pinchots and other well off New York families would purchase cheap land that had been recently deforested and sell it once the land had returned to forest. The land would likely be again deforested and resold or converted into agricultural land.

Thus when James Pinchot suggested to his son, Gifford, that he should pursue a career in forestry, it was a much more risky proposition than that of Schenck's family. Indeed, Gifford Pinchot is often regarded as the first American forester.²⁰ It is important to note that his family's motives for pushing him towards forestry and his own forestry education shaped his future forest policy in significant ways. James Pinchot felt remorse for his family's profit off of timber harvesting, and thus encouraged his son to become a forester so as to recompense for the past environmental damages occurred by the Pinchots.²¹ Gifford Pinchot later wrote in his memoir that he felt it his duty to, through forest policy, prevent the further unsustainable destruction of America's forests by private interests by any means necessary.

Pinchot may have been one of the first American foresters, but when he entered into forestry there existed no school on the subject in the United States. He thus, like many wealthy Americans at the time, traveled to Europe to complete his education. Specifically, he studied at the *L'Ecole nationale forestiere* in Nancy. Unlike the German school of forestry, the French school prioritized forest growth and rehabilitation. As an example of this different ideology, the French referred to the heads of their state forests not as directors, nor managers, but

¹⁹ Char Miller. *Gifford Pinchot and the Making of Modern Environmentalism*. (Washington, DC: Island Press/Shearwater Books, 2001). 30.

²⁰ This label is partially Pinchot and his follower's creation, and discounts some of the work done by other early American conservationists.

²¹ Gifford Pinchot. *Breaking New Ground*. 1.

conservators.²² Where Schenck was trained in economic forest management, Pinchot was trained in Sylviculture, or the environmental management of trees.²³ His training was also of shorter length- the French program in forestry lasted two years, compared to the six to twelve years of Germany's forestry degree.²⁴ Through his education and his family's status, Pinchot obtained employment as the first manager of the Biltmore Estate in 1891, a position he retained, though it is debatable as to the extent, at the time of Schenck's arrival.²⁵

Pinchot had European training and a well-respected position; why, then, did he seek aid in managing the estate? One must consider Pinchot's ambitions. He had made a name for himself through first undertaking the work needed at Biltmore, and would soon become the leading consultant for the U.S. Forest Service.²⁶ By his own choice Pinchot would become less and less involved at Biltmore, and thus both himself and the owner of the estate, George Vanderbilt, saw fit to hire another manager.

Why, then, was Schenck specifically chosen? The perception of German Forestry as the best in the world was not limited to the Germans. This idea was spread partially by German representatives; Baron Herman, agriculture expert at the German embassy in Washington, DC, made a speech in 1895 that claimed that "every tree in Germany is known to a forest officer," among other things.²⁷ However, much of the distribution of this impression was done by Americans themselves. In scientific and general periodicals, American authors frequently wrote of the wonderful efficiency and effectiveness of German Forestry. For example, an article titled

²² Theodore S. Woolsey, and William Buckhout Greeley. *Studies in French Forestry*. (New York: John Wiley & Sons, 1920). 273.

²³ Pinchot. *Breaking New Ground*. 16.

²⁴ Woolsey, Greeley. *Studies in French Forestry*, 275.

²⁵ Pinchot was involved in many other projects at the time of Schenck's arrival and, according to his diary, spent only a few weeks of the year at Biltmore.

²⁶ "Forestry as a Science" *Scientific American* 55, 8. (August 1896).175.

²⁷ "Forestry in Germany" *The New York Evangelist* . 34.

‘Will Forest Tree Culture Pay?’, published in *The Hub* trade magazine, praised the training German foresters received, saying, “nearly all the Governments of Europe, and even Asia, have Colleges of Forestry... but among them all, Germany stands far in advance, not only for the completeness of system, but for the accuracy and economy of the results obtained.”²⁸ Likewise, the New York periodical *Christian Union* wrote that “German literature [on forestry] is so important that it may be said with perfect safety that no one who is unacquainted with it can claim to be anything of an authority on forestry.”²⁹ Pinchot himself wrote in 1895 that the German “course of training...has produced one of the most efficient forest staff of the present day.”³⁰ Those knowledgeable in forestry in the United States believed that Germany was the best source of foresters in the world; thus Pinchot’s first step, when searching for a manager for the Biltmore Estate, was to inquire in Germany.

Ultimately, it was Schenck’s availability that led him to work at Biltmore. Schenck had recently completed his Phd program and was without an immediate source of employment upon graduating; Brandis, who Schenck had worked for as a forestry assistant and apprentice during the late 1880s, therefore recommended Schenck to Pinchot. In January of 1895 Schenck received this simple telegram while on holiday in the French Riviera: “are you willing to come to America and to take charge of my forestry interests in western North Carolina? – George W. Vanderbilt.”³¹ After some deliberation, Schenck accepted this offer and traveled to the United States.

The first meetings between Schenck and Pinchot seem to have been quite cordial.

Schenck wrote in his memoir that Pinchot was eager to show him the sights and sounds of New

²⁸ Howard Dubois. “Will Forest Tree Culture Pay?” *The Hub*. 34, 1. (April 1892). 13.

²⁹ “Forestry” *Christian Union* 41, 24. (June 1890). 846.

³⁰ Gifford Pinchot. “Government Forestry Abroad.” *American Economic Association*. 6, 3. (May 1891). 5.

³¹ Schenck, Carl. *The Biltmore Story* (Minnesota Historical Society, St. Paul. 1955), 17

York; they visited the American Museum of Natural History, toured Central Park, and went to several fine restaurants and department stores.³² One thing in particular stood out to Schenck. While they toured the Museum of Natural History, Schenck was filled with wonderment at the size of the size of the tree cores that filled part of the museum's collection.³³ These were old growth samples of a size that Schenck had never witnessed before. As he wandered the halls of the museum with Pinchot, Schenck saw for the first time how different forestry might be in the United States. But while the job to be done at Biltmore loomed ever closer, it still seemed far away amidst the hustle of the big city. Schenck recollected that, in the days he spent with Pinchot in New York, the subject of his employment was rarely mentioned, despite the fact that this was technically Schenck's first meeting with his supervisor.³⁴ Most of their talk was either about the city itself or about their mutual love of hunting and fishing. Indeed, one of the few times Pinchot mentioned Biltmore to Schenck was at their parting. As Schenck boarded a train headed south, Pinchot said to him, "Dr. Schenck, I believe you are just the right man for the position. You will be forester and I will be chief forester during your term of employment."³⁵

Before Schenck went to Biltmore, however, he made a notable extended stop in Washington D.C. His original intent was to visit the German ambassador, but, after being turned away, went instead to visit the offices of the US Department of Agriculture's forestry division.³⁶ The United States government had only recently begun conserving massive tracts of land as national forests, and the lack of American trained foresters was still very apparent at the office. It is less likely that Schenck made his way to their offices, then, to learn about American forest policy, but rather because the office was full of his fellow compatriots. Here one can see that

³² Schenck. *The Biltmore Story* 20.

³³ *ibid*

³⁴ *ibid*

³⁵ *ibid*

³⁶ Schenck. *The Biltmore Story* 21.

Schenck's oceanic crossing was part of a broader transatlantic movement that marked this period; he was far from the first German forester to travel to the United States. Based on the work of some recent migrants from Germany, the transfer of ideas from Europe to America had been well underway by 1895. Bernhard Fernow, a native Prussian trained in German forestry, had been appointed Chief of the Forest Service only a few months before.³⁷ He greeted Schenck with open arms, as did Filibert Roth, a Württemberg native who would conduct some of the first surveys of American forests conditions undertaken by the US government. While these Germans would slowly be replaced by Americans as forestry took hold in the country, at the time the meeting provided Schenck with the comfort and enthusiasm required for the task ahead. German state forest policy had begun to be successfully implemented on the national level in the United States, but little had been done to experiment with German forest management on private estates in North America.

One should note here that various forms of forestry existed in Germany. Schenck himself described the misconception of Americans with German forestry best in a letter from 1908, when he wrote,

It cannot be repeated too often that there is no more room in America for "German" forestry than there is for "Chinese" forestry. I wish that I could take some of these men- and women- who have forestry beneath the skull at a place where brains should be on a flying trip through Europe... Come with me to my own state, Hesse Darmstadt, and I show to you private forests, notably private forests owned by the peasants, and not entailed: you will find them as badly treated as any woodlands owned by farmers in Western North Carolina. When we speak of German forestry, we have in mind, invariably, the variety of forestry which is practiced within the densely peopled states of the fatherland by the state governments, the townships and the cities, all of which are

³⁷ Fernow would remain a relatively minor character in the story of the Biltmore School, but he did lay an important groundwork for the further development of US Forest Policy under Gifford Pinchot. He also created his own school of forestry at Cornell after Schenck, but due to poor funding, extensive forest fires, and a series of bad business deals the idea was abandoned after a few years.

forest owners; further, by the wealthy families owning forests by way of entail, the oldest son being merely the user, pro tem, of the proceeds obtained from the forest.³⁸

The Germans prided themselves on their state-organized forestry, a model in which vast state owned tracts were managed by government officers. If Schenck had stayed in Germany, he would have likely served as one of these imperial foresters. However, at the same time forestry had long been practiced by the nobility of Germany on their palatial estates. Such forestry was meant to generate long term income for the noble family so as to help financially cover their more lavishes expenses. Schenck saw implementing this noble-based style of forestry as his task in the United States, and to this end he boarded a train the next morning towards the southwest to America's palatial estate: Biltmore.

The Biltmore Estate could perhaps only come about under the unique circumstances provided by the Vanderbilt fortune. Its owner, George Washington Vanderbilt, was the grandson of Cornelius Vanderbilt, one of the richest Americans of the 1800s. Cornelius had amassed a massive amount of money through shipping during the early nineteenth century, allowing his descendants to live out luxurious lives at his passing. George Washington (GW) Vanderbilt inherited \$1 million with the death of Cornelius, \$5 million upon the death of his father, and had at his disposal another \$5 million in a trust fund that gained interest over time.³⁹ Counting for inflation, GW's fortune amounted to around \$300 million in today's money by the time he was 25.⁴⁰ GW was unlike his eight other siblings. Rather than follow the trend of his fellow millionaires and spend his inheritance on a massive New York City mansion, Vanderbilt was content to live with his mother. He was an academic at heart, spending most times in his own

³⁸ Carl Schenck to Leonard Bronson, *Letter of October 11, 1908* Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

³⁹ Arthur T. Vanderbilt *Fortune's Children: The Fall of the House of Vanderbilt*. New York: Morrow, 1989. 271

⁴⁰ The Bureau of Labor Statistic's annual Consumer Price Index (CPI), established in 1913. Inflation data from 1665 to 1912 is sourced from a historical study conducted by political science professor Robert Sahr at Oregon State University. Taken from <http://www.in2013dollars.com/1895-dollars-in-2015?amount=11000000>

library. He had a particular interest in linguistics; he was fluent in eight languages and one of his favorite hobbies was translating works by contemporary authors into ancient Greek.⁴¹

All this changed in 1889. In an effort to escape the cold drudgery of winter in New York, GW went with his mother to the mountains of North Carolina. He was enthralled with the rugged peaks and wild country he saw during his trip, and decided from that moment that that was where he needed to be. Thus, starting in 1889, Vanderbilt began buying up vast swaths of land in southern Appalachia. His first purchase, 5,000 acres, would be considered enormous today, but it left GW unsatisfied.⁴² Vanderbilt's estate was meant to be his own personal paradise; this dream mandated that there would be no close neighbors to intrude upon his life of pristine isolation. Thus by the time he stopped purchasing land, Vanderbilt's estate rivaled some of the smaller states of Europe. The Biltmore Estate encompassed over 146,000 acres (228 square miles), and, given the underdeveloped mountain terrain, it took over a week to travel from one boundary line to the other.⁴³

To top off this magnificent landscape Vanderbilt commissioned an equally awe-inspiring house and grounds. Without the limits of New York City's street grid system, GW was free to build as big and grand a mansion as his money would allow. The resulting French-style Chateau remains the largest private house in the United States to this day. It contains over 250 rooms and occupies 5 acres from end to end.⁴⁴ Yet perhaps the most subtly powerful statement of the entire mansion was the view from the porch; the Biltmore House rests on top of a leveled ridge overlooking the French Broad River and the Pisgah range that dominates the opposite bank.

⁴¹ Vanderbilt, *Fortune's Children*. 271 and 277

⁴² Vanderbilt, *Fortune's Children*. 272

⁴³ *ibid*

⁴⁴ Vanderbilt, *Fortune's Children*. 275

Though most guests failed to realize it, all of the land visible from the Biltmore mansion was owned by Vanderbilt. GW wanted a palatial estate in America, and he had built that dream.

However, GW was also aware that he could not afford to live on his vast estate for very long without it generating revenue. He requested the advice of Frederick Law Olmstead, the prominent American landscape artist who had been designing the grounds immediately surrounding the mansion. It was thus Olmstead that told Vanderbilt:

Such land in Europe would be made a forest; partly, if it belonged to a gentleman of large means, as a preserve for game, mainly with a view to crops of timber. That would be a suitable and dignified business for you to engage in; it would, in the long run, be probably a fair investment of capital and it would be of great value to the country to have a thoroughly well organized and systematically conducted attempt in forestry; made on a large scale. My advice would be to make a small park into which to look from your house, make a small pleasure ground and gardens, farm your river bottoms chiefly to keep and fatten live stock with a view to manure, and make the rest a forest, improving the existing woods and planting the old fields.”⁴⁵

The rest proceeded like clockwork; Vanderbilt hired Pinchot to manage his forest, and Pinchot, realizing that managing such a large estate would take more time than his ambitious goals would allow (Pinchot was becoming increasingly involved in federal forest policy and his own business interests in New York), sought out a trained European forester to relieve some of the work that needed to be done. Thus Schenck arrived at Biltmore Station in late April of 1895.

⁴⁵ Elizabeth Stevenson. *Park Maker: A Life of Frederick Law Olmsted*. (New York: Macmillan, 1977). 389.

Finding a Balance

“Biltmore was nothing.” These are the words Schenck chose to use when first describing the estate in his memoirs.⁴⁶ While it may be posited that Schenck had some inkling of the challenge that lay before him in managing this forest estate, his early time with Pinchot in New York had left him quite unprepared for what he faced in his first years in the United States. Schenck was used to the forests of Germany. These, as mentioned above, were of pure artificial design: forests were often of a single type of tree, planted in even rows and all of the same age. The forests of Biltmore were practically the exact opposite. Once the original old growth trees had been cut, many of the properties that eventually made up the Biltmore estate were left abandoned for the forest to regrow on its own. Schenck perhaps offers the best description of the forest when he wrote that, “from the German viewpoint, the forest might be designated a chaos of trees.”⁴⁷ The trees of Biltmore had been left on their own. Without management, what resulted was a wilderness. Beech trees shared space with oaks and chestnuts. Softwoods such as pine and cedar were interspersed with hearty hickory. Adding to the chaos was a thick understory of rhododendron and various other low-height plants. This was a forest unlike Schenck had ever before encountered, and in more ways than one: the young German forester had little prior knowledge of American tree species besides his brief experience at the American Museum of Natural History in New York. For him this was not only a woefully undermanaged landscape, but one he was totally unfamiliar with.

Naturally this was rather overwhelming to Schenck, especially considering that, prior to his hiring, Pinchot had been working to manage the forest for three years. It seems, from Pinchot’s memoir, that he experienced a similar sense of panic at the impossibility of the task

⁴⁶ Schenck. *The Biltmore Story* 23.

⁴⁷ Schenck. *The Biltmore Story* 26.

ahead when he first started at the estate. He wrote that, “with my only technical advisors 3,000 miles away across the ocean, it is not surprising that...I spent anxious hours poring over my French and German textbooks... but it was hard to get much light from the writings of men who had never seen the forest that I had to handle.”⁴⁸ Similarly, Schenck found that his experiences in European forestry left him without much to work with at the beginning of his term of employment. This is not to say that Pinchot and Schenck’s first experiences with the forest were quite the same. Pinchot had undertaken a fair amount of work in the four years before Schenck’s arrival. Perhaps the most important task undertaken by Pinchot was his commission of a surveying team to create detailed maps on the entire Vanderbilt property. These proved vital to the continued management of the forest. Foremost a believer in Sylviculture, Pinchot had also undertaken extensive work to replant the many abandoned farms and logged hillsides that lay scattered across the property.⁴⁹ Many of these projects ended in failure, but they give evidence to the fact that, contrary to some of Schenck’s more blunt claims, the forest was not as entirely wild as he suggests.

Pinchot had tried to make the Biltmore forest profitable from his inception as chief manager, but the resulting methods proved to be problematic for Schenck. As Pinchot’s diaries indicate, he was practicing cutting on the property as early as 1892.⁵⁰ The forest was thus depleted of many of its larger trees by the time of Schenck’s arrival. One effort made by Pinchot that proved helpful for Schenck involved training Biltmore’s lumbermen to avoid crushing smaller trees when cutting down larger ones, but it did little to outweigh the problem that there were very few trees left that could be sold for profit. Schenck’s first orders from Pinchot were to

⁴⁸ Pinchot, *Breaking New Ground*. 53

⁴⁹ Pinchot, *Breaking New Ground*. 56

⁵⁰ Gifford Pinchot, *The Conservation Diaries of Gifford Pinchot*, ed. Harold Steen (Forest History Society: Durham, 2011), 57.

continue the projects currently taking place at the estate. To give an example of how little profitable timber was left, one of the first jobs Schenck gave his work crews, after touring the estate with Pinchot, was to begin clearing the reportedly numerous piles of cut timber that Pinchot had left in the woods to rot. They could not turn a profit on the wood due to its poor quality.⁵¹

Adding to Schenck's frustration was a resistance to change at the Biltmore Estate. This was exacerbated by the ill-defined chain of authority within the Forestry Department. Pinchot was technically his superior, but it was quite apparent that his involvement would be piecemeal with Schenck's arrival. After his initial tour of the Biltmore grounds with Schenck in April, Pinchot left the estate for New York, and did not return until June.⁵² While the management of the forest between these two visits progressed with no apparent problems, in between Pinchot's visit in June and his next visit in September, Schenck's opinion of Pinchot and his frustration towards the situation at Biltmore appears to reach a peak. While Schenck assumed control of most of the day to day operations of managing the forest, his work crews still looked to Pinchot for orders. These crews, consisting mainly of men from the impoverished areas surrounding the estate, were hardy folk who did not initially take kindly to working under a foreigner. Worse than the workers, though, were those subcontracted to work with the Biltmore Forest, such as the head of a sawmill in nearby Asheville. After an incident in which this millwright refused to even talk with Schenck and requested instead to receive payment from Pinchot, Schenck became exasperated. He had been told verbally by Vanderbilt that he would be in charge of the day to day workings of the estate, and he expressed this matter to Pinchot in a series of

⁵¹ Schenck. *The Biltmore Story* 34

⁵² Pinchot, *The Conservation Diaries of Gifford Pinchot* 60.

aggressive letters written in August of 1895. Of the millwright incident, Schenck wrote to Pinchot,

If Mr. Vanderbilt has empowered you to decide in regard to the saw mill, why did you not drop me a line as to the matter at once, after having got my letter of July 29th? I was bound to think that you knew about the millwright matter and that there was an understanding between Mr. Vanderbilt and you....My position, there cannot be any doubt about it according to my agreement, is the following 1) I am subject to your approval in matters of general admin. As well as in the work down by the Forestry Office 2) I am subject to Mr. N(?)'s approval on money matters.⁵³

Then, at the end of the letter, Schenck added, "In Germany and Austria there is no princely estate and a great many are smaller than Biltmore Estate- without a sort of constitution. I do not think it possible to get along without it in this country."⁵⁴ Through this he made it clear that his supposed suggestions were not simply himself vying for power, but instead an attempt to implement his German training, the very training for which he was brought to the United States, at the estate. He received no response. Resultantly, Schenck became even more frustrated with Pinchot's lack of involvement at Biltmore. A few days later he wrote an even more scathing letter to Pinchot in which he called him out personally, writing,

[It is of my opinion] that your connection with the estate was ended the day you have put me in as the Resident Forester, and is(?) thinking, owing to my appointment and the remarks of Mr. Vanderbilt, that you would enter government service and would come down once or twice a year to look how things were getting on, that Mr V. is under the same impression.⁵⁵ It is more than strange that we never touched the subject, when you were down.⁵⁶

This was one of many times that Pinchot and Schenck showed hostility towards one another. However, unlike many cases, this one was quickly resolved, as it dealt not with

⁵³ Carl Schenck. *Letter to Gifford Pinchot August 8th 1895*. Gifford Pinchot Papers Box 558.

⁵⁴ *ibid*

⁵⁵ Schenck underlined the above words in his own letter. It is important to also add that Schenck's grip of the English language was not as strong as it would be in the following years, given that he had only been in the United States for four months at the time.

⁵⁶ Carl Schenck. *Letter to Gifford Pinchot August 11th 1895*. Gifford Pinchot Papers Box 558.

major differences in models and best practices (as future conflicts would involve) but with a simple misunderstanding of Schenck's contract at the estate. Pinchot returned to Biltmore in September of 1895 and, in a meeting with Schenck and Vanderbilt, eagerly gave Schenck the independence he wanted in managing the estate.⁵⁷ Pinchot's political career was gaining ground, and thus as Pinchot became less and less involved Schenck had more say on the day to day levels of operation at the estate. Schenck, however, still sent major operational reforms to Pinchot for approval, often prefacing his requests with 'In Germany...' to ensure he was changing policy not based on his own whims, but in a way that brought the estate's management closer to the German model.⁵⁸

Schenck gained some of the independence he wanted in managing the estate's forest. Vanderbilt had one request regarding this increase of responsibility: to finish the few projects Pinchot had started before Schenck's arrival before he could begin managing the forest in a way that suited him. One of these projects ended in such disaster that Schenck nearly resigned his position.

Through Challenge, Change

Pinchot's methods of forest planting and growth management at Biltmore were based on the practices he had learned while studying in France. When it came to cutting and processing the timber, however, Pinchot relied on the standard American practices, as he had little training otherwise. One of the final projects of Pinchot's left on the estate at

⁵⁷ Pinchot, *The Conservation Diaries of Gifford Pinchot*. 60.

⁵⁸ Carl A. Schenck *Letter to Gifford Pinchot August 28th, 1895*. Biltmore Estate Forestry Department Manager's Records Series P Folder 6.

the time of his voluntary role reduction was a traditional American splash dam. Rather than cut road or lay down train tracks, early American lumbermen relied on the power of water to transport timber. They would first select a creek which led from close to the timber harvesting site to a larger navigable river. Following selection of the creek, they would proceed to construct a temporary earth and timber dam across it. As the water would rise on the upstream side of the dam, the lumbermen would begin piling logs near the site. Once the water was collected in sufficient levels, they would open the sluice and allow water to rush back downstream, along with the logs the lumbermen had cut. At the intersection of the creek and the navigable river, the lumbermen would secure the logs and float them downstream to the nearest sawmill.

Schenck had no prior experience with splash dams. As stated previously, the Germans relied on extensive networks of roadways throughout their forests to ease transportation issues. Schenck saw the splash dam as a temporary means of addressing a transportation issue while he was looking for permanent solutions.⁵⁹ The natural beauty of the site, combined with the rugged terrain, added further to Schenck's hesitation. When he first toured the site with Pinchot in his first weeks at Biltmore, he was amazed at the size of the trees and the sheer beauty of the cove. The stand had never before been under the axe; the trees were resultantly some of the largest on the estate. Schenck felt trepidation at cutting down such a superior stand; because the logs had to be lightweight in order for the water to carry them, he could only remove Tulip Poplars, a relatively cheap wood, from the site. However, he was under orders to finish this final project, and he obeyed.

⁵⁹ Schenck. *The Biltmore Story* 29

Early attempts to build a splash dam at the site proved problematic, and resulted in Schenck eventually calling for the retirement of Pinchot's chief lumberman, Charles Whitney.⁶⁰ Whitney had miscalculated the minimum size of the dam, and began moving logs very early in the process. He had also failed to take into account the meandering of the stream; this proved to be disastrous. As soon as the first logs flew past the dam, they formed a jam at the closest turn in the creek.⁶¹ Once the logs were moved from this jam, they simply flowed on to the next bend in the stream, where they formed another jam. Quite soon the lumbermen realized the futility in conducting such an operation, and work was halted. Schenck would resume the work in the later months of that year, determined to bring this last project of Pinchot's to fruition.

In the time in-between, Schenck sought advice from his German mentors. Most were wary of the idea and urged him to introduce German ways of forest management. Wilhelm Schlich, a prominent German forester, perhaps best exemplified Schenck's mentors' attitude towards the project when he wrote, "You seem to have taken to floating. If you can do this without expensive work, well good. In the reverse case, however, I should strongly advise you to consider at an early date the construction of roads so laid out that tramway can be laid."⁶² While expensive to construct and maintain, the Germans preferred the use of roads and rail when harvesting timber, as it made for quick access and less environmental impact. Despite the warnings of his German peers but wary of disobeying orders after the conflicts of the previous months, Schenck continued with the splash dam.

⁶⁰ Schenck also claimed that Whitney, being a northerner, found it impossible to manage the southern work crews, which would often disobey his orders out of contempt for him as an outsider.

⁶¹ EM Griffith *Letter to Gifford Pinchot, June 16, 1895*. Carl Schenck Papers, Box 14.

⁶² Wilhelm Schlich. *Letter to Carl A. Schenck December 2, 1895*. Carl Schenck Papers, Box 14.

The project began smoothly enough. Excavations were made for the dam, and hemlock logs were hauled up by mule to construct it.⁶³ The tulip poplars that dominated the grove were felled. Crews began engineering the stream: rocks were removed, soft banks were reinforced with beams, shallow sections were made deeper, and new dikes were dug to avoid any sharp bends in the creek. After several weeks the splash dam was ready. All that remained was the water to power the logs through. This water, however, was slow in coming. The amount flowing through the creek was insufficient to move the massive tulip logs, forcing the crews to wait for rain to power the timber through.

When the rain did come, it proved disastrous. The logs made it to the river, but as the creek level rose, the way the logs reached the confluence began to vary dangerously. Logs spilled from the banks of the creek, causing extensive damage to the communities lying downstream. Bridges were torn from their posts and fields of crops were rolled over as the creek crested its banks.⁶⁴ Schenck's first major experience with American styles of lumbering had ended in disaster. If the embarrassment of this failed operation did not dishearten the German forester, the extensive number of lawsuits that followed certainly did.⁶⁵

Through this experience Schenck grew quite critical of the style of forestry Pinchot had practiced at Biltmore and the policy towards forests in the United States in general. One should note that Pinchot was equally dissatisfied with this style of forestry, but approached solving it in a way that differed greatly for Schenck.⁶⁶ However, for the time being Schenck saw Pinchot as the embodiment of this wasteful American style, and it is

⁶³ Schenck. *The Biltmore Story* 41 and 42 contain the majority of this story.

⁶⁴ *ibid*

⁶⁵ Schenck later wrote that, if Vanderbilt had not been away in Europe, he would have likely been fired on the spot.

⁶⁶ See Chapter 2

during this time that Schenck began a feud over forestry practice with Pinchot. While the latter of these two men had reduced his role to the more technical aspects of the forest's management, his word still held more weight than Schenck's. Therefore, despite the setback that resulted from such practices, the American style of forestry dominated the management policy at Biltmore. Schenck was still required to clear-cut sections of forest in order to make profit. Once his work crews had finished this task, they were entrusted to replant the deforested area with seedlings. After seeing these replacement crops die time and time again, Schenck once again confronted his supervisor via letter. This time, Schenck personally attacked Pinchot's style of forestry, saying,

As Americans are of the opinion that forestry and tree-planting are the same, I wish to say, that no reasonable forester would plant, where nature regenerates, and where woodlands can be bought at a price per acre, at which planting per acre cannot be done. I repeat, so absurd as it might sound, the disbursements for silvicultural operations should not be charged to Biltmore Forest, but to "Sport and Landscape"⁶⁷

This is, overall, a letter about the handling of the Biltmore Forestry Department's finances. However, the last sentence is more than likely intended to take a jab at Pinchot's style of forestry at Biltmore. Schenck would be much clearer about his intentions in a letter he composed after the beginning of the New Year:

I was so greatly disappointed that I came near resigning the position which I am holding down here, and the disappointment has made me not only wild but sick. Heaven knows that I try to do my best, and with all the enthusiasm that a young man can have, try to perform my task down here, but, under the circumstances, it is sometimes not very pleasant. What is the use of buying land and buying land again, thus increasing the area, instead of managing the area which we have more intensively and more systematically? Had I only the 3,000.00 to spare, I would gladly put them in. I am going to lose all the respect that I had for your public spirited American gentry. Their public

⁶⁷ Carl Schenck. *Letter to Gifford Pinchot December 28th 1895*. Gifford Pinchot Papers Box 558.

spiritedness seems to be bounded by the line where public attention ceases to see their noble actions.⁶⁸⁶⁹

Pinchot wrote in his memoirs that Schenck never truly let go of his German ways.⁷⁰ If these letters are any indication, Schenck's problem in 1896 was somewhat a failure to adapt, but even more a disenchantment with the existing American style of forestry. He saw Pinchot's ways as futile; when Pinchot's saplings failed to regenerate the forest, Schenck was held directly responsible for the unsuccessful attempt. He saw that American practices generated only short term revenue at Biltmore. Moreover, he viewed his ultimate purpose in the United States, to bring German-style forestry to America and make it work in a foreign setting, as increasingly difficult given the conditions he had to work with. Schenck was concerned with making Biltmore Forest a sustainable operation; he needed projects that preserved some of the woods and allowed for natural regeneration as well as plantings. Despite his reservations, Schenck renewed his contract at the beginning of the year, much to the elation of Pinchot and Vanderbilt.⁷¹ But in order for Schenck to implement some aspects of German forestry at the estate, he needed his work in Biltmore Forest to be independent of Pinchot's influence.

Fortunately for Schenck, Pinchot's work at Biltmore and his savvy political connections had made him a rising star in the American Conservation movement. In early 1896 the National Academy of Sciences formed the first National Forest Commission to report the status of America's forests and how best to manage the vast lands controlled by the Federal government in the west. Among the first members of the commission was

⁶⁸ Carl Schenck *Letter to Gifford Pinchot January 20th 1896*. Gifford Pinchot Papers Box 558.

⁶⁹ Pinchot's response to this letter was simply to say "The news about the dam and the boom I am exceedingly sorry to hear, especially as to the loss of the cordwood. The other was to be expected in the natural course of things."

⁷⁰ Pinchot, *Breaking New Ground*. 65

⁷¹ Gifford Pinchot *Letter to Carl A. Schenck January 21st 1896*. Biltmore Estate Forestry Department Manager's Records Series P Folder 6

Pinchot.⁷² In 1897 Pinchot was appointed special agent to the Department of the Interior to study these western lands and make recommendations based on his experiences.⁷³ These commitments took up more and more of Pinchot's time, and his involvement in Biltmore lessened dramatically as a result.

Schenck's first year at Biltmore was one of his worst. He had left a country where forestry had been practiced for generations and moved to a country where virgin forests were still being clear cut at whim for quick profit. Here one can see that, despite previous successes with transferring German state forest policy to the United States, implementing private forest management proved to be incredibly difficult. Most ideas that crossed the Atlantic during this time period dealt with abstract policy and reform; Schenck's transfer dealt with changing an entire physical landscape.⁷⁴ It is also apparent from these early years that Schenck suffered when forced to work under constraints he did not agree with. Some of the harsh language found in letters from Schenck to Pinchot can be attributed to a language barrier; Schenck's English was still rusty when he entered into employment in America.⁷⁵ The furious overtones, however, largely reflect a frustration with the impediments he faced at the estate. Schenck believed that, in order to do what he was sent to the United States to do, he had to rid the estate of the unsustainable practices implemented before his arrival. That Pinchot and Vanderbilt were reluctant to so dramatically alter the forestry system that had been in place at the estate for half a decade is understandable, but their resistance to change impeded Schenck's ability to manage the estate in a manner he felt proper.

⁷² Schenck. *The Biltmore Story* 47.

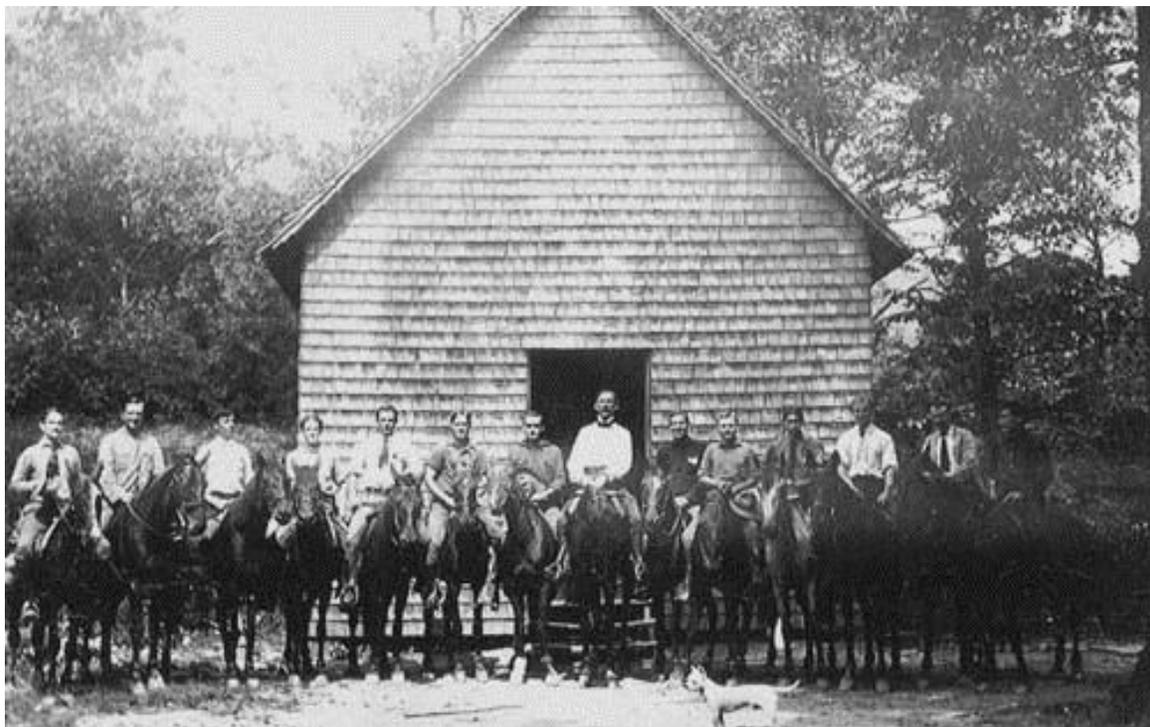
⁷³ James Lewis. *A Biographical Portrait of Gifford Pinchot*. (Forest History Society, Durham). 2.

⁷⁴ Daniel T. Rodgers. *Atlantic Crossings*, 5.

⁷⁵ Schenck. *The Biltmore Story* 3.

By the middle of 1896, however, Schenck had what he had expected to have when he first entered into employment at Biltmore. Pinchot's influence over the estate was waning, and Schenck was free to practice forestry the way he wanted to, limited only by the budget restrictions put in place by Vanderbilt. With a freedom of choice, Schenck soon turned to address the number of young men, who, fascinated by the work being conducted at Biltmore, were showing up by the dozen to volunteer their services at the estate. Within two years he would put form the first school of forestry in America.

Chapter 2: A School in the Forest



Pictured: Schenck (middle, white shirt) and Forestry Students posing in front of the Biltmore School before heading to a daily inspection of Biltmore Forest, around 1903. Photo Courtesy of the Forest History Society

In June of 1899, a letter arrived at Carl Schenck's office at Biltmore from a Dr. John C DuBois of Hudson, New York. "I have just received a letter," he began,

"from Mr. Gifford Pinchot, Esq., Forester connected with the US Department of Agriculture, in which he says; 'The course at the Biltmore Forest School lasts for a year, and, in my judgement, is the most useful now open for forest students in America. Your son would do best to begin in September, if you decide to have him go there. The forester of the Biltmore Estate, Dr. C. A. Schenck, is in charge of the school, and you should communicate with him.' I now do so, and ask you to kindly send me, full particulars, both printed and written – what requirements are demanded as to previous study, cost, price of board and rooms, etc."⁷⁶

⁷⁶ John C DuBois. *Letter to Carl A. Schenck June 11th 1899* Biltmore Estate Forestry Department Manager's Records Series P Folder 6.

Schenck had first formed the basis for what became the Biltmore Forest School in 1896, but did not expect it to last or grow. But grow it did. What began as informal lessons to young apprentices in the forest became, by the 1900s, a full graduate curriculum, complete with textbooks, lecturers, and even a small “campus” that included a schoolroom, cabins, and a mess area. The school became the best known and most influential part of Schenck’s Atlantic crossing.

This chapter explores the middle years of Schenck’s time at Biltmore, with a specific focus on the development of the Biltmore Forest School and Schenck’s personal ideas about how forestry could be effectively implemented in the United States. I argue that the formation of the Biltmore School marked a transformative period in Schenck’s time in the United States. Specifically, through educating Americans about forestry, Schenck developed what he called ‘conservative forestry’: a model which advocated private forestry management over public in the United States and was the fusion of German ideas with the realities he faced in America. This chapter begins with an examination of the Biltmore School. It explains how the factors of time, demand, and fame played into the formation of the school. Not forgetting the importance of Schenck’s German heritage, the chapter then considers the Biltmore School curriculum, and how it compared to Schenck’s own education versus the experiences he had gained by working at Biltmore. Finally, the chapter provides insight into the ever-changing relationship between Schenck and his former supervisor, Gifford Pinchot, and how it relates to the story of the Biltmore School. Here Schenck isolated himself from the general conservation community by standing by his stance that forestry should be a private, economically profitable endeavor. This position put him at odds with the conservation movement Pinchot was developing and greatly shaped the development of Schenck’s school in the Biltmore forest.

The Cradle of Forestry in America

Schenck's situation at Biltmore at the end of 1896 was quite different than that of the beginning. Indeed, it was markedly better. With the absence of Pinchot, Schenck was in complete control of the estate's forestry department.⁷⁷ He could undertake his own projects and slowly fit the Biltmore Forest to the model of forestry popularized by the German nobility, albeit with some concessions for the environment and terrain. Furthermore, Schenck returned from a two month trip to Germany to fulfill his military duties (a trip he was forced to undertake every other year until World War I) happily married. He had proposed to Adele Bopp before he entered into employment at Biltmore, and brought her with him to America on his return journey as Mrs. Schenck.⁷⁸

It was a few months before this trip that the foundations of a forestry school began to appear at the Biltmore Estate. Periodicals such as the *Scientific American* had been showcasing the work being done at Biltmore for months.⁷⁹ While the extent of outside coverage waned with Pinchot's departure from the estate, knowledge of Biltmore had spread throughout the nation. Pinchot wrote in his memoirs that young men first wrote to Biltmore looking for an education as early as 1893, but he often turned them away for lack of time to either teach them or positions to offer them.⁸⁰ Schenck quickly encountered the same problem, and first solved it by sending the students to schools in Germany.⁸¹ He was also sure to caution these early students about getting into his line of work. "Forestry will never be a remunerative profession," he wrote to a prospective student in 1897, "and you will never become rich at it. The salaries which you will earn,

⁷⁷ Though one should note that this gave him increased responsibilities, and therefore increased his risk of blame if anything went wrong with the estate.

⁷⁸ Schenck, Carl Alwin. *The Biltmore Story*, 57.

⁷⁹ "Forestry as a Science" *Scientific American* 55, 8. (August 1896).175.

⁸⁰ Gifford Pinchot. *Breaking New Ground*, 64.

⁸¹ James Lewis *Trained by Americans in American Ways*. 160.

either from state or private service, are very small, and the life in or near the woods is rough.”⁸² With that disclaimer, he encouraged the prospective student to take up forestry, recognizing that, “the development of this country as well as many others will necessitate the management of the woods by trained foresters.”⁸³ Such a warning did little to discourage potential foresters from visiting the estate. As the number of students continued to rise, Schenck began using them as a means of free labor- he trained them in the style of forestry he was implementing at the estate, and they in turn worked for him for free as apprentices. This method too worked only for a short period. Soon, word had spread that there was a school of forestry being formed at the Biltmore Estate and the number of young visitors became more than Schenck could manage in such an informal way. The primary leaders in American Forestry at the time, Gifford Pinchot and Bernhard Fernow, began receiving letters inquiring about applying for a school, and in turn began forwarding them to Schenck.⁸⁴

Eventually, this mounting pressure to take on students became overwhelming, and in 1898 Schenck officially formed the Biltmore Forest School.⁸⁵ This was of course, with the expressed permission of Vanderbilt himself, who had been skeptical of Schenck’s plan. Of particular concern to Vanderbilt (and eventually to Schenck) were the finances involved in creating such a school.⁸⁶ The school began in a way that would not prove sustainable in the long run. It had no endowment or benefactor, for Vanderbilt’s finances left no room for such projects.⁸⁷ The school, from its beginning, was paid for entirely through the tuition received by students and out of Schenck’s own pocket. Schenck first began advertising his new school in the

⁸² Carl A. Schenck. *Letter to Arthur Underhill May 15, 1897*. Biltmore Estate Forestry Department Manager's Records Series U Folder 1 Box 36.

⁸³ *ibid*

⁸⁴ Gifford Pinchot *Letter to Carl A. Schenck October 21st 1896* Biltmore Estate Forestry Department Manager's Records Series P Folder 7 Box 29.

⁸⁵ Letters indicate that he had formed what was considered by most a school as early as 1896; however, 1898 marks the first mention of his active advertisement of Biltmore Forest School in scientific journals.

⁸⁶ For an in depth look on these finances, see Chapter 3

⁸⁷ Vanderbilt’s finances is examined in greater detail in Chapter 3

spring of 1898. His school was to be one of the more expensive professional schools in the United States. For a year of education at the Biltmore School, one was expected to pay \$200.⁸⁸ In comparison, annual tuition at Harvard at the time was roughly \$175.⁸⁹ With the average US citizen's salary at roughly \$400 in 1900, Biltmore School was a relatively socially exclusive institution geared towards the well to do.⁹⁰ This is not to say that those of lower means could not attend it, but they were forced to take out copious loans from local banks to afford tuition.⁹¹

The applicants to the Biltmore School were as varied as the applications themselves. The residential origins of the applicants reflected the geographic distribution of forestry interest in the United States. Most potential students hailed from the northern Midwest and South, the two primary areas of concentration for the lumber industry at the time.⁹² Many of those who applied from these regions were the sons of lumbermen, who were eager to learn better forest management practices and, by doing so, increase profit. A significant proportion of applicants, however, hailed from the Northeast. New England was the epicenter of the conservation movement. It was in western New York that the first successful nature preserve in the country was established in 1884: Adirondack Park.⁹³ Great names in conservation, particularly the Pinchots and Olmsteads, also hailed from this region of the United States.

From New England the backgrounds of applicants contrasted sharply with those of the Midwest and South. Indeed, in a significant way they closely mirrored the average applicant

⁸⁸ H. Waters *Letter to Carl A. Schenck July 5th 1900* Biltmore Estate Forestry Department Manager's Records Series W Folder 41 Box 29.

⁸⁹ "Harvard in 1900." FDR Suite Restoration Project @ Adams House, Harvard University. (Accessed January 09, 2017.) <http://www.fdrsuite.org/harvard1900.html>.

⁹⁰ The US Diplomatic Mission to Germany. "About the USA: Facts and Figures" (Berlin, Germany. July 2003).

⁹¹ Durant Clifton Howe *Letter to Clarence Willis January 4, 1907*. Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

⁹² Various letters, Biltmore Estate Forestry Department Manager's Records. Various Series, The Biltmore Company, Museum Services Department, Archives Division, Asheville, North Carolina

⁹³ For more information on the early years of conservation, consult *Crimes Against Nature* by Karl Jacoby

backgrounds of Europe. Many applicants had little prior experience with forestry, let alone the forest. They were sons of pharmacists, judges, and other upper-middle class citizens. Two main reasons for applying to Schenck's school present themselves through these students' application letters. First, there was an interest in moving towards outdoors work for health benefits. In a letter of inquiry from 1898, CE Weltner wrote,

“Mr Phillip Schleaussner, my nephew, whose father is a druggist at No. 644 Bedford Ave. Brooklyn, NY has spent the past year with me owing to a weakness in his lungs, which, however, is rapidly disappearing. The young man is 19 years old, a graduate from a Brooklyn College and a bright youth. The doctors have told him to do out door work, and I have suggested to him the practical study of forestry as a life work.”⁹⁴

This directly mirrors Schenck's own motives for entering into forestry. The late nineteenth century marked a rise in popularity of the use of sanatoriums within the medical world. The idea that 'clean' air could treat a variety of lung afflictions still held sway in medical circles, as evident by the above letter. Thus several of Schenck's students, like Schenck himself, pursued an education in forestry to ensure ample time in the outdoors for health reasons. Secondly, individuals from the Northeast applied to the Biltmore School because of a perceived general lack of direction in life. Naturally this was a problem limited to those who could afford to have such a dilemma. Many such applicants reportedly only became interested in forestry after reading about the work being done at Biltmore in Scientific Journals.⁹⁵ In this way the applications to the Biltmore School differed from those of the German Schools. The sons of lumbermen, those seeking forestry as a career for health reasons, and those otherwise quite interested in forestry did make up the majority of students at Biltmore. However, one should make note of those upper middle class students applying to the school due to a general lack of

⁹⁴ CE Weltner *Letter to Carl A. Schenck, April 3rd 1898* Biltmore Estate Forestry Department Manager's Records Series W Folder 38 Box 36.

⁹⁵ Louis Banigan *Letter to Carl A. Schenck, August 11th, 1901* Biltmore Estate Forestry Department Manager's Records Series W Folder 38 Box 36.

life direction, for this serves as an indicator of the parallel rise of the conservation movement in the United States.⁹⁶ That well off Americans could consider a degree in forestry at the Biltmore School a viable option for the future speaks to the growing fame at what was occurring at Biltmore on the private level and the prevalence of the environmental movement in the United States as a whole.

Despite the number of applications or letters of inquiry Schenck received throughout his time at Biltmore, the early years of the Forest School were years of learning for both Schenck and his pupils. A letter from Pinchot to Schenck from 1898 suggests that, after his initial advertisement, Schenck only accepted three students.⁹⁷ This was not, however, because of a lack of applicants. Schenck wrote a few years later that so many students applied his first year that he had to create a waiting list for those waiting to apply.⁹⁸ Schenck was very selective when it came to the education and proficiency of the students at his school and the first year of the school seems to have been more of a ‘testing the waters’ period for Schenck. Pinchot confirms this when he wrote to Schenck about his lament for lack of students that,

“The first part of an enterprise of that kind must be exceedingly arduous and the less men you have the more easily you will get it in order. Besides, I should think that the number would increase during the year, and I hope before long you will have as many men as you can possibly attend to.”⁹⁹

That number did eventually increase, and it did so largely in part to assistance from Pinchot. In 1898 Pinchot was appointed chief of the Division of Forestry, which gave him considerable influence over national conservation policy in the United States. However, his

⁹⁶ It should also be noted that, in many cases, in many ‘lack of life purpose’ cases, the applicant’s father, brother, or other relative tends to have done the applying

⁹⁷ Gifford Pinchot *Letter to Carl A. Schenck, September 16th, 1898* Biltmore Estate Forestry Department Manager's Records Series W Folder 9 Box 29.

⁹⁸ Carl Schenck. *Unpublished Manuscript* Carl Schenck Papers, Folder 20, Box 57.

⁹⁹ Pinchot *Letter to Schenck, September 16th, 1898* Biltmore Estate Forestry Department Manager's Records Series P

department still lacked experienced and trained American foresters.¹⁰⁰ As Pinchot took on his new role, he began seeking a long-term means of staffing the department. He thus formed an informal understanding with Schenck: as long as Schenck provided his students with an education that readied his graduates for work at the Division Pinchot would hire on students from the Biltmore School to work for the US Government. With the Biltmore School now acting as a means, in all practical terms, of direct employment into the United States Division of Forestry, Schenck's school began to attract more and more students.

A Short, Practical Course in the Woods

When he opened the Biltmore Forest School, Schenck had little prior experience with education besides his years in Germany. It is thus of little surprise that Schenck chose to base his school, initially, on the German model. The German forestry education system was divided into different segments of apprenticeship and learning. Traditionally, a prospective German student would enter into a summer apprenticeship with a forester after graduating from a German high school equivalent (Gymnasium).¹⁰¹ Following this term, the pupil would begin study at an academy for two years. Finally, the student would enter into a major university for a final year of study, focused primarily on political economy and forest law, before taking an extensive examination in Forest Policy and, upon passing, becoming an official state forester.¹⁰² It was this final year of the German forestry education that Schenck modeled his school after. He preferred to take on students who had already graduated with a bachelor's from American colleges, and kept his program resultantly short.

¹⁰⁰ While, as chapter 1 suggests, there were plenty of trained and experienced foresters in the United States, many had been brought in from Europe.

¹⁰¹ Filbert Roth. *The Curriculum in Forestry Education* in *Forestry Quarterly*, Volume 8. (Cambridge, MA). 1910.

¹⁰² SW Powell. "Forestry Abroad." *Christian Union* 44, 12. (1891). 525.

Despite having a similar structure to the German model of education, Schenck's school differed quite significantly from those of his native land. Schenck sought to keep his students outdoors as much as possible. Students stayed in tents or primitive cabins within the Pisgah tract if it was the summer or with residents of Biltmore village, the town Vanderbilt had constructed to house his servants, in the winter. In the early years of the school they would arrive at 9:30 AM to his office within the forest.¹⁰³ Schenck would lecture students, usually on a single subject each day, until 11:30.¹⁰⁴ In the first few years of the Biltmore School, Schenck found there to be a lack of English textbooks on the subjects he was teaching to the students. Unwilling (or more likely unable) to pay for translations, Schenck instead began typing out his lectures and distributing them amongst the students at the beginning of class each day.¹⁰⁵ Following lectures the students would accompany Schenck on horseback into Pisgah forest, where they would help him in the day to day activities of the estate. Every student was required to own a horse for use in travelling around the Biltmore forest.¹⁰⁶ During the winter students would help Schenck plan for the spring plantings and summer cuttings instead of venturing out into the woods. This is part of what made Schenck's school unique at the time: whereas most existing schools and those to come would be primarily indoor affairs; the fact that Schenck, as chief forester for the Biltmore Estate, still had to actively manage the forest he taught in meant that his students gained most of their education through firsthand experience, not lecture or book learning.

While Schenck expected his students to have some degree of training in biology and forest science before they entered into his school, he soon realized that his students would need a more extensive education than that of the German secondary model he was attempting to

¹⁰³ Carl Schenck. *The Biltmore Story* 78

¹⁰⁴ James E. Benedict, "Diary, J. E. Benedict, Biltmore Forest School, 1906-1907," Carl Schenck Papers.

¹⁰⁵ *ibid*

¹⁰⁶ Carl Schenck *Unpublished Manuscript, 1949* Carl Schenck Papers.2

emulate. Thus, as the school expanded, so did the curriculum. Students received lectures in law and political economy, similarly to German schools, but they also received an education in Botany, Zoology, Sylviculture, and more.¹⁰⁷ As Schenck was initially the only teacher at his school, the curriculum was limited to the amount of material he felt confident teaching.

Schenck's curriculum acts as an indicator of his move away from his German roots. He would later write that, "I have cursed all my European experience and instruction and Doctors degree! They were utterly useless, they were misleading!"¹⁰⁸ Schenck had originally attempted to base his school on a German model, but much like his early work in adapting German forestry to the Biltmore forest, he ended up creating something entirely new, something unique to himself. Through his work at the Biltmore Estate, Schenck had begun to form ideas about forestry in the United States that, in some instances, differed from his traditional German teaching.

By the early 1900s, the Biltmore School had grown in size while Schenck grew in prominence. The school became situated in an area of Pisgah Forest known as the pink beds, so named for the prevalence of Catawba Rhododendron in the area.¹⁰⁹ This allowed ease of access to Pisgah forest for Schenck and his students. Schenck converted an old church into a one room school house, and desks slowly replaced pews.¹¹⁰ Vanderbilt had a commissary constructed in 1902 to feed both the regular employees of the forest and Schenck's students. Meals typically consisted of cheese and crackers, corned beef, and canned peaches.¹¹¹ Lacking the money and time to provide students with their own housing, Schenck simply tasked his students with finding a place to stay. Fortunately, because of Vanderbilt's purchase of much of Biltmore Forest from

¹⁰⁷ Carl Schenck *Unpublished Manuscript* 1

¹⁰⁸ *ibid*

¹⁰⁹ In a testimony to the size of Vanderbilt's estate, the Biltmore School was located 17 linear miles from the Biltmore Estate, or over 30 miles on modern roads.

¹¹⁰ *The Cradle of Forestry in America* US Forest Service, (1990). 6.

¹¹¹ *ibid*

numerous local mountaineers and their subsequent evictions from the estate, there were plenty of abandoned homesteads and cabins to be found nearby the schoolhouse. Unfortunately for students, these houses were often small, cramped, and in desperate need of repair. Indeed, the five cabins that became the standard for student housing were nicknamed “Little Bohemia”, “The Palace” (likely named sarcastically), “Rest for the Wicked”, “Hell Hole”, and “Little Hell Hole”.¹¹² Despite its humble appearance, the establishment of a campus for the Biltmore School had lasting impacts on both the school and Schenck’s treatment of it. Schenck became more and more invested in the school’s future, and its student population steadily increased.

At the same time, Schenck was becoming a figure of authority in the emerging field of academic forestry in the United States. He began to act as an advisor for other forestry schools hoping to form. Particularly, Schenck was instrumental in developing the curriculum of the forestry school at Sewanee, or the University of the South.¹¹³ Schenck was also hired, for a brief time, as a consulting forester in the US Division of Forestry. He published in forestry journals on a regular basis, and attended conferences on forestry in Minnesota, Washington DC, and elsewhere. Oftentimes, and increasingly so as his student group grew, he would take his students along for these trips. Schenck even capitalized on his mandatory service in the German Army (required of him once every two years) by taking his students along with him to study German forestry while he carried out his duties.¹¹⁴ Those students who could not afford the trip across the Atlantic were employed as ‘Forester Assistants’ by the US Division of Forestry.¹¹⁵¹¹⁶

¹¹² *The Cradle of Forestry* US Forest Service, 7.

¹¹³ Carl Schenck *Various Letters to Gifford Pinchot* Biltmore Estate Forestry Department Manager's Records, Outgoing Correspondence.

¹¹⁴ Carl Schenck *Unpublished Manuscript*, 2.

¹¹⁵ Carl Schenck *Letter to Gifford Pinchot January 6, 1900*. Biltmore Estate Forestry Department Manager's Records, Outgoing Correspondence.

¹¹⁶ This practice was canceled after a few years, however, as Schenck soon found that his ties to America brought ire from his fellow German soldiers. This particularly came to a head in 1900, when, according to Schenck, he came

As the school and Schenck's work at Biltmore flourished, he committed to continuing work at the Biltmore Estate. Vanderbilt and Schenck signed a 10 year contract extension with full insurance coverage in the same year. Schenck was no longer there to provide advice as a European expert and then depart; his work in the United States was developing a sort of permanence that would have lasting effects on both Schenck and on American forestry. As part of this, he crafted a unique private-based model of forestry which he saw as the best way forward for the United States. Unfortunately, at the same time another model was being implemented at the federal level, and the minor differences between the two would soon lead to conflict. At the head of this other model was Schenck's former supervisor: Pinchot.

A Tale of Two Models

Around the beginning of the twentieth century, Schenck and Pinchot developed two separate models over the way forestry should be implemented in the United States. Pinchot was ironically developing a model of forestry very similar to that of the German state. He believed more and more in the idea that forestry in the United States could only succeed through public ownership and practice on federal lands.¹¹⁷ Pinchot's model emphasized using timber from National Forests, subsidized by tax income, to outcompete private interests and resultantly ensure the country's timber supply was properly preserved and managed. Crucial to his model was the idea that lumbermen and private interests could not be trusted to implement forest

into an altercation with a superior officer over Schenck's 'American' riding style. Schenck accosted the Captain, and resultantly faced this officer's wrath for the duration of his three month period. Forced into the most paltry tasks a man of Schenck's rank (Lieutenant) could do, Schenck found himself unable to spend any time with the students he had taken to Germany to learn forestry. Schenck felt guilt for leaving his students in Germany with little to do and anger towards the German army and the aristocratic system he found in place.

¹¹⁷ McCleary, Douglass *Carl Schenck: What is his Forest Management Legacy Today?* (Forestry Source: Society of American Foresters, April 2016). 10.

management on their own.¹¹⁸ Instead of working to educate or regulate them, Pinchot's model focused on eradicating private forestry. If the federal government was the only institution left to produce the nation's lumber, they could do it in a careful and managed way without profit necessarily driving their production.

In contrast, Schenck began to believe that private forestry might provide a greater role in the American Conservation movement than the work of the government itself.¹¹⁹ This, Schenck claimed, was a step away from his German teachings; he was, in his own words, "not following any of [my] illustrious German predecessors in financial teachings. I am going my own way."¹²⁰ In later years Schenck would give his model of forestry a label: "conservative forestry".¹²¹ He knew, however, that in order for his model to garner support it needed to be profitable. Schenck's model thus emphasized forest finance above all else. As he explained in a letter to Bernhard Fernow, a fellow German who had recently founded a school of forestry in the United States at Cornell University, in 1900,

"Forest finance is the heart of American forestry. No investment is made by a businessman unless he looks ahead to its financial prospects. Ask a big railroad man, ask a farmer, ask a telephone company, and they will tell you they look ahead for years to come... The arcanum of forestry seems to me to lie in the following words: 'increase or decrease the total of your investments to that figure at which the highest and safest levels of interest are obtained.'"¹²²

¹¹⁸ This could relate to his family's exploitation of the forests for wealth.

¹¹⁹ Carl Schenck *Letter to Sir Dietrich Brandis* 1903. Biltmore Estate Forestry Department Manager's Records, Outgoing Correspondence.

¹²⁰ Carl Schenck *Letter to Bernhard Fernow November 2nd, 1900*. Biltmore Estate Forestry Department Manager's Records, Outgoing Correspondence.

¹²¹ *Ibid.*

¹²² Carl Schenck *Letter to Bernhard Fernow October 25th, 1900*. Biltmore Estate Forestry Department Manager's Records, Outgoing Correspondence.

A few days later, he clarified his definition of private forestry as the proper “handling of forest investments.”¹²³

This model revolves around two key ideas. First, that the forest is a private investment; and that every tree is a potential source of revenue. This emphasis went against the romanticized idea, popular in the American conservation movement, of nature as a place of escape, or rather a wild place removed from human touch. Second, that forests are a means of long term, low yet steady profit: a way of gaining a modest income over a long period of time. Schenck outlined this second assumption in a journal article written in 1900, as follows:

“Forestry on a large scale will not be possible in the United States, on private holdings, unless it proves to be a remunerative investment of capital. Unfortunately, owing to the slowness of tree growth, there is no chance for large profits in forestry. Not one of the forest owners abroad has engaged in forestry with the view of getting rich off it. Forestry is not a maker of wealth; it is only a preserver of wealth. But as a preserver of wealth, forestry is unrivaled.”¹²⁴

No doubt the second assumption reflected Schenck’s German education and experience. For generations Germany had been practicing the sort of forestry along the lines of which Schenck was now prescribing for the United States.¹²⁵ However, one can also distinguish these writings from Schenck’s early experiences at Biltmore. By 1900 Schenck had become relatively accustomed to the American way of doing things. The above periodical is written for the average American lumberman who Schenck saw as the means of enacting long term positive change in the field of forestry. By convincing lumbermen to practice sustainable harvesting, Schenck believed he could efficiently train them to be America’s first generation of foresters emulating not the primarily state-centric practices of his native Germany, but those of Schenck’s new

¹²³ Schenck *Letter to Fernow November 2nd 1900*. Biltmore Estate Forestry Department Manager's Records, Outgoing Correspondence.

¹²⁴ Carl Schenck *Forestry as a Business: Business Problems* 1900. Carl Schenck Papers.

¹²⁵ See Chapter 1

model for the United States. With these lofty goals in mind Schenck began publishing articles in earnest about his proposed changes to forestry in America. Schenck and Pinchot's lofty but conflicting models would soon come to a head in both Washington, DC and Biltmore.

After leaving the Biltmore Estate for a career in the federal government in 1896, Pinchot maintained a persistent correspondence and cordial relations with Schenck. Pinchot also kept a vested interest in the Biltmore School as a source of federal foresters. So long as Schenck's students were able to pass the entrance exams for the United States Division of Forestry, Pinchot would continue sending Schenck applicants and recommending his school to others. When Pinchot was promoted to Chief of the Division of Forestry in 1898, he found the department lacking in trained American foresters. Thus Pinchot soon turned to Schenck to serve as a senior consultant for the department, around four months after the founding of the Biltmore School.¹²⁶

Schenck resultantly found himself working in three different positions concurrently: manager of the Biltmore Estate, head of the Biltmore Forest School, and active consultant to the US Forestry Division. Surprisingly, Schenck was able to balance all three, at least for a time. He made several trips to the Deep South for the Division, where he studied the longleaf pine forests there and contributed to the Division's desire for a comprehensive survey of all American forests.¹²⁷ As the Biltmore Forest School expanded, Schenck used it as a means of contributing to the Division of Forestry. He had his students develop tools and tables that found use with the federal government.¹²⁸ Indeed, one of Schenck's greatest lasting legacies came out of this period.

¹²⁶ Gifford Pinchot *Letter to Carl Schenck August 20th, 1898*. Biltmore Estate Forestry Department Manager's Records, Folder 8, Box 29.

¹²⁷ Schenck, *The Biltmore Story*, 86-87.

¹²⁸ Gifford Pinchot *Letter to Carl Schenck February 27th, 1899*. Biltmore Estate Forestry Department Manager's Records, Folder 11, Box 29.

Wanting a better means of measuring tree height and diameter, Schenck invented what is known as the Biltmore Stick, which is still used by lumbermen today.

Unfortunately for Schenck, his idea of private, managed forestry soon put him at odds with the work of the Division of Forestry under Pinchot. Schenck's positive inclination towards lumbermen and his actions as acting consultant only fed the flames of contempt between the two. Increasingly, Pinchot became more critical of Schenck's ideas. Referring to an article published by Schenck titled 'Forestry as a Business', Pinchot wrote in a letter,

“[Your article] does not fit the problem in America. I am very much afraid that the tendency of this article and of other similar statements of yours will be to discourage men from taking up forestry under the misconception that it is useless for anyone to do so expect with a large capital and with very little expectation of ever making money. As a matter of fact, forestry is paying in a way that directly contradicts your point of view.”¹²⁹

This quote can be seen as a passive attack on Schenck's school and work. In other words, Pinchot is stating that Schenck's private management style will never take on in the United States because of the ability for unmanaged forestry to pay. This concept is inherently anti-lumbermen, for it suggests that they are too concerned with profit to be encouraged to manage. In addressing Schenck's views on forest finance, Pinchot continues,

“Your reasoning on financial forestry seems to me to involve the assumption that the general conditions of the lumber business are as fixed in this country as they are in Germany... the American lumberman does not seem to me to need protection against rashly engaging in forest enterprises, being already sufficiently prejudiced against them... there are one million square miles of timberland in the United States. Someone must own it.”¹³⁰

¹²⁹ Gifford Pinchot *Letter to Carl Schenck November, 1899*. Biltmore Estate Forestry Department Manager's Records, Folder 13 Box 29, 1.

¹³⁰ Pinchot, *Letter to Carl Schenck November 1899*, 2.

In this way one can see how Pinchot's views were in conflict with those of Schenck. Though the two shared the common goal of popularizing forestry in the United States, their means of meeting that goal conflicted as much as their definition of forestry. As this rift between Schenck and Pinchot grew, the former became increasingly critical about Pinchot's acts as Chief of the Division of Forestry. After Schenck sent a particularly sharp letter to one of Pinchot's head foresters concerning the direction the department was going, Pinchot decided he could no longer overlook what he perceived as Schenck undermining his position and authority. A few weeks after this incident, he composed one of what would become many letters to Schenck that outlined his lividness towards Schenck. He accused Schenck of attempting a radical attack on the work of the division for the purpose of discrediting Pinchot's name and hindering the very cause of forestry in the United States, among other things.¹³¹ Still, in this instance Pinchot sent a letter to Schenck only a few days later apologizing for the accusations, and hoping that, despite their differences, Schenck would continue to lend his support to the Division of Forestry.¹³²

For better or for worse, Schenck's time with the Division of Forestry came to an end within the year. There was simply too much difference between Schenck and Pinchot's ideas regarding what constituted forestry in the United States. In March of 1900, Pinchot wrote to Schenck,

“I thought over the position you have taken with a great deal of care, continued over an interval of several months. The conclusion I have come to is, since you cannot afford to subscribe to the policy of the division, it is wisest for us to sever our official connection. We shall thus avoid future controversies, and I shall no

¹³¹ Gifford Pinchot *Letter to Carl Schenck October 18, 1899*. Biltmore Estate Forestry Department Manager's Records, Folder 13 Box 29.

¹³² Gifford Pinchot *Letter to Carl Schenck November 14, 1899*. Biltmore Estate Forestry Department Manager's Records, Folder 13 Box 29.

longer be obliged to consider the effect you might have on the Division's work...I have not the slightest hard feeling, and I hope you have none."¹³³

The final sentence of this letter dictated Schenck's response. "Strange to say I greeted your letter of the 22nd with delight," Schenck began,

"Not as if I was eager to sever my connection with you, on the contrary, I think it will be much easier for us to work together if our connection is severed. In 99 out of 100 points we agree, certainly we agree in our love of forestry. In 1 out of 100 points we disagree, and we shall always disagree... if you think such a disagreement inside the Division incompatible with [it's] efficiency, then it is better for me not to work there anymore. Besides, I have always labored under the pressure of swearing allegiance to Uncle Sam and at the same time to my Fatherland."¹³⁴

This final line, likely made for jest, must have had lasting consequences for Schenck. At the time Schenck had worked for almost five years in the United States, and was planning on working for many more. However, by including this last line Schenck unintentionally labeled himself an outsider and a foreigner. It solidified Pinchot's perception of Schenck as a man ultimately uncommitted to the progress of American forestry. A few years later, President Theodore Roosevelt would perfectly put to words Pinchot's perception of Schenck when, upon meeting Schenck for the first time and learning that he had, in his years in the country, never renounced his German Citizenship, Roosevelt exclaimed, "Nobody has a right to work here for so long without becoming a citizen of the United States!"¹³⁵ This perception of Schenck as an alien intruding upon the work of conservationists within the US resonated with Pinchot, and would come to a head in 1903.

Around the same time Schenck severed his ties to the Division of Forestry, Pinchot had begun establishing the first school of forestry in the United States that still exists to this day at

¹³³ Gifford Pinchot *Letter to Carl Schenck March 22nd, 1900*. Biltmore Estate Forestry Department Manager's Records, Folder 13 Box 29.

¹³⁴ Carl Schenck *Letter to Gifford Pinchot March 26th, 1900*. Biltmore Estate Forestry Department Manager's Records, Folder 13 Box 29.

¹³⁵ Schenck, *The Biltmore Story* 113

his alma mater: Yale University. This school differed in several ways from Schenck's. For one, Pinchot's father provided Yale's forestry school with a \$150,000 endowment, ensuring that it had a means of survival in difficult financial times and that the tuition fee could be set artificially low.¹³⁶ The school also emphasized hard sciences, such as physics and chemistry, and classes were concentrated indoors.¹³⁷ Perhaps more importantly, however, was that the Yale School followed Pinchot's ideals. It was a school that trained its students in the importance of government work in forestry, and emphasized silviculture and tree care over private forestry and timber harvesting as subjects. For that reason, it attracted more students with backgrounds in the biological sciences than it did the sons of lumbermen.

As the Yale School of Forestry began to graduate students, it ran into direct competition with the Biltmore School for jobs at the US Division of Forestry and elsewhere. Naturally, Pinchot preferred to have graduates of Yale in place throughout the US, for they were trained in his style of forestry. This preference caused a new souring of relations between Pinchot and Schenck. Pinchot's strategy for curtailing the spread of Schenck's idea of financial forestry was first to attempt to convince Schenck to change his view. Thus, when Pinchot finally visited the Biltmore School in early 1903, his trip ended with an hour long shouting match with Schenck on an isolated patch of railway nearby the Biltmore forest. Schenck later recalled Pinchot's final words as, "I do not want the Yalermen to be lumbermen" to which Schenck responded, "there cannot be an American forestry unless the foresters are logging superintendents and every forester is spending more time in logging than in silviculture."¹³⁸ Pinchot left the Biltmore Estate

¹³⁶ Henry S. Graves, *The First Thirty Years of the Yale School of Forestry. In commemoration of the third de-cennial reunion at New Haven, Connecticut*, (New Haven: Yale University Press, 1930). 13.

¹³⁷ Schenck argued in later years that he did not teach these subjects because he wanted students to gain experience in practical forestry, though it may have ultimately come down to his lack of funds to purchase microscopes or other equipment.

¹³⁸ Carl Schenck. *Unpublished Manuscript* Carl Schenck Papers, Folder 20, Box 57.

having failed to convince Schenck to turn against the lumbermen, and had hurt their relationship further in his attempt.

A few weeks later, a letter arrived at the Biltmore Estate from Pinchot addressed to George Washington Vanderbilt. In it, Pinchot asked Vanderbilt to not only prevent Schenck from awarding his students a master's degree in forestry, essentially rendering it worthless as a program, but to dissolve the Biltmore School altogether. He cited the shortness of the curriculum as a primary reason for its inadequacy. "In my opinion," Pinchot stated, "the proposition by Doctor Schenck [to award his students with a degree in forestry] is in effect a proposal to lower the standards of forest work in the United States, and therefore injure rather than help the progress of forestry."¹³⁹ Pinchot gives no other reason than the brevity of the Biltmore School program. He instead went out of his way to emphasize that his desire to shut down Schenck's school had nothing to do with the competition between the Yale School of Forestry and the Biltmore School, or that Schenck's disagreements with him had any effect on his writing.¹⁴⁰

For Schenck, this letter came as quite a shock. Though their fight on the Asheville railroad may have eluded to a heightened sense of tension, for Pinchot to directly write to Schenck's superior with a call to dissolve the school was unexpected. Schenck spent a week crafting his response. In the five page letter he eventually sent Pinchot, Schenck rose to defend his approach to forestry and his school while also questioning the motives behind Pinchot's letter. He pointed out the large number of graduates who Pinchot had employed at the Division of Forestry, and noted that not a single one of them graduates had ever failed a US Governmental exam. Schenck also took personal offense at Pinchot's critique of his personal views, saying that,

¹³⁹ Gifford Pinchot, *Letter to George Vanderbilt July 20th 1903*. Carl Schenck Papers, Folder 20, Box 57.

¹⁴⁰ *ibid*

“as regards to my personal knowledge of forestry, I can only say that no forester in the United States had a better chance of training than myself; that no forester in the United States is held in higher esteem by Sir Dietrich Brandis and Dr. William Schlich¹⁴¹ than myself; that no forester in the United States has ever passed his university examinations more satisfactorily than myself; that no forester in Hesse Darmstadt has ever reached a higher standing in the government examinations than myself; and that no forester obtained the doctor degree ‘summa cum laude’ excepting myself. I do not want to talk of these matters boastfully. I just want to emphasize that my forestal knowledge is, to say the least, equal to Filibert Roth, Henry Graves, or Mr. Fisher, the young sapling who now occupies the chair of forestry at Harvard.”¹⁴²

Schenck also accused Pinchot of pursuing his own interests for Yale in writing the letter rather than arguing for the sake of the U.S. conservation movement and forestry policy.

“I fully realize that you are interested in your own child, the Yale Forest School, and that you are of the opinion that the means and ends tried by you at Yale are the only correct ones. On the other hand, I want to emphasize that I have a high opinion of my own child, the Biltmore Forest School, and that I do not stand alone in the view that college training is not a prerequisite for a successful forester.”¹⁴³

Schenck sought to defend his institution against the threat of dissolution.¹⁴⁴ He also emphasized that it served a purpose that was different from the Yale School of Forestry. Schenck presented his school more of a means of providing vocational training than as feeder school for the Division of Forestry. There are two sentences, however, in Schenck’s letter that would have assuaged Pinchot’s anxiety more than any others. On the third paragraph of his letter, perceiving Pinchot’s anxiety about the influence of Schenck’s ideas within the federal government, Schenck writes, “As regards employment in governmental service, I fully see the advisability of employing college graduates. The Biltmore School, however, does not intend to

¹⁴¹ Two prominent German foresters, the leaders in European forestry in the late 19th century.

¹⁴² Carl Schenck, *Letter to Gifford Pinchot July 31st 1903*. Carl Schenck Papers.

¹⁴³ *ibid*

¹⁴⁴ Schenck’s letter is to be expected, however, the reaction of his students is surprising. In the weeks following Schenck’s letter, the students of the Biltmore School took action. They formed a committee of five senior students (those with the most experience and reputation) and drafted a letter for their own sake to Pinchot. In it, they sought to describe to Pinchot in detail the rigorous study required at Biltmore in an attempt to legitimize the school.

prepare men for governmental service.”¹⁴⁵ By stating this, he disproved Pinchot’s suspicion of the Biltmore School. With Pinchot’s fears quelled, Schenck response succeeded in calming the waters; what had been a heated rivalry slowly began to cool.

The first five years of the Biltmore Forest School saw much important advancement, both in Schenck’s personal ideology and his position in the United States. While Schenck still clung to many aspects of his German teachings, he began to develop his own ideas about forestry and ultimately fashioned his own new and comprehensive model of forestry for the United States. In doing so, he adhered to the idea of making private managed forestry the dominant style in the country. This approach threatened to isolate him among emerging leaders of conservation in the United States. That he refused to renounce his German citizenship may have added to his unpopularity in government circles. His open critique of Pinchot’s policies at the United States Division of Forestry drew ire from Pinchot and his allies, who soon took to openly attacking Schenck’s ideas and his school in articles and letters. As larger schools, such as Yale, began to surpass the Biltmore School in terms of size and scope, however, tensions dissipated, and by 1904 Schenck’s school in the Pink Beds was growing faster than ever. Things were going well for managed forestry at Biltmore. When Schenck’s time in North Carolina came to an end just five years later, it did so unexpectedly.

¹⁴⁵ Carl Schenck, *Letter to Gifford Pinchot July 31st 1903*

Chapter 3: Flourishing & Floundering



The Biltmore Forest School on an excursion to a logging site in Waynesville, NC around 1908. Schenck is located five in from the right, second row. Of note are the three men standing on his left, all full time professors at the Biltmore School, and the two men to the right, students from China and Germany (respectively). Photo Courtesy of the Forest History Society.

On the morning of November 26th, 1908, a large crowd had gathered by the train depot at Biltmore Village. They came from a variety of walks of life: some were private lumbermen, others state foresters. Members of Congress and local politicians milled about with botany professors. Yet when the clock struck 9:30 am, they all boarded the carriages awaiting them at the station and began the thirty minute, meandering journey to the Biltmore Estate.¹⁴⁶ All of them had at least two things in common: an interest in the ever-changing forestry practices in the United States and a personal invitation from Carl A. Schenck to the first ever Biltmore Forest Festival.

¹⁴⁶ Carl Schenck, *Itinerary for the Biltmore Forest Festival* Carl Schenck Papers, Box 13, Folder 4.

This was a weekend of celebration of the achievements at Biltmore. It marked the twentieth anniversary of the beginnings of private forestry at the Biltmore Estate (starting with Pinchot and followed by Schenck) and the tenth anniversary of Schenck's fledgling Biltmore Forest School. Schenck used the weekend to show his guests the benefits of the style of forestry he had developed at the estate, all while they enjoyed fine fall weather and ample food provided for the Thanksgiving weekend. All in all, the weekend was a success. Schenck's guests left the following Sunday with a newfound appreciation of the work done at Biltmore and a better understanding of Schenck's own style of forestry.

This weekend, however, would mark the apex of Schenck's time in the United States. Within the year, he would once again find himself making an Atlantic crossing, this time back to Germany. His contract was terminated by Vanderbilt in the summer of 1909 and, lacking the stability of a permanent campus, the Biltmore School traveled across the world before finally fizzling out in 1913.

This chapter traces Schenck's time in the United States from 1906 to his departure, along with his school, to Germany in 1909. I argue that the failure of work at Biltmore was caused not by the rigidity of Schenck's German methods (as Pinchot suggests), but rather by a series of market forces beyond Schenck's immediate control. To elaborate this point, this chapter first examines the status of the school after 1903. After the brief period of contention with Pinchot, the Biltmore Forest School was able to grow and flourish. Schenck hired adjunct professors and expanded the number of accepted students. At the same time, his management practices proved successful at Biltmore, and the Forestry Department finally began to produce a profit. With his forest practices beginning to yield a profit and the school on steady ground, it seemed that

Schenck's Atlantic crossing was heading towards long term success. However, even in 1906 Schenck had doubts his style of forestry would last in the United States.

The second half of this chapter examines why Schenck's time in the United States came so abruptly to an end. Ultimately, the reason for Schenck's dismissal was his patron's financial problems, along with those of the United States at the time. For years Vanderbilt had been running the estate on a net loss, and a series of collapsed investments left him particularly strapped for cash. Schenck's slow-to-profit but sustainable style of forestry conflicted with Vanderbilt's need for immediate cash, leading to such frustration that Vanderbilt terminated Schenck's contract. Ultimately, the end of Schenck's personal Atlantic crossing was not entirely due to the failure of his German expertise to take hold in the United States, but rather the nature of a financial situation beyond his immediate control.

The High Water Mark

By 1906 the Biltmore Forest School had overcome most of its previous problems. The conflict between Pinchot and Schenck had subsided from the inflammatory levels of 1903. While they were far from friends and rarely corresponded, the two men maintained a professional relationship. Indeed, by 1904 Pinchot had resumed sending federal foresters to lecture at the school and recruiting Biltmore Students for the US Division of Forestry.¹⁴⁷ As the Biltmore School became better established, the number of applicants increased and, in turn, so did the number of admitted students. This presented a fortunate problem for Schenck to have. The rise in the number of students ensured that his school had the potential for long term success. However, his need to spend time providing his students with an education conflicted with the time needed to manage the Biltmore Estate. Opportunely, this problem had a simple solution. With more

¹⁴⁷ Gifford Pinchot to Carl Schenck. *Letter of July 12, 1904* Biltmore Estate Forestry Department Manager's Records Series P Folder 6.

students came more revenue from tuition. Using these additional funds, Schenck began looking for qualified professors at state and private universities to give students an education in subjects he lacked the time or knowledge to teach. In late 1904, Schenck hired his first assistant professor, Clifton D. Howe.

Howe's appointment gives an insight into the qualities of the professors hired by Schenck and the extent to which Schenck's forestry practices were instilled within the school itself. Howe came to the Biltmore School with qualifications similar to those of Schenck when he was first hired in 1895. Howe had studied botany first at the University of Vermont, and was pursuing a doctorate at the University of Chicago when he applied to become the Biltmore School's professor of Botany.¹⁴⁸ In the summers between his years of education, he had worked as a surveyor for the United States National Bureau of Forestry. And, like Schenck with his mentor Sir Dietrich Brandis, Howe's application was backed by letters of recommendation by some of the foremost academic leaders in American conservation.¹⁴⁹ Schenck accepted Howe's position application within four days of receiving it. In Schenck's response, he mentioned his style of forestry work at Biltmore, but merely as something Howe might be interested in, not as something he might be required to teach.¹⁵⁰

This became the general trend when it came to Schenck's relationship with his adjunct professors and guest lecturers. Schenck hired professors in fields he had little experience in: zoology, botany, and other subjects he referred to as the 'allied sciences'.¹⁵¹ Because of his own

¹⁴⁸ Clifton Durant Howe to Carl Schenck. *Letter of August 2nd, 1904* Biltmore Estate Forestry Department Manager's Records Series H Folder 21.

¹⁴⁹ Various Letters, Biltmore Estate Forestry Department Manager's Records Series H Folder 21.

¹⁵⁰ Carl Schenck to Clifton Durant Howe. *Letter of August 6th, 1904* Biltmore Estate Forestry Department Manager's Records Series H Folder 21.

¹⁵¹ Carl Schenck to WM Threlkeld Jr, December 11, 1906. Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

lack of knowledge, these professors enjoyed a fair amount of liberty in what they taught. However, in the fields in which Schenck had expertise, he taught subjects with his own definition of forestry in mind.

By 1906 Schenck had thus limited his scope of influence to proselytizing a style of forest finance and practice that was particularly suited to maintaining large private estates, such as the one at Biltmore. In Schenck's own words,

“The Biltmore School is the only technical school of forestry in this country. It is not a university at which all or many sciences are taught; it limits its scope and its sphere to technical forestry alone... The Biltmore School teaches forestry from the practical standpoint only, or from the standpoint of the investor... students who have had, prior to their entrance at Biltmore, some experience in business, notably in the lumber business, or students whose families are financially interested in lumbering and forestry, are particularly welcome at the School.”¹⁵²

It is prudent to briefly discuss the use of the term ‘technical school’ in this letter, and how it set the Biltmore School apart from other institutions. Schenck prided himself with the idea that the Biltmore Forest School was unique in that it trained its students on how to both manage and, more importantly, obtain sustainable profit from large tracts of *private* land. This contrasted with the other universities that were forming at the time. Most of the newly founded departments of forestry at universities in the United States, particularly that which developed at Yale in 1898, were focused on training foresters to be conservators in the employment of the federal government. These schools included classes in chemistry, plant physiology, and other scientific subjects with the end goal being an education in the protection and care of trees, rather than their

¹⁵² Carl Schenck to WM Threlkeld Jr, *Letter of December 11, 1906*. Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

removal for profit.¹⁵³ Most, importantly, however, they trained foresters to work in employment of the Federal government, rather than in the private sector.

Schenck continued to be skeptical of this school of thought. “Conservation means restriction of personal liberty and personal licentiousness.” He wrote in 1908, “Such restrictions are, in a sense, not in keeping with the spirit of American institutions.”¹⁵⁴ In the 1906 course catalogue for the Biltmore Estate, Schenck offered lectures in forest protection. These lectures, however, did not deal with how to preserve forests in the form of government reservations or protected areas, but rather how to protect private forests from pests.¹⁵⁵ Of note should be that part b of this course on forest protection was devoted to protection from man and to teaching students how to protect against squatters, poachers, and various threats to private property. This emphasis reflects Schenck’s experience in German forestry.¹⁵⁶

The focus on forestry as a private affair extends to most of the courses Schenck personally taught at the Biltmore Forest School in 1906. Forest Law dealt with real estate and forming lumber corporations.¹⁵⁷ Forest Policy dealt with the benefits of private forests to the surrounding area.¹⁵⁸ Finally, Schenck offered a class in “the forest work of the federal government”. This class offered students who were interested in working for the US Forest Service a chance to learn about government practices and Pinchot’s model. Schenck even reserved a few acres of Biltmore Forest to give students the opportunity to practice federal policy firsthand.¹⁵⁹ This separate class both demonstrates that Schenck was aware that his

¹⁵³ Henry S. Graves, *The First Thirty Years of the Yale School of Forestry*, 9.

¹⁵⁴ Carl Schenck to AE Prince, Esq, *Letter of October 22, 1908* Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

¹⁵⁵ Course Catalog: 1906, in Carl Schenck Papers, Box 69, Folder 2.

¹⁵⁶ See Chapter 1

¹⁵⁷ Course Catalog: 1906, in Carl Schenck Papers

¹⁵⁸ *ibid*

¹⁵⁹ *ibid*

‘conservative’ forest policy differed from that of the federal government, but it also speaks to Schenck’s resourcefulness and adaptability, as it enabled his students to prepare for government service.

Naturally, the Biltmore School’s curriculum was not totally different than those of the mainstream schools of forestry. An examination of the subjects of exams offered in 1906 shows that students were tested on zoology, soil science, Sylviculture, forest mensuration, dendrology, and other scientific subjects.¹⁶⁰ Still, Biltmore failed to offer classes that dealt with plant physiology and other physical sciences outside of those that were relevant to private forestry practices. For example, soil science was used to determine which trees to grow in which soil in order to produce fast growing results. Sylviculture focused on treating tree diseases and preventing their spread to other plantings. Such a course of study gave students a broad enough overview of natural sciences to underwrite the Biltmore Forest School’s claims to be a legitimate university while fitting into Schenck’s ideal of a school catered to private forestry on large estates.

Fieldwork on the Biltmore Estate continued to be a key component of the Biltmore School curriculum. According to Schenck, this was yet another unique aspect of the Biltmore School that made it suitable for the sons of lumbermen and others interested in private forestry. The size of the Biltmore Estate only served to benefit the students; as time wore on the Biltmore Estate continued to grow, albeit in smaller spurts than in its inception. Thus Schenck could provide the students with a wide variety of forestry projects in equally varied ecosystems; at its lowest elevations the Biltmore Estate resembled the forests of upper Alabama and at its highest

¹⁶⁰ Various Exams, Carl Schenck Papers, Box 61, Folder 35.

the woodlands of southern Maine.¹⁶¹ Over the years, Schenck had also developed close personal relationships with the owners of neighboring forest owners and lumber yards. Thus in addition to working on projects at Biltmore, Schenck offered his students a comparative study of competing forestry techniques within the greater Asheville area.¹⁶²

With the march of time and the development of a sound curriculum, Schenck ensured that his school had a steady stream of students as long as his contract with Vanderbilt remained intact. When the 10th anniversary of the founding of the Biltmore School came about in the fall of 1908, there was cause for celebration. The Biltmore Forest Festival was Schenck's personal celebration made public. It was also an opportunity to show that, after almost twenty years of precarious existence, his style of forestry was finding success in the United States. With such an opportunity only arising in the rarest of circumstances, it is little wonder that Schenck spent almost the entirety of 1908 preparing for this momentous occasion.¹⁶³ The date of the festival, Thanksgiving weekend, was no coincidence, but rather marked the sense of rejoicing Schenck hoped the event would mark. He invited a wide variety of guests, from lumbermen to foresters to engineers to politicians.¹⁶⁴ Schenck even sent invitations to Pinchot's Division of Forestry, though no one from that department attended.¹⁶⁵ All the invitees had some influence over setting private forest policy in the United States, be it through direct action or through work with others.

¹⁶¹ Carl Schenck to AE Prince, Esq, *Letter of October 22, 1908* Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

¹⁶² Howard Krinbill, *Diaries*. In Carl Schenck Papers. Box 58, Folder 7.

¹⁶³ Carl Alwin Schenck. *The Biltmore Story*, 160.

¹⁶⁴ Various Letters, In Carl Schenck Papers. Box 14.

¹⁶⁵ This was the complete result of the schism that had formed between Schenck and Pinchot over US forestry practices.

On the morning of November 26, 1908, carriages transporting the three hundred and twenty eight guests made their way from Biltmore station to the house itself.¹⁶⁶ The Biltmore Forest Festival was quite the occasion. Schenck designed the weekend-long event to mirror the life of the forest. After visiting the Biltmore house itself, Schenck directed his guests to the numerous pine plantations he had planted since his inception as head of the Biltmore Forestry Department in 1898.¹⁶⁷ After lunch on the same day they toured sites which had been cleared of underbrush to allow for planting growth, and ended the day with a regal Thanksgiving feast at the Battery Park Hotel in downtown Asheville. The next day the guests were guided through more mature plantations and ended the day with an opossum hunt and barbeque in the woods. On the final day, Schenck took his guests deep into Pisgah forest to study the forestry practice that truly defined his ‘conservative’ style of private forestry: selective cutting. Rather than harvest all the trees in the area at once, Schenck practiced a method found mainly in Germany but rarely in the United States, in which only the oldest trees in the area were cut at a single time. This practice, widely used today, allows for congruent growth and harvest on a single piece of land.

That the Biltmore Forest Festival could cover so many aspects of forestry production speaks to the extent to which Schenck had successfully instilled forestry management at the Biltmore Estate by 1908. It also suggests why the school remained steadfastly alluring to the young aspiring private foresters of the United States. Schenck’s claims about the variety of work students could experience at Biltmore were not unfounded. The extent to which his students became immersed with his work at Biltmore was further demonstrated at the Forest Festival by the fact that Schenck had them act as guides and presenters at the various tour stops.¹⁶⁸

¹⁶⁶ Carl Schenck, *Attendance List* in Carl Schenck Papers, Box 13, Folder 4.

¹⁶⁷ The full itinerary can be found on pages 162-164 of *The Biltmore Story*

¹⁶⁸ “The Forest Festival” in *The Asheville Citizen-Times*. November 29th, 1900. (Asheville, NC).

All in all, the three day extravaganza represented the peak of success of Schenck's Atlantic crossing. He had successfully instilled a style of German forestry within the United States (albeit with a few adaptations), founded a school to train American foresters in his style, and shown to the private and some public leaders of forestry in the country the possibilities available to them if they adopted his 'conservative' practices. But soon after the festival, a series of uncontrollable events in the United States financial market would cause the downfall of the Biltmore Estate and Schenck's work in the country.

“Biltmore is in Trouble”

At the time of the Forest Festival, things had been going suitably well, financially, for the forestry department at Biltmore, but not for Biltmore itself. Constructing the Biltmore Estate alone had cost Vanderbilt a significant amount of his inheritance; this was, after all, the reason for his interest in forestry as a potential revenue generator for the Biltmore Estate. However, the style of forestry Schenck championed at Biltmore necessitated a number of factors that were ill suited to Vanderbilt's financial needs. First among those was the fact that establishing Schenck's 'conservative' style of forestry required a significant amount of preliminary expenditure with very little return. Infrastructure was an issue; roads had to be placed throughout the wilderness that was Biltmore forest to allow easy access to logging sites. But the overarching problem was that of time. Forests take time to grow, and the estate could not hope to harvest new plantings for at least fifteen to twenty years. Indeed, Schenck's original 1897 working plan predicted that the Biltmore forest would not produce a profit until 1907 or later.¹⁶⁹ In order for Schenck's style of forestry to sustain Vanderbilt's grand estate, he needed time.

¹⁶⁹ Carl Schenck, *Letter to George Washington Vanderbilt* November 1, 1905. Carl Schenck Papers, Box 57, Folder 14.

Unfortunately, Vanderbilt's personal investments did not bode well for this sort of endeavor. On a summer weekend in 1901, Roy Dresser, the brother of Vanderbilt's wife, spent a weekend with the family in a cabin within Biltmore forest. Having recently become the president of the United States Shipbuilding Company, Dresser was there not only to visit, but also to convince his wealthy brother-in-law to invest heavily in his corporation. And invest Vanderbilt did- by the end of the weekend he had bought 100,000 shares of stock in US Shipbuilding.¹⁷⁰ Though Vanderbilt could not know this at the time, his massive investment was a grave mistake. In less than a year, the New York Stock Exchange suffered its first ever crash and the value of Vanderbilt's stocks plummeted. With the funds to run the estate suddenly missing, Vanderbilt was forced to cut spending for the first time in his estate's existence. And cut he did: upkeep and maintenance payments for the estate were slashed from \$250,000 per year to \$70,000.¹⁷¹ Workers were told to cover the entrances to unfurnished rooms within the Biltmore House (of which, with two hundred and fifty rooms within the house, there were several) with brick. Perhaps most important to Schenck was that Vanderbilt began to target departments he deemed too expensive to maintain. For example, many of the agricultural activities at the estate were eliminated around this time.¹⁷²

The Biltmore Estate survived the year, but in 1903 Vanderbilt's fortune took another hard hit. In the course of a few weeks the value of the family's heavy investment in the New York Central railroad declined by over thirty percent.¹⁷³ In light of this financial disaster, the family moved to its European residence to ensure that its investments on that continent remained sound. In their absence, the Biltmore House was closed to all: only revenue generating and maintenance

¹⁷⁰ Schenck, *Biltmore Story* 128.

¹⁷¹ Arthur T. Vanderbilt *Fortune's Children*, 278.

¹⁷² *ibid*

¹⁷³ Schenck, *The Biltmore Story*, 133.

operations were allowed to continue and the necessity of Schenck's department was questioned for this first time. Schenck was only appropriated fifty percent of his requested budget and told to borrow the rest from the Asheville banks.¹⁷⁴ In response, Schenck did everything in his power to prevent the termination of his experiment in forestry.¹⁷⁵ He postponed his visits to Germany in 1903 and 1904 and, at the same time, worked hard to increase the lumber output of his department. This surplus lumber did not raise enough money to provide the funds necessary to run the Biltmore Estate, but it did indicate to Vanderbilt that Schenck was committed to making conservative forestry work at Biltmore. In other words, Schenck was fervently striving to make profit. Vanderbilt's interest in forestry should not be downplayed, and likely had an effect in the preservation of Schenck's department despite its struggle to produce results. The result was that, despite the financial hardships of the Vanderbilt family from 1901-1903, the Biltmore Forestry Department survived.

After the troubles of 1903, finances stabilized at the Biltmore Estate. Things did not get worse; however, they did not become better. 1905 was a particularly profitable year at the Biltmore Estate. The Forestry Department made up most of the expenses it had occurred during the year (roughly \$23,000), and Schenck had high hopes that the department would be on target to turn a profit that could sustain the estate by 1907.¹⁷⁶ Now Schenck began to prefer borrowing from the local banks to fund his department, rather than receive funding from Vanderbilt himself. In order for his style of forestry to remain attractive to private forest owners throughout the United States, Schenck thought it prudent to show that his work could be sustained without the

¹⁷⁴ *ibid*

¹⁷⁵ It should also be noted that, in the middle of this financial debacle, Pinchot's letter (mentioned in Chapter 2) arrived at the Estate.

¹⁷⁶ Carl Schenck, *Letter to George Washington Vanderbilt* November 1, 1905. Carl Schenck Papers, Box 57, Folder 14.

financial backing of a wealthy patron such as Vanderbilt.¹⁷⁷ Many American lumbermen owned significant tracts of land, but lacked the substantial inheritance of Vanderbilt that allowed him to make many of the investments he made at Biltmore. Schenck wanted to demonstrate that his style of forestry could be used by even the poorest of private foresters, provided they had land to work on and a bank to borrow money from.

1906 saw the continuance of this trend: Schenck proposed a budget for the forestry department to Vanderbilt, received an allowance that was much smaller than his requested amount, and made up for the lack of funds by borrowing from private banks, making purchases out of his own paycheck, and using the revenue generated from tuition at the Biltmore School to make progress in the forest. Ironically, much of the funds Schenck received from the students at the Biltmore School were ultimately from the local banks as well. While Schenck still kept the tuition rate at Biltmore at \$200 per year, he noted first in his 1906 School Catalogue that, with the additional expenses of providing for a horse, food, lodging, and potential for travel, the expense of attending the Biltmore School was more accurately \$750 a year.¹⁷⁸ The richest of Biltmore Students could afford this with the help of their parents or guardians; however, when most students ran out of cash they were simply told to take out a loan with the local banks.¹⁷⁹ While this system was precarious at best, it provided Schenck with enough funds to continue his work at Biltmore, and to some success. At the end of 1906, the Biltmore Forest had generated a surplus of roughly \$3000.¹⁸⁰

¹⁷⁷ Schenck, *The Biltmore Story*, 140.

¹⁷⁸ Course Catalog: 1906, in Carl Schenck Papers

¹⁷⁹ Durant Clifton Howe *Letter to Clarence Willis January 4, 1907*

¹⁸⁰ Carl Schenck *Letter to George Washington Vanderbilt November 1 1906* Carl Schenck Papers, Box 57, Folder 14.

Things were about to take a turn for the worse in a way that was largely out of Schenck's control. Late in 1907, the United States faced one of the worst financial crises it had ever encountered. In the course of nine months, average stock prices dropped over 20%.¹⁸¹ With this financial tumble, the market for timber bottomed out. Schenck had been able to get by with the department in 1901-3 because of his ability to sell lumber at a reasonable rate to cover his expenses. In this instance, however, Schenck was left without an easily accessible source of revenue. He continued to harvest lumber, but his customers could not make their payments on time. Schenck's shipments of lumber to Europe had some hope of generating revenue, as the markets were less affected there, but the banks in the United States did not have the means to rapidly convert this revenue into US dollars.¹⁸² There were few options for Schenck to take, and he began to lose hope for the estate.

In March of 1908, Schenck sent what he expected to be his last budget as chief of the Biltmore Department of Forestry to Vanderbilt. "Dear Mr. Vanderbilt," he began,

The situation of the lumber business has been, and is now, so lifeless as to appear almost hopeless. It is true that the prices in the excellent line of lumber carried by the Forestry Department have weekend a little, but there is no demand whatsoever; business is dead. The majority of prophets promise a revival, to take place during the months of May and June. Will it come? Under these conditions, it is impossible for me to realize my plan, and to have the Forestry Department support itself, without either calling on you for financial aid or else increasing the loans made at the Asheville banks against our stock of lumber, as collateral. My own opinion is that further increase of these loans are not advisable for the Forestry Department since we cannot readily shoulder the same responsibility which the average lumberman undergoes unhesitatingly, on his own personal behalf. The running expenses of the department have been and will be reduced to the utmost... in spite of these reductions, the department is facing unavoidable

¹⁸¹ Robert F Bruner, Carr, Sean D. *The Panic of 1907: Lessons Learned from the Market's Perfect Storm*, (John Wiley & Sons, Hoboken, New Jersey, 2007). 32.

¹⁸² Schenck, *Biltmore Story*, 154.

expenses, notably taxes, which it cannot meet without assistance from your or the banks.¹⁸³

Schenck had immediate expenses that he could not afford to pay without taking out extra loans or receiving more money from Vanderbilt. The latter of these would not be possible, given the withering state of Vanderbilt's fortune, and Schenck's reluctance to take out more than he could from the bank was quite clear. Vanderbilt's initial response, then, was for Schenck to take the next available option: try and sell Pisgah Forest.¹⁸⁴ This pronouncement was nevertheless quite shocking for Schenck. While he had considered such a sale a possibility in the past, he realized that its realization would mean the failure of his work at Biltmore, which had become his life's work. As he wrote in his memoir, "I did not make the slightest attempt to find a purchaser for Pisgah Forest. With that sale of Pisgah Forest, my beloved Biltmore Forest School would lose its working field, its demonstration field, its experiment stations, and its very basis."¹⁸⁵

Fortunately for Schenck, within a few months the Vanderbilt family left for Europe for an indeterminate amount of time, leaving him an opportunity to consider other ways to obtain revenue for the Forestry Department. During the summer Schenck attended forestry conferences in the upper Midwest, and attempted to find buyers for the Biltmore lumber on the way back. Unfortunately, that region was feeling the maleffects of the 1907 depression as much as North Carolina, and Schenck's search met with no success. With Schenck's attention focused on the quest for new sources of revenue, the Biltmore Forest School, in the meantime, began to suffer from neglect. In October of 1908, Clifton Durant Howe, who had become Schenck's longest

¹⁸³ Carl Schenck *Letter to George Washington Vanderbilt, March 14, 1908*. Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

¹⁸⁴ Schenck, *The Biltmore Story*, 155.

¹⁸⁵ Schenck, *The Biltmore Story*, 156.

running faculty hire and Assistant Director of the school, tendered his resignation.¹⁸⁶ In the same month, two other faculty members left the school. With such losses, Schenck turned to the Forest Festival as the ‘last gasp’ to save the forestry department and the school itself.

The Biltmore Forest Festival provided Schenck with a much needed boost of morale and provided his school with an equally needed boost of attention. After his current class graduated in December 1908, Schenck accepted enough students to fill his classroom from two full school years and still retained a waiting list of eighty two individuals.¹⁸⁷ With such a number of students eager to join his school, Schenck risked relying more heavily on the school for revenue for his forestry department. In January of 1909, Schenck raised the tuition for his school from \$250 to \$300.

While this did some to relieve Schenck’s financial worries, matters occurring on the national scale then sealed the fate of the Biltmore Estate. 1908 was a presidential election year in the United States, and it seemed that Theodore Roosevelt’s chosen successor to his presidency, Republican William Howard Taft, was likely to win. Schenck had high hopes for this transition in the presidency. Taft was known to be in strong favor of corporations and leaning against the government controlled conservation forestry supported by Roosevelt and Pinchot.¹⁸⁸ Thus the National Lumber Manufacturer’s Association, of which Schenck was a member, launched a considerable effort to draw attention to their floundering market. Their main objective was to

¹⁸⁶ Carl Schenck, *Letter to Clifton D Howe, October 28, 1908*. Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

¹⁸⁷ Carl Schenck, *Letter to Clifton D Howe, January 29, 1909*. Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

¹⁸⁸ Pinchot would be dismissed as chief of the Division of Forestry within a year of the election after publicly rebuking Taft during the Pinchot-Ballinger controversy.

increase the tariff on exported lumber, as the delicate market was being inundated by cheap lumber from Canada.¹⁸⁹

Regrettably for Schenck, the newly elected president Taft took a position that was the exact opposite of that Schenck and his fellow American was expecting. Taft declared his belief that the United States should provide lumber free to the consumer and, in order to drive lumber prices down, subsequently introduced measures in Congress to subsidize the import of Canadian timber.¹⁹⁰ If there was a metaphorical nail on the coffin to Schenck's work at Biltmore, this anti-protectionist shift in federal policy was it. Gone were his hopes of a financial recovery for the lumber industry. Schenck had gone unpaid for over two years and in turn paid his own workers out of bank loans and revenues from the Biltmore Forest School.¹⁹¹ As a result, work slowed, but did not stop. Schenck made preparations for harvests in the summer of 1909; however, his plans soon faced an abrupt change. On April 24, 1909, Schenck's position as chair of the Biltmore Forestry Department was terminated.

Schenck himself identified two events in 1909 that likely caused his termination. The first of these was the result of years of consternation with a counterpart at the Biltmore Estate, C.D. Beadle. Beadle was originally hired as an understudy to Frederick Law Olmstead in the Biltmore Nursery and Landscaping Department, but had risen through the ranks to become general manager of the entire Biltmore Estate, save for Schenck's independently acting Forestry Department.¹⁹² As funds ran out at Biltmore, Beadle and Schenck became bitter rivals. Indeed, the management at Biltmore Estate began to resemble a feudal society: Schenck and Beadle,

¹⁸⁹ Schenck, *The Biltmore Story*, 165.

¹⁹⁰ William Howard Taft. *Address on the Tariff Law of 1909*. September 17, 1909. From the American Presidency Project. <http://www.presidency.ucsb.edu/ws/?pid=68485>

¹⁹¹ Schenck, *The Biltmore Story*, 169.

¹⁹² Schenck, *The Biltmore Story*, 170.

both highly desirous of extra funding from Vanderbilt and highly covetous of any extra favor the other received, descended to spreading rumors of incompetence and hearsay against each other.

In one instance in March of 1909, Beadle reportedly accused Schenck of lying about his department's progress to Vanderbilt. Schenck took this quite personally, and, after Beadle refused to retract his claim, rushed Beadle and boxed his ears.¹⁹³ Beadle used this highly public fight (it took place in Beadle's office; his staff subsequently threw Schenck out of the building) to land Schenck a charge of assault & battery. Fortunately, Schenck was well-liked by most in the Asheville community, and when he appeared in court in June, the judge charged him a fine of \$1 and released him. Schenck survived the event with little effect to his public record. Yet his private record with Vanderbilt had been tarnished. With Schenck and Vanderbilt's relationship on the thinnest of ice, it only took a small breach of standard practice for Vanderbilt to ask for Schenck's resignation.

With his department deeply in the red and selling Biltmore Forest out of the question for personal reasons, Schenck turned to other means to raise additional revenue. One such means that had been brought up before with Vanderbilt was selling the hunting rights to the estate. While its lumber may have no longer been profitable, the vast tract that surrounded Biltmore acted as a natural habitat for wild game. Vanderbilt had often taken hunting parties deep into these woods in the past. As a result, Schenck had constructed a sizeable network of roads, trails, and hunting lodges throughout the estate by 1909.¹⁹⁴ The infrastructure was there and, most importantly, so was the market. Hunting clubs, made up primarily of wealthy businessmen, had

¹⁹³ This account can be found on pages 171-3 of *The Biltmore Story*

¹⁹⁴ Schenck, *The Biltmore Story*, 127.

been in talks with Vanderbilt over hunting rights as early as 1903.¹⁹⁵ In such prior instances, Vanderbilt had made known to Schenck that he was willing, in principle to sell complete hunting rights to such clubs, but in the past finances had shown signs of improvement and the issue was dropped by the wayside.

Thus, in the early spring of 1909, Schenck sought a similar contract with the Asheville and Chicago Hunting Club in order to accrue some revenue. The deal appeared sound (if not overly favorable) to Schenck. The club agreed to pay \$10,000 a year for hunting rights, and reserved Vanderbilt an exclusive right to hunt in the one thousand acres immediately surrounding the Biltmore House.¹⁹⁶ As an added bonus, the club even agreed to buy any firewood or lumber the needed exclusively from the surplus of Biltmore Forest. But Schenck made one mistake that cost him his position. With Vanderbilt in Europe for the foreseeable future and the need to finance the department an immediate pressing need, Schenck signed a contract with the Asheville and Chicago Hunting Club on behalf of Vanderbilt without any prior consultation with or notice of his employer on the matter.

Vanderbilt was furious.¹⁹⁷ He had been making arrangements to sell the estate while in Europe, and this new contract became a significant hindrance in his plans. Once he returned to Biltmore, Vanderbilt had a series of talks with Schenck, which devolved to the point of Vanderbilt accusing Schenck of idiocy.¹⁹⁸ At the end of these interviews, Schenck was asked to resign. The work he had done to improve forestry at the estate had come to an abrupt end.

¹⁹⁵ George Washington Vanderbilt. *Letter to Carl Schenck August 25, 1903* Biltmore Estate Forestry Department Manager's Records. Series V, Folder 33.

¹⁹⁶ Schenck, *The Biltmore Story*, 172.

¹⁹⁷ Schenck, *The Biltmore Story*, 173.

¹⁹⁸ One has to recall that, in the late 19th and early 20th century, an idiot was a legitimate medical term used to designate those of the lowest possible mental capacity. In other words, Vanderbilt was accusing Schenck of a severe mental handicap in a way that had more consequence than if the term were used today.

This is not to say, however, that all was lost for Schenck. He was contractually obligated to continue to work at Biltmore until November 1909, giving him time to make plans for his future. The most pressing issue was that of the Biltmore Forest School. Schenck's immediate thought was that the school would dissolve when he left the estate.¹⁹⁹ A school without a permanent base is one that is hard to maintain, much less to legitimize, despite the fact that Schenck would no longer have to feed tuition money directly into funding the Biltmore Forestry Department. One thing that Schenck did not count on, it seems, was the loyalty of his students to him. Almost as soon as news reached the students of the Biltmore Forest School about Schenck's termination, his students organized a fundraising effort amongst alumni to buy Biltmore forest from Vanderbilt himself.²⁰⁰ This did not come to fruition; however, such an effort made by his students encouraged Schenck to make considerable effort to save his school from dissolution. Thus, when Schenck packed his bags and boarded a steamer for his native town of Darmstadt, he did not do so alone. With him was the entirety of the Biltmore Forest School, now thirty four students strong, who he continued to lecture on the ship's deck even in the midst of his return Atlantic crossing.²⁰¹

The final years of Schenck's time at Biltmore consisted of a surprising mixture of victories and defeats. On one end, Schenck's school reached its highest peak. It had several distinguished faculty members, a steady stream of students, and a sound curriculum that produced visible results. By 1907 one could clearly see the positive effects of Schenck's methods on the woods around Biltmore. Schenck had even transcended the traditional boundaries of an Atlantic crossing by developing his own style of forestry that would have been relatively alien to

¹⁹⁹ Edwin Meeker "Biltmore Doings- May 1909" Carl Schenck Papers, Box 69, Folder 13.

²⁰⁰ *ibid*

²⁰¹ Howard Krinbill *Letter to 'Papa' November 5th, 1909* Carl Schenck Papers, Box 59, Folder 13.

his native country. However, at the same time external factors proved a near constant threat to the continuance of Schenck's work at Biltmore. Much of these had to do, ironically, with the manner of Schenck's work in the private market. As much as Schenck fought for the belief that his 'conservative' forestry could produce long term profit for private lumbermen in the United States, a series of financial depressions and other economic factors eventually resulted in the ruin of the Biltmore Estate and his forestry department. Schenck summed up the reasons for the failure of his work at Biltmore best when he wrote in 1908 that, "A commodity begins to be managed and to be conserved only when it becomes scarce and, being scarce, valued."²⁰² The flood of the North American lumber market with cheap Canadian wood coincided with the inundation of the European market with lumber from Russia and the US market collapsed. Schenck's model, which depended on a continuous high demand for lumber and few sources to provide it, was, for the time being, impossible to maintain in the United States.

²⁰² Carl Schenck, *Letter to AE Price, ESQ. October 22, 1908* Biltmore Estate Forestry Department Manager's Records. Outgoing Correspondence.

Epilogue



*Carl Schenck at the dedication of the Carl Alwin Schenck Redwood Grove, 1951.
Photography Courtesy of the Forest History Society*

In January of 1914 the last issue of ‘Biltmore Doings’ was sent to subscribers across the United States. The Biltmore Forest School’s monthly newsletter was usually composed by the class president or another member of the student body. However, in this instance Carl Schenck himself addressed the reader. The six page long letter took on a defeatist, melancholy tone. After nineteen years of work in the United States, Schenck’s final major connection was severed. The Biltmore Forest School was dissolved.

It had been five years since the Biltmore Forest School had been uprooted from its namesake home. It is a testimony to the devotion of Schenck towards this school that it existed for as long as it did after 1909. Since then, the university was one almost constantly on the move. Schenck taught his students in six different locations across Europe and North America:

his native Darmstadt, Mimizan-les-Bains in France, upstate New York, various parts of North Carolina, Cadillac, Michigan, and Coos Bay off the coast of Oregon.²⁰³ In a sense the curriculum of the Biltmore School became more of an itinerary. While Schenck did still give regular lectures to his students, much of their time was spent conducting field visits. Here Schenck put the connections he had made while working at Biltmore to good use. He provided students with a range of forestry practices and forest environments themselves that would be difficult to rival even today.²⁰⁴

The one place he could not return to, however, was Biltmore. On Schenck's first attempt to visit the estate in 1910 to show his students the plantings he had made while an employee of Vanderbilt, he was barred at the door. Undeterred, he and his students eventually resorted to less legal means, and simply jumped the fence surrounding the property at a relatively remote location.²⁰⁵ In a moment of foreshadowing, Schenck discovered that, much to his surprise, the forests of Biltmore had flourished even in his absence.²⁰⁶ Commercial plantations of white oak and maple had begun to mature, and the abandoned fields that once dotted the landscape were slowly returning to forest. But private forestry was soon to cease at Biltmore. In 1914, George Washington Vanderbilt died of a heart attack at the age of 52.²⁰⁷ Of the \$6,000,000 he had inherited upon his father's death, only \$900,000 was left to his descendants.²⁰⁸ With such a lack of funds the lavish lifestyle necessary to live at the Biltmore became untenable, and within the year Vanderbilt's widow sold over 90% of Biltmore Forest (or roughly 110,000 acres) to the

²⁰³ Carl Alwin Schenck. *The Biltmore Story*, 178.

²⁰⁴ Duke University receives on mention in Schenck's writings as a school unfortunately limited to practicing forestry at one site alone. (*Biltmore Story*, 200.)

²⁰⁵ Schenck, *The Biltmore Story*, 188.

²⁰⁶ *Ibid.*

²⁰⁷ Arthur T. Vanderbilt *Fortune's Children*, 278.

²⁰⁸ *ibid*

National Forest Service for \$5 an acre.²⁰⁹ Today this massive tract that was Schenck's working ground comprises the southern section of Pisgah National Forest.

In the short term, however, things seemed to point towards the eradication of Schenck's legacy in the United States. Sensibly, the idea of a travelling school with no permanent campus proved a hard idea to sell. Schenck calculated he needed at least forty students to cover the costs of assistant lecturers and travel.²¹⁰ In the first month of 1914, with less than twenty students enrolled in the Biltmore School, Schenck decided it was time to finally dissolve the school he had fought so hard to maintain. While Schenck may not have grasped it in his lifetime, the work he carried out at Biltmore would, albeit after a period of several decades, have an influence over forestry practices in the United States.

With the outbreak of World War I, Schenck himself was called to serve in the German army only a few months after the dissolution of the Biltmore Forest School. After being severely wounded at the Battle of Lodz, Schenck served as an army administrator in Belgium for the remainder of the war.²¹¹ After the war he continued to lecture on occasion at forestry schools in the United States and give tours of German forests to American students.²¹² He remained in Germany during Nazi rule, where he became an outspoken critic of the Autobahn system's effects on Germany forests before retiring from forestry shortly after the outbreak of World War 2.²¹³ In 1951 Schenck took a final trip to the United States. He visited his former workplace for a final time, gave numerous lectures and talks, and finally made his way out to California. Here, at Prairie Creek Redwoods State Park, a crowd of former students and friends came together to

²⁰⁹ *ibid*

²¹⁰ Carl Schenck "Biltmore Doings: January 1914" Carl Schenck Papers, Box 69, Folder 17.

²¹¹ "The Biltmorean, Volume 1" Carl Schenck Papers, Box 69, Folder 18..

²¹² "Unpublished Biographical Sketch of Carl Schenck" (1955).

²¹³ Carl Schenck. *Letter to Frederick Law Olmstead, May 1941* Carl Schenck Papers, Box 14, Folder 4.

dedicate a 'Carl Alwin Schenck' grove.²¹⁴ Schenck gave a brief, three minute speech that ended with a prayer. "Dear God," he said, "Let this Biltmore Spirit live, for it is thy spirit, and it is truly American."²¹⁵ Such an event was a testimony that this idea of the 'Biltmore Spirit' was living on. Many of Schenck's former students had moved into prominent positions within the private and public realm. That his former students were able to dedicate a section of state park to Schenck speaks of their power and influence in the field of forestry and beyond.

When Schenck died four years after this speech amongst the Redwoods, the 'Biltmore Spirit' was, through changing markets and society, becoming more and more of a mainstream practice. Numerous factors in the mid-twentieth century led to the mass adoption of a conservative style of forestry that Schenck helped to establish. At the end of World War Two, two events combined to cause a dramatic rise in the cost of lumber. In the American East, the last of the virgin stands of timber were exhausted just as the rise of suburbia created a significant increase in demand.²¹⁶ With supply low and price high, private industry took measures to better manage forests for long term profit.

At the same time, the modern environmental movement made Pinchot's model of US forestry impossible. With the passing of the Wilderness Act in 1964, timber harvests were banned from vast swaths of the forest reserves Pinchot had created. In subsequent years, evolving conservation policy ensured that today's National Forests are practically inaccessible to timber harvesting. Currently, demand is enough to render his practices significantly more relevant today than those of Gifford Pinchot. This is not to say that the work of Gifford Pinchot is meaningless; indeed, without Pinchot's efforts to create an extensive national forest system

²¹⁴ Willis Linn Jepson. *Trees for the Great: Honoring Carl Alwin Schenck*. (Biltmore, N.C.: Alumni of Biltmore Forest School, 1952). 15

²¹⁵ Carl Schenck, "Speech, 1951" (Forest History Society, Durham, NC)

²¹⁶ Douglas MacCleery. "Carl Schenck: What is his Forest Management Legacy Today?", 11.

some of the most scenic parts of the United States would be inaccessible to the general public. National forests still act as reserves, though in different ways to those Pinchot intended. Rather than protecting timber resources, national forests protect important natural habitats and provide public space for recreation. Whereas Pinchot's actions have had a positive impact on many in the United States today, they were not in the ways in which he originally intended.

With a massive source of timber suddenly off limits in the United States, the price of lumber rose ever higher. Thus, throughout the second half of the twentieth century, the federal and state governments took steps to further incentivize private interests to practice better forest management.²¹⁷ Today over ninety percent of American timber comes from private lands.²¹⁸ Of these privately held timber lands, over sixty percent practice selective cutting and intensive forest management, that is, policies that descend from Schenck's work at Biltmore.²¹⁹ Of those lands that still remove all trees from a tract each harvest (otherwise known as clear cutting), the variables that limited the appeal of Schenck's practices still hold true; in the US South and West, lumber is often so abundant as to render 'conservative' forestry uneconomical.

Like so many other Atlantic crossings, Carl Schenck's time in the United States had been one of triumph and tribulation. He was tasked, through his work at the Biltmore Estate, with the difficult task of managing tens of thousands of acres of unkempt forest. To make matters even more trying, his benefactor, Vanderbilt, was increasingly dependent on the profits from Schenck's work to sustain his luxurious estate. Schenck brought with him the techniques and ideas regarding forestry that had developed in Germany over centuries. He was resistant to clear cut methods and splash-dams, two practices dominating the contemporary American lumber

²¹⁷ Ibid

²¹⁸ Ibid

²¹⁹ Sonja Oswalt, "US Forest Resource Facts and Historical Trends" (US Forest Service, USDA. 2014). 41.

business, and instead implemented selective cutting and road-based lumber transportation, two mainstays of German Forestry.

As Schenck's time in the United States grew longer, however, he began to establish forestry practices that were remarkably different from those in his native Germany. Whereas the German model of forestry was primarily state based, Schenck saw merit in educating the lumbermen in the United States on what he called 'conservative forestry' and using private means to maintain America's forests. Around the same time Schenck founded the Biltmore Forest School, the first in the nation for that subject, and to teach students how to maintain a forest according to his techniques. The novelty of the subject matter and the unique emphasis on field work drew many aspiring foresters to the school. Gifford Pinchot, Schenck's former supervisor, perceived this as a threat to his model of federal forest conservation (which ironically bore a closer resemblance to the German state based model). This disagreement over forestry policy led the two to sever ties as friends, but the two maintained some degree of professional acquaintance and Biltmore alumni continued to receive jobs at the US Division of Forestry.

Despite occasional hiccups, the school and Schenck's forest practices was flourishing as the 1910s drew closer. The school developed a complex curriculum and 'conservative forestry' was finally beginning to draw a profit for the estate. However, in 1907-1908 the US stock market crashed and the price of lumber fell significantly. Instead of recovering after the crash, newly elected President Taft's anti-protectionist policies devalued American lumber even further. Cheaper Canadian lumber began flowing into the country. Adding to these financial hardships were the personal woes of Vanderbilt. A series of faulty deals had left the family strained for resources. The tensions between Schenck and Vanderbilt grew, and a series of conflicts in 1909 resulted in Schenck's ultimate dismissal.

By the time Schenck left the Biltmore Estate, it seemed that his original conflict with Pinchot over forestry practices was over, and that Pinchot had won. There were simply too many trees in the United States to make their private preservation by lumbermen profitable. Although things were beginning to change by the time of Schenck's passing, forestry in the early half of the twentieth century was conducted in the National Forests that Pinchot had helped create in a way that most resembled Pinchot's model. It is thus little wonder that Schenck is written out of most early works on environmental history. The 'Biltmore Spirit' was perceived to have died with Schenck. While his Atlantic crossing had a direct influence on those he interacted with during his time at Biltmore (particularly the many alumni of the Biltmore Forest School), in terms of lasting forest policy there was little question in the 1950s and 60s as to what style of forestry had come up on top. Not knowing of the coming changes to US forest policy, Schenck himself took a defeatist tone towards his work at Biltmore. Indeed, one of his personal mottos became, "*In Magnis et Voulisse sat est.*": in great deeds it is enough to have wanted.²²⁰ Little did he know of the extent to which his model would take hold in the modern era.

In many respects, Schenck was a man quite ahead of his time. As an outside observer, he noticed that American society lent itself more towards a style of forestry that emphasized the free market as opposed to the state owned model of his native Germany. While his efforts to incubate this style of forestry in the United States failed during his lifetime, in the long run his predictions proved to be true. So long as there was an abundance of timber in the United States private interests would have no incentive to conserve the forests, and Pinchot's method of state-controlled forestry proved key. Once the resource became scarce, Schenck's model began to take hold in the United States. Carl Schenck's Atlantic crossing introduced the United States to

²²⁰ Carl Schenck, *Biltmore Doings*

conservative, private forestry for a period of almost twenty years. While his own experiment at Biltmore failed, his ideas for the future of American forest policy still reign true today. By planting these ideas to the United States, his Atlantic crossing was a success.

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