



Center for
Sustainable Business

Martin Guitar: Navigating Sustainability and Legacy

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Introduction¹

On a clear winter morning in January 2020, Jacqueline Renner, President of C.F. Martin & Co., Inc. (Martin Guitar), was reviewing the company's strategy for sourcing environmentally sustainable wood for its acoustic guitar production operations. The two members of Renner's staff most directly concerned with wood sustainability – Frank Untermeyer, Director of Supply Chain Management, and Cindy McAllister, Director of Intellectual Property, Community and Government Relations – were discussing a crucial choice the company faced, but did not agree on the strategy Martin should adopt. Renner understood and appreciated both points of view, but could only choose one.

Martin produced acoustic guitars with a uniquely rich sound, which had been preferred by popular music icons for 100 years or more. In his memoir, *Chronicles*, Bob Dylan described the experience of playing the Martin Dreadnought, saying that a “six-string guitar became a crystal magic wand.”ⁱ Martin's distinctive sound resulted from a combination of innovative design and the use of “tonewoods” – specifically, rosewood, mahogany, ebony, and spruce.

In the early decades of the 21st century, the company's dependence on these raw materials had become increasingly problematic. The beauty of tonewoods meant they were in high demand by several industries, notably furniture and musical instrument manufacturing. Old-growth tonewood forests around the world were being decimated, threatening Martin's future supply and, not incidentally, accelerating climate change.

As much as Martin Guitar was committed to serving musicians by providing them with its ‘crystal magic wands,’ it was also committed to operating in an environmentally responsible manner. Balancing the company's need for wood with its environmental values was a challenge that Untermeyer and McAllister faced every day. By 2020, after years of effort, Martin had increased its use of sustainably harvested wood to 85% of its total wood consumption. Renner was pleased with this accomplishment, but she also recognized that it would be much tougher to source the rest of Martin's wood sustainably. Even maintaining the current, hard-won 85% level might become impossibly expensive, or simply impossible.

As Untermeyer saw it, musical instrument manufacturers would have to work together to influence global wood harvesting practices. On its own, Martin was far too small to have the needed impact. As the three executives discussed Untermeyer's ideas, McAllister raised concerns. First, even if all musical instrument manufacturers could agree to work together, their share of world timber markets was still dwarfed by the appetite of furniture makers, especially those in China, who might ignore international agreements on wood sourcing. Second, if Martin led the effort to create an industry coalition, it would be giving up its

¹ This case study was written by New York University Stern School of Business graduate students Tristan Davis-Jung, Hakan Carl Stanis, Zineb Touzani, and Ananya Vidyarthi, and edited by Chet Van Wert, Adjunct Assistant Professor, NYU Stern School of Business. It is published with the authors' permission. It was prepared solely as the basis for class discussion. It is not intended to serve as an endorsement, source of primary data, or illustration of either effective or ineffective management.

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ability to act independently according to the company's own values. And third, by collaborating with its competitors and uniting to support common principles and practices, Martin might lose its market leadership position on sustainability issues, along with any marketing advantages that gave the Martin brand.

Renner appreciated McAllister's reservations, but she thought the company – and the world – was running out of time and had to take bold action. However, she also wanted to preserve the company's 180 plus-year legacy and the market position its investments in sustainability and innovation had won.

A Legacy of Sound Innovation

In the early 1800s, Christian Frederick Martin took up the craft of guitar-making at the age of 15, when he moved from Germany to Vienna to study with renowned guitar-maker, Johann Stauffer. He later emigrated to the United States, ultimately settling in Nazareth, Pennsylvania, in 1838, where the family and Martin Guitar have remained ever since. Martin Guitar's current CEO, C.F. Martin IV (Chris), is the sixth generation of the Martin family to run the company, and he is determined not to be the last.

Nazareth became a cradle of innovation in the craft of making guitars – innovation that contributed to Martin Guitar's reputation for producing the highest quality acoustic guitars. As Renner says, "You either have people who play Martins, or people who want to play Martins."

Martin Guitar's most important innovation was the Dreadnought design, introduced nearly 100 years ago. Today, it is regarded as the standard design for acoustic guitars due to its deep bass, which appeals to country and folk music performers. Popular musicians of all kinds were drawn to it, including Elvis Presley, Johnny Cash, Eric Clapton, Joni Mitchell, Kurt Cobain, Amanda Shires, and John Prine.

Martin originally released two Dreadnought models, the D-1, with a mahogany body, and the D-2, which used rosewood. The D-2 became enormously popular, and some commentators say that it "may still be the most popular style of six string guitar."ⁱⁱ *Music Trades* magazine noted that Martin Guitar's Dreadnought was "the single most copied guitar design in history."ⁱⁱⁱ And so it happened that Martin both created a guitar with a better sound and trained musicians to prefer guitars made with mahogany and rosewood.

Environmental Commitment

While innovations that produced a more distinctive and appealing sound are a key element of Martin Guitar's legacy, another is the company's commitment to operating in an environmentally responsible manner. Chris Martin has said that he worried that one day his daughter would "go to a show wearing a t-shirt that said, 'My daddy cut down the last tree.'"^{iv} Two generations earlier, Chris's grandfather, C.F. Martin III, had set the company on a sustainable manufacturing path when he confronted evidence that ivory demand was decimating the African and Asian elephant populations. He responded by phasing out the use of ivory on guitars .

C.F. Martin III was also concerned about the sustainability of tonewood forests. Renner had been given a 1960s-era recording of him in which he talked about the importance of caring for the environment, managing wood supplies sustainably, and finding innovative ways to source wood – at a time before environmental sustainability was a mainstream business concern. Renner came to appreciate that respect for the environment was not just a recently adopted value, but a fundamental strand of the Martin legacy. She also discovered deep support for environmental values throughout the company: “We found that our coworkers embraced sustainability initiatives not as a task, but as an important way that the company does business. We didn’t need to create strategic initiatives to drive sustainability. It has always been part of how we do everything that we do.”

Despite the company’s and the industry’s dependence on tonewoods, cultivating new sources was impractical; rosewood, mahogany and spruce trees require 100 years or more to mature. The only realistic approach was to protect existing forests and manage them sustainably for the long term, enabling them to regenerate naturally and support the ecosystems that depend on them.

The solution Martin chose was to support the Forest Stewardship Council® (FSC®), an organization whose principles aligned with Martin’s (Exhibit 1). The FSC works to “promote environmentally sound, socially beneficial and economically prosperous management of the world’s forests. Our vision is that we can meet our current needs for forest products without compromising the health of the world’s forests for future generations.” By voluntarily subscribing to the FSC’s social and environmental guidelines, Martin must take steps to preserve rare and diverse forests, provide benefits for the forests and the indigenous communities that rely on them, and monitor the impact that its operations have on the environment.

Since 1997, Martin had been committed to sourcing an increasing percentage of the wood it used from responsibly managed forests through its FSC Chain-of-Custody Certification, FSC License Code FSC® C008304. This process requires all parties handling the raw materials, from the forest to the ultimate manufacturer, to be certified (Exhibit 2). “FSC Chain-of-Custody certification traces the path of products from forests through the supply chain, verifying that FSC-certified material is identified or kept separated from non-certified material throughout the chain.”^v

In 2019, Martin Guitar sourced over 70% of the wood it purchased through FSC Chain-of-Custody certification. Another 15% or so was acquired through channels that the company deemed to be sustainable, although not certified. While FSC certification had proven to be a transparent and effective method of assuring that the company’s wood supply chain was truly sustainable, according to Renner, “I think there is a bigger role we need to play beyond FSC certification. It is important to be harvesting logs and working with vendors who treat their forest sustainably, even if they are not certified yet.”

Ivory of the Forest

Tonewoods are a key contributor to the sound of any acoustic instrument. For the back and sides of the guitar, Brazilian and East Indian rosewoods are typically used in the highest quality guitars. Rosewood’s density creates rich bass notes. Hawaiian Koa and Figured Walnut can also be used, but they produce

higher-pitched tones as a result of their lower density. For its guitar tops, Martin uses Sitka Spruce for a vibrant, uniform tone and the way it transmits sound through the instrument body. Across Martin Guitar's offerings, rosewood and spruce are the most frequently used woods. However, old growth spruce and some rosewood species are among the most endangered wood resources in the world. According to the United Nations Office of Drugs and Crime (UNODC),^{vi} rosewood is the material most frequently trafficked illegally across the globe (Exhibit 3).

In 2016, the UN Convention on International Trade in Endangered Species (CITES) named rosewood the "ivory of the forest" as it implemented tighter restrictions on logging and trade in rosewood. The organization cited the vast devastation of forests in places like Cambodia and Brazil as an extinction-level threat to the species – not to mention a profound factor driving climate change.

Despite the considerable effort and expense Martin had invested in sustainable sourcing, the amount of wood the company used was a drop in the bucket compared with the insatiable demand of the global furniture business. The Chinese 'hongmu' furniture industry, in particular, represented roughly two-thirds of rosewood imports worldwide. Chinese imports of rosewood logs had increased 1250% between 2000 and 2014 (Exhibit 4). Over the same period, the price of Siamese Rosewood logs originating in Southeast Asia had increased by 1500%.^{vii}

Given these financial incentives, a well-developed supply chain of logs illegally harvested from old-growth rosewood forests was flourishing, and neither national laws nor international agreements could control it. As sustainably managed tonewood imports inevitably became scarcer and more expensive, Renner worried that this diminishing supply, combined with the company's commitment to sustainable sourcing, would lead to increasingly expensive guitars, limiting Martin's future business and forcing it into a specialized, marginal position in the guitar industry.

Renner wondered if international trade in rosewood might be banned outright someday. If it were, how would Martin produce guitars with the sound of a Dreadnought? Renner asked Untermeyer to explore the company's options in the face of potential supply constraints or even a hypothetical ban on rosewood imports.

Experimenting with Alternative Materials

Martin had a long history of experimenting with alternatives to rosewood. Chris Martin emphasized his personal frustration with "the lack of an enthusiastic response from our [music] dealers regarding our past attempts at selling FSC-certified guitars." Over the years, the company found that other woods have similar tonal qualities and are more sustainably harvested, although none of them can duplicate the iconic sound of rosewood. Perhaps, though, with other structural innovations in the guitar (like the X-brace), woods such as cherry, walnut, or mango might carry on Martin Guitar's legacy someday. In Untermeyer's words, "it's Martin's duty to anticipate these changes."

Mango Wood: While visiting Hawaii, Chris Martin came across the idea of using mango wood for guitars. On mango plantations, the trees have a 25- to 30-year fruit-bearing lifespan, after which they are

uprooted and replaced. Using the wood of discarded mango trees would be a highly sustainable practice, introducing a high-value use for a material that would otherwise be a waste product of mango production. Using mango wood, the Martin Guitar team created the CEO-9, a guitar with a warm sound and an augmented treble range. Although not representative of Martin's classic sound, the CEO-9 is an example of Martin's ability to innovate and its commitment to sustainability.

X-Series: Martin Guitar created the X-Series, which is made entirely of materials that are environmentally sustainable, but not traditional tonewoods. According to Mike Nelson, Senior Director of Marketing, "The X-Series is well-priced to appeal to a younger demographic and is meant to be an entry model for the Martin Guitar line. And, while the X-Series may not offer the same sound produced by tonewoods, it is an incredible value for the price."

While the company manufactured tens of thousands of X-Series guitars every year, consumers were probably not aware that they were made from 100% sustainable components. Martin did not promote that fact. On its website, Martin advertises that the X-Series "checks all the boxes,"^{viii} including: legendary Martin tone, travel friendly, durable, playable, comfortable, and a great value. It does not advertise sustainability as one of the boxes checked.

The Wood Summit and Industry Collaboration

Beginning in 2007, Martin began hosting a -semi-annual Wood Summit, bringing together a variety of business, government, and non-profit stakeholders to discuss responsible and sustainable sourcing of the woods used in acoustic guitars. At the most recent summit, in 2019, Chris Martin reiterated the company's commitment to acquire wood in a sustainable way while also "...convincing the customers – both the consumer and the dealer – that there are other viable woods"^{ix} suitable for guitars.

Whereas previous summits had not included Martin's competitors, Untermeyer advocated inviting them in the future. He proposed using future meetings as a forum for the entire musical instrument industry to find common ground and use its collective influence in support of long-term sustainability initiatives. One valid objection to this idea, Untermeyer recognized, was that Martin would be investing in an effort that would benefit its competitors. Would that be the best use of company resources? "At a certain point," he reflected, "we can either succeed together or fail separately. Martin by itself just doesn't have the resources or the influence to bring about the changes that need to be made on a global level."

Charting a Sustainable Course

As Renner, Untermeyer, and McAllister talked, they agreed on several points. First, despite the company's promising work with alternative woods and its formidable design capabilities, it had yet to find a way to reproduce the iconic Martin sound produced by rosewood and spruce. It would have to continue and expand its work on this challenge.

Second, Untermyer had made progress in sourcing an increasing portion of Martin's rosewood needs from FSC-certified sources, but he was striking out in the search for certified spruce, which was essential to the sound-transmission qualities of Martin's guitar tops. He had been able to find certified Romanian spruce as a substitute for Sitka spruce, but the viability of this source was uncertain. Meanwhile, logging of the last stands of old-growth Sitka spruce continued in Alaska and British Columbia. Untermyer thought that this activity, at least, could be influenced by a united musical instrument industry.

Third, while it was attention-getting to call rosewood 'ivory of the forest,' Renner reflected that the steps C.F. Martin III took in the 1960s to discontinue using ivory on guitar fretboards had not prevented the devastation of elephant populations through poaching. As with ivory, Martin's consumption of tonewoods was too small, by itself, to influence global markets. Untermyer emphasized this point as he argued for collaboration with Martin's competitors.

Renner summarized the questions that would inform her decision on Untermyer's proposal:

1. What were the prospects for uniting the musical instrument industry around sustainability concerns? And even if they could agree on a common strategy for protecting tonewood forests, how could the industry influence international trade in tonewoods – considering that it was still far smaller than the furniture industry, and that so much trade was taking place illegally?
2. McAllister was concerned that Martin, by collaborating with its competitors, would give up the benefits to the Martin brand of the years of work the company had invested in sustainable sourcing. And yet Martin did not promote its sustainability work to its customers or the general public. Perhaps there was good reason for this, since its sourcing was not 100% sustainable. Would that be a risk? How could Martin secure the positive reputational benefits it had justifiably earned through its sustainable sourcing work without looking hypocritical? And could it do so while collaborating publicly with its competitors?
3. With limited resources, would it make more sense to focus the company's sustainability team on developing alternative wood supplies and on design innovations that would augment the sound quality of non-tonewoods? Did Martin have sufficient resources to take on both initiatives – international trade and tonewood alternatives – and do them well? Could the company, given its legacy and values, decide to give up on the long-term sustainability of tonewoods and focus its resources on replacing them?

Renner knew that time was a critical factor in this decision, and she had to report to Chris Martin and the company's Board of Directors before the end of the month.

Exhibit 1. Forest Stewardship Council Mission and Principles

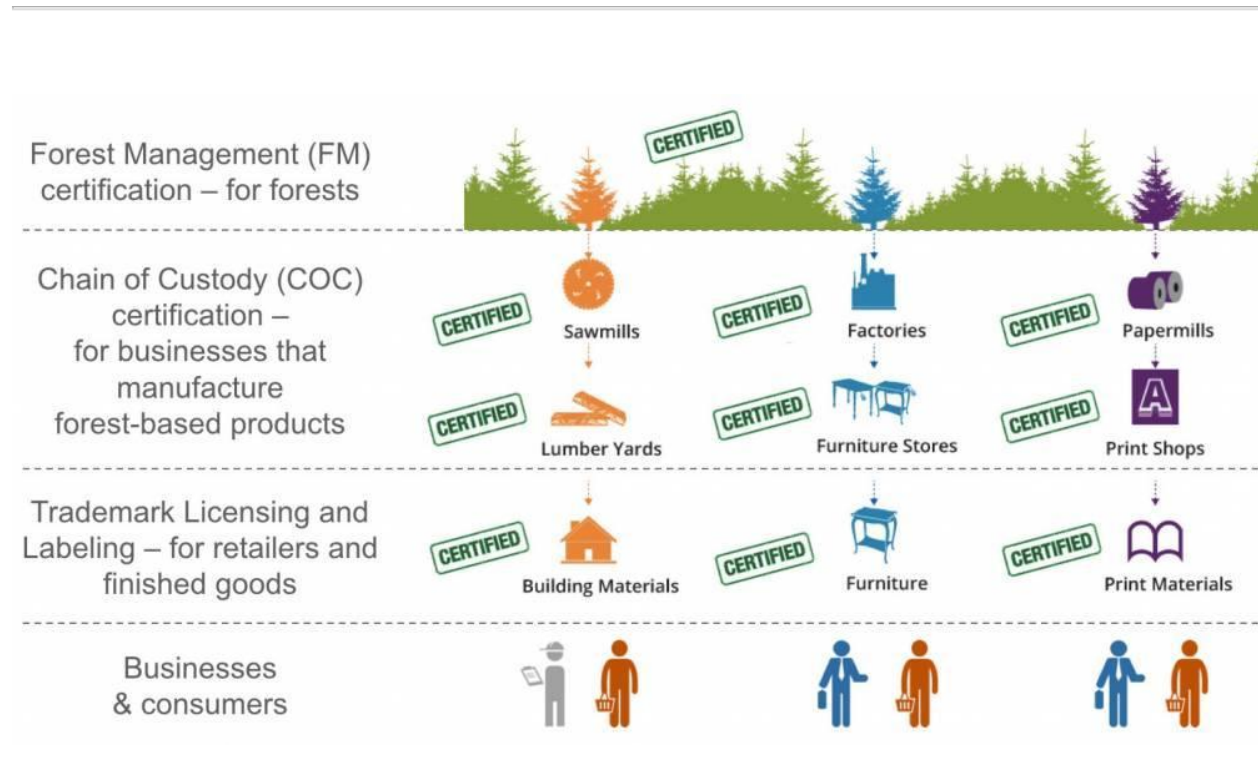
The Forest Stewardship Council mission is to promote environmentally sound, socially beneficial and economically prosperous management of the world's forests. Our vision is that we can meet our current needs for forest products without compromising the health of the world's forests for future generations.

Principles

- **PRINCIPLE #1: COMPLIANCE WITH LAWS AND FSC PRINCIPLES** - Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory and comply with all FSC Principles and Criteria.
- **PRINCIPLE #2: TENURE AND USE RIGHTS AND RESPONSIBILITIES** - Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.
- **PRINCIPLE #3: INDIGENOUS PEOPLES' RIGHTS** - The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.
- **PRINCIPLE #4: COMMUNITY RELATIONS AND WORKER'S RIGHTS** - Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.
- **PRINCIPLE # 5: BENEFITS FROM THE FOREST** - Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.
- **PRINCIPLE #6: ENVIRONMENTAL IMPACT** - Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.
- **PRINCIPLE #7: MANAGEMENT PLAN** - A management plan — appropriate to the scale and intensity of the operations — shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.
- **PRINCIPLE #8: MONITORING AND ASSESSMENT** - Monitoring shall be conducted — appropriate to the scale and intensity of forest management — to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.
- **PRINCIPLE # 9: MAINTENANCE OF HIGH CONSERVATION VALUE FORESTS** - Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.
- **PRINCIPLE # 10: PLANTATIONS** - Plantations shall be planned and managed in accordance with Principles and Criteria 1-9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

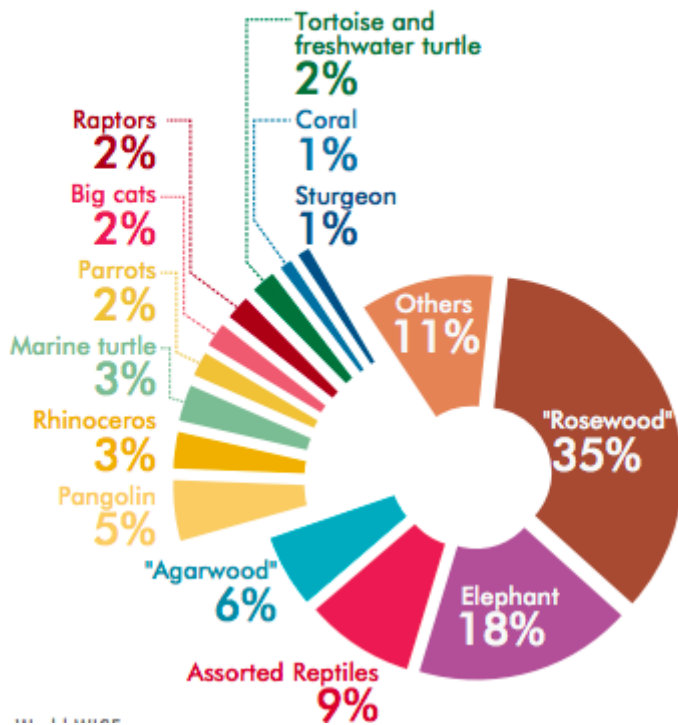
Source: Forest Stewardship Council, "Mission and Vision: Protecting Forests for Future Generations," <https://us.fsc.org/en-us/what-we-do/mission-and-vision>, accessed 27 September 2020.

Exhibit 2. Chain of Custody Certification



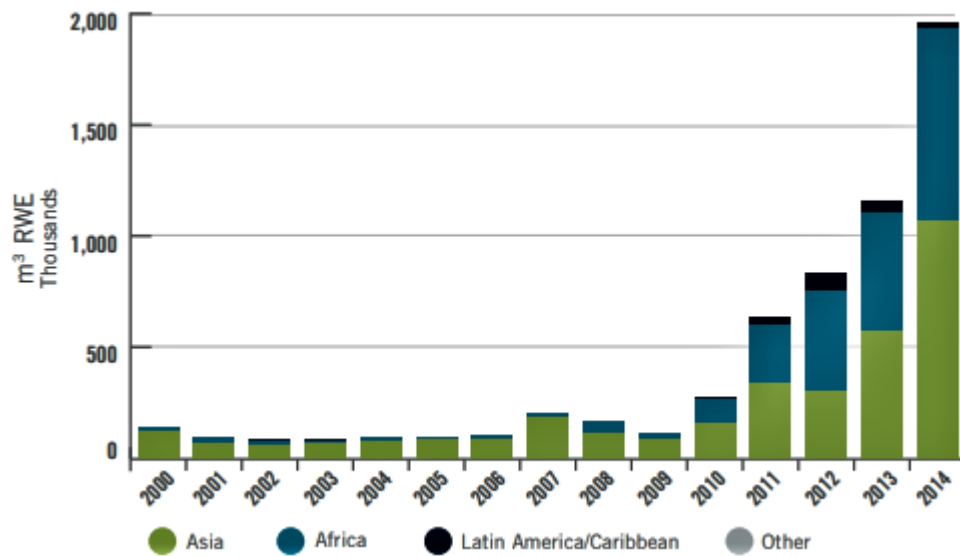
Source: Forest Stewardship Council, "Chain-of-Custody Certification," <https://us.fsc.org/en-us/certification/chain-of-custody-certification>, accessed 27 September 2020.

Exhibit 3. Type of Wildlife Seized (2005-2014)



Source: United Nations Office of Drugs and Crime (UNODC), World Wildlife Crime Report 2016: Trafficking in Protected Species. https://www.unodc.org/documents/data-and-analysis/wildlife/World_Wildlife_Crime_Report_2016_final.pdf, accessed 27 September 2020.

Exhibit 4. China's Rosewood Imports



Source: Naomi Basik Treanor, "China's Hongmu Consumption Boom: Analysis of the Chinese Rosewood Trade and Links to Illegal Activity in Tropical Forested Countries," Forest Trends, <https://www.forest-trends.org/wp-content/uploads/imported/for173-china-rosewood-report-letter-16-0329-hr-no-crops-pdf.pdf>, accessed 27 September 2020.

Endnotes

ⁱ Bob Dylan, *Chronicles: Volume One* (Simon & Schuster, 2005)

ⁱⁱ C.F. Martin & Co., “The Dreadnought Story,” <https://www.martinguitar.com/about/martin-story/dreadnought-story/>, accessed 27 September 2020.

ⁱⁱⁱ “How The Dreadnought Came To Define The Acoustic Guitar.” 2015. *Music Trades* 163 (1): 102–8.

^{iv} Rainforest Alliance, “A Word from Chris: Martin Guitar and the Rainforest Alliance,” Youtube, 13:25. February 27, 2017. <https://www.youtube.com/watch>, accessed 27 September 2020.

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^{vi} United Nations Office of Drugs and Crime (UNODC), *World Wildlife Crime Report 2016: Trafficking in Protected Species*. https://www.unodc.org/documents/data-and-analysis/wildlife/World_Wildlife_Crime_Report_2016_final.pdf, accessed 27 September 2020.

^{vii} Naomi Basik Treanor, China’s Hongmu Consumption Boom: Analysis of the Chinese Rosewood Trade and Links to Illegal Activity in Tropical Forested Countries, <https://www.forest-trends.org/wp-content/uploads/imported/for173-china-rosewood-report-letter-16-0329-hr-no-crops-pdf.pdf>, accessed 27 September 2020.

^{viii} C.F. Martin & Co., “X-Series Checks All the Boxes,” <https://www.martinguitar.com/x-series/>, accessed 27 September 2020.

^{ix} C.F. Martin & Co., “Global Environmentalists Gather to Discuss Sustainability in Sourcing Raw Materials,” 19 June 2019, <https://www.martinguitar.com/about/news/global-environmentalists-gather-to-discuss-sustainability-in-sourcing-raw-materials/>, accessed 27 September 2020.

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