

Ebony for Lutherie Schools

The Ecological and Political Status - choices for luthiers

Fall 2023



ALLIANCE

A world map showing deforestation in magenta from 2001-2022. The map is overlaid on a satellite-style background. The year '2022' is written in large white text on the left side. The map shows significant deforestation in the Amazon basin, the Congo basin, and parts of Southeast Asia and Australia. Major cities and countries are labeled in French.

2022

What is Ebony and Where Does it Come From?

Ebony is a common name, not a latin classification, for a black, dense tropical hardwood. It includes many species and genus from many countries, including the Indian Ocean region, western Africa and parts of South America.

These regions suffered form heavy deforestation (in magenta) during the last two decades (data from 2001-2022).

Botanics, Taxonomy and Classification of Wood Species

Taxonomy is the science of classification that makes tree identification possible by organizing plants systematically. The classification is done from the most general to the most particular : the kingdom, the phylum, the class, the order, the family, the genus and finally the species. The botanical name, in *Latin*, is made of the two last levels of classification : the *genus* and the *species*. It helps scientists identify shared genetic characteristics between plant species. Plants with the same species name have the most genetic similarity, those plants in the same class or division have far less genetic similarity.

Many of the “ebony” woods we use come from the *Diospyros* genus that is composed of over 700 species including fruit trees like persimmons as well as a variety of trees also referred to as ebony. Trade restrictions for wood from the nation-state to the international level are based on the trees’ Latin names.

“The *Diospyros* genus includes over 700 plant species, most of which do not produce the sought after hard, black wood. Other tree species belonging to the *Dalbergia*, *Juglans*, *Swartzia*, *Ebenopsis* and *Libidibia* genera are sometimes listed as ebony on timber markets.”

Diospyros rhombifolia bonzai,
Montreal Botanical Garden.

Kingdom : *Plantae*

Phylum : *Tracheophyte*

Class : *Angiosperm*

Order : *Ericales*

Family : *Ebenaceae*

Genus : *Diospyros*

Species : *rhombifolia*

Latin name

Diospyros rhombifolia

Why is ebony highly coveted?

Ebony was introduced into the European woodworking trades around the 16th century. Rare and expensive, it found uses similar to other noble materials of the time like ivory.

Its more widespread use for musical instruments accessories and fingerboards emerges later and seems to coincide with the transitional period from a baroque to a modern set-up, when the increased string length and tension called for a stiffer neck. Luthiers adopted stronger materials for the fingerboards.

The combined hardness and resistance to wear made ebony the preferred go-to material once it became widely available.

“ Baroque violins were most often fitted with local hardwoods like maple for fingerboards and tailpieces and boxwood or fruitwood for the pegs and endpins. Later, ebony was used as veneers to layer the top surface of fingerboards and tailpieces. Along the course of the 19th century, the use of exotic hardwoods was extended to all fittings and fingerboards, even on period instruments that were restored.”

Baroque set-up → *Transitional* → *Modernized set-up*



Girolamo Amati, violino piccolo, 1613, Cremona.



Lorenzo Storioni, child's violin, 1793, Cremona.



Andrea Amati, violin, 1559, Cremona.

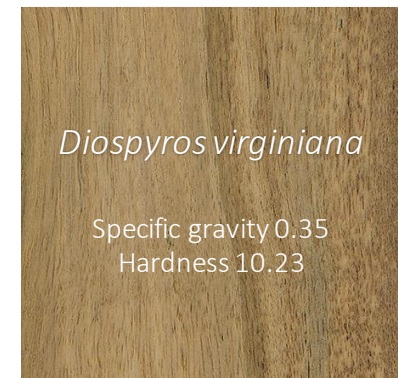
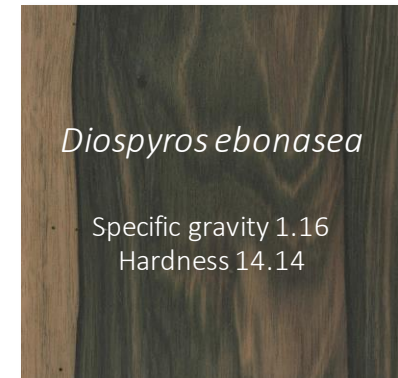
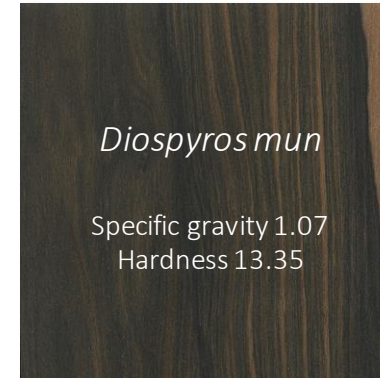
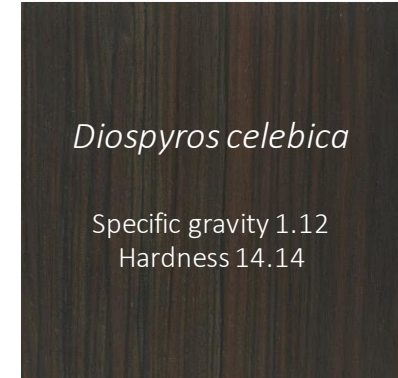
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“Not all ebony trees are the same! Their physical and mechanical properties vary from species to species and amongst specimens of the same species.”



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“Variations due to deforestation and centuries of unsustainable exploitation have also exhausted prime quality stocks. Many specimens available today are only a pale image of what made ebony famous.”

Different specimens of *Diospyros crassifolia*



Is the cultural attachment to ebony sustainable?

“Our definition of beauty & perfection has a negative impact on the sustainability of ebony supplies”

“As things currently stand, prioritizing this ideal of beauty is detrimental to ecosystems that are vital to both fauna and local populations”

Is it reasonable to expect this level of uniformity from a natural product like ebony? Is this idea of perfection (lack of defects and variability) more compatible with a man-made material?

When did beauty become limited to a consistent black color, instead of the natural variation of wood?





Photo by Paolo Cerutti/CIFOR. Rosewood (mukula) logging and trade in Zambia.

“Less than 10% of Ebony Trees Cut Are Sellable”

“Much like other tonewoods, ebony grows with different color variegation. In fact, only about one in every ten trees features the uniformly black color that has long been the standard within our industry. This historic preference for black color, along with primitive logging methods and the lack of proper forest management, has led to considerable waste. Because the variegated heartwood has had little value to the industry, loggers would typically cut down ebony trees until they found one with the desirable black heartwood and leave the other felled trees behind”

[Source : Taylor guitars about sustainable ebony.](#)



The Loss of Ebony Species is Like a Domino Effect

“African Blackwood is one type of ebony sourced from East Africa and is commonly used in large commercial string instrument production. In Tanzania “Over 70% of wood harvested in forests is unaccounted for, causing huge losses of government revenue and driving some species to the brink of local extinction”

High prices, poor funding for forest management and enforcement, and highly organized syndicates support illegal logging in many countries like Tanzania and Mozambique. This has led to the endangered status of species after species.

[Source : The Guardian](#)



International Protection for Endangered Species

The IUCN (International Union for the Conservation of Nature) is an international, non-profit organization of scientists which tracks the population size of species at risk world-wide. They identify risks – present and future- to the survival of these species and recommend measures for protection.

“According to this list, 41 species from the Diospyros spp. Genus are critically endangered, 106 are endangered and 91 are vulnerable.”





Nation State Restrictions

At CITES, international trade restrictions are negotiated. Those trade restrictions are enforced by customs officials in both the exporting countries and the importing countries.

Exporting country customs will:

- Implement the exporting country's restrictions
- Implement CITES trade restrictions.

Importing country's customs will:

- Implement CITES restrictions.
- Implement any restrictions negotiated with individual nation states
- Implement any further restrictions on imports the importing country (or European Union) has put in place

Legislations : a long term fix

Similar to Pernambuco, countries with commercially viable “ebony” species have banned the export of logs and rough timber in an effort to realize economic value and control illegal logging. In addition, the IUCN and CITES have identified species and countries which need protective measures to stabilize the species population.

“ Despite the progress made in the legislation department, international illegal logging syndicates continue to bypass protective measures given high prices and continued market demand, largely in the music industry.”

"EBONY" POSSIBILITIES	Common Name	Country(s)	Country Status	IUCN Red List	CITES listing
Diospyros crassiflora	Ebony	Cameroon, Nigeria	Banned export raw logs and rough timbe?	Vulnerable	
Diospyros ebum	Ceylon Ebony	Indonesia, Sri Lanka and India	Export Banned India & Sri Lanka	Data Deficient	
Diospyros celebica	Macassar ebony	Sulawesi	Officially Listed Endangered	Vulnerable	
Millettia laurentii	Wenge	near Ghana		Endangered	Requested Study at 18th Convention
Dalbergia melanoxylon	African Blackwood	dry savanah, central & southern Africa		Near Threatened	Appendix 2
Diospyros tessellaria	Mauritius Ebony	Mauritius		Vulnerable	
Diospyros mun	Mun Ebony	Vietnam, Laos		Critically Endangered	
Juglans neotropica	Peruvian Walnut	South America		Endangered	
Swartzia tomentosa	Brazilian Ebony	Venezuela, Guyanas	Rare	Least Concern	
Diospyros melanoxylon	Coromandel Ebony	Sri Lanka, India		Status unknown	
Diospyros angulate		Mauritius		Critically Endangered	
Swartzia Radiale		Columbia		Endangered	
Diospyros spp.	Ebony (114 species)	Madagascar	All Endangered	All Endangered	Appendix 2
Diospyros dendo	Gabon Ebony	Gabon	Cutting & Export strictly controlled/ Endangered	Least Concern	
Diospyros mespiliformis	African Ebony	African Savannah		Least Concern	

Identifying Sustainable Sources and Chain of Custody (COC) supply chains

FSC Forest Stewardship Council

PEFC Program for the Endorsement of Forest Certification

SFI Sustainable Forestry Initiative

Are three internationally recognized organizations which help develop and audit sustainably certified sources and COC supply chains for wood species.

“At present, there are no known sustainably certified sources for ebony recognized by these organizations.”



SFI-00001

Moving to Alternatives

In 2012, the US government fined Martin guitars \$350,000 for using illegally sourced ebony from Madagascar. Since those fines, the guitar industry in the US has largely transitioned away from ebony for their fingerboards to composite materials and some alternative wood species.

Employees at the PEFC and SFI that the Alliance has spoken with were surprised that the industry is still using ebony for fingerboards because they did not know of any legal sources of ebony at this time.

“It is possible that there are some small sources of legal ebony on the market, but the message is clear – we should start shifting to legal, preferably sustainable, alternatives to ebony for our instruments.”





Photo : Tomml

Actions within reach of the luthier.

Implementing changes to support sustainable practices in lutherie can be overwhelming at first glance. Despite how challenging it might seem, starting with simple actions can go a long way and lead to stronger sustainable practices at the workbench, whether as an apprentice or as an accomplished luthier. Here are 4 guidelines.

1. Get informed

- Learn about legislations :
 - Is the species listed on CITES
 - Is the species protected by national or tribal laws
 - Does the species meet sustainable harvest standards
- Know your wood :
 - Learn about taxonomy, tree biology and wood harvesting practices.
 - Learn wood physics and basic acoustics.
- Research Substitute Materials :
 - How do the important physical characteristics compare
 - What is the material's carbon footprint
 - Does the material contain any hazardous chemical compounds
 - Is the material compostable, or biodegradable





2. Buy wood wisely

- Identify reputable suppliers.
 - Is the wood FSC, SFI or PEFC certified
 - Is the wood sourced in countries with sound forestry practices.
 - Purchase only wood harvested legally
 - Can the supplier tell you the species and country of harvest
 - Check supplier's background (Peers' opinions and Facebook groups are good for this).
 - Look for local wood suppliers (limits carbon footprint and the use of chemical required to make pest treatment prior exportation).
 - Ask for shipping methods and return and refund services.
- Make group orders with colleagues to reduce Greenhouse gas (GHG) emissions due to transportation.
- Do not "binge-stock" wood species under CITES review or listed as rare, threatened or endangered on the IUCN Red List
- Do not buy poached material.

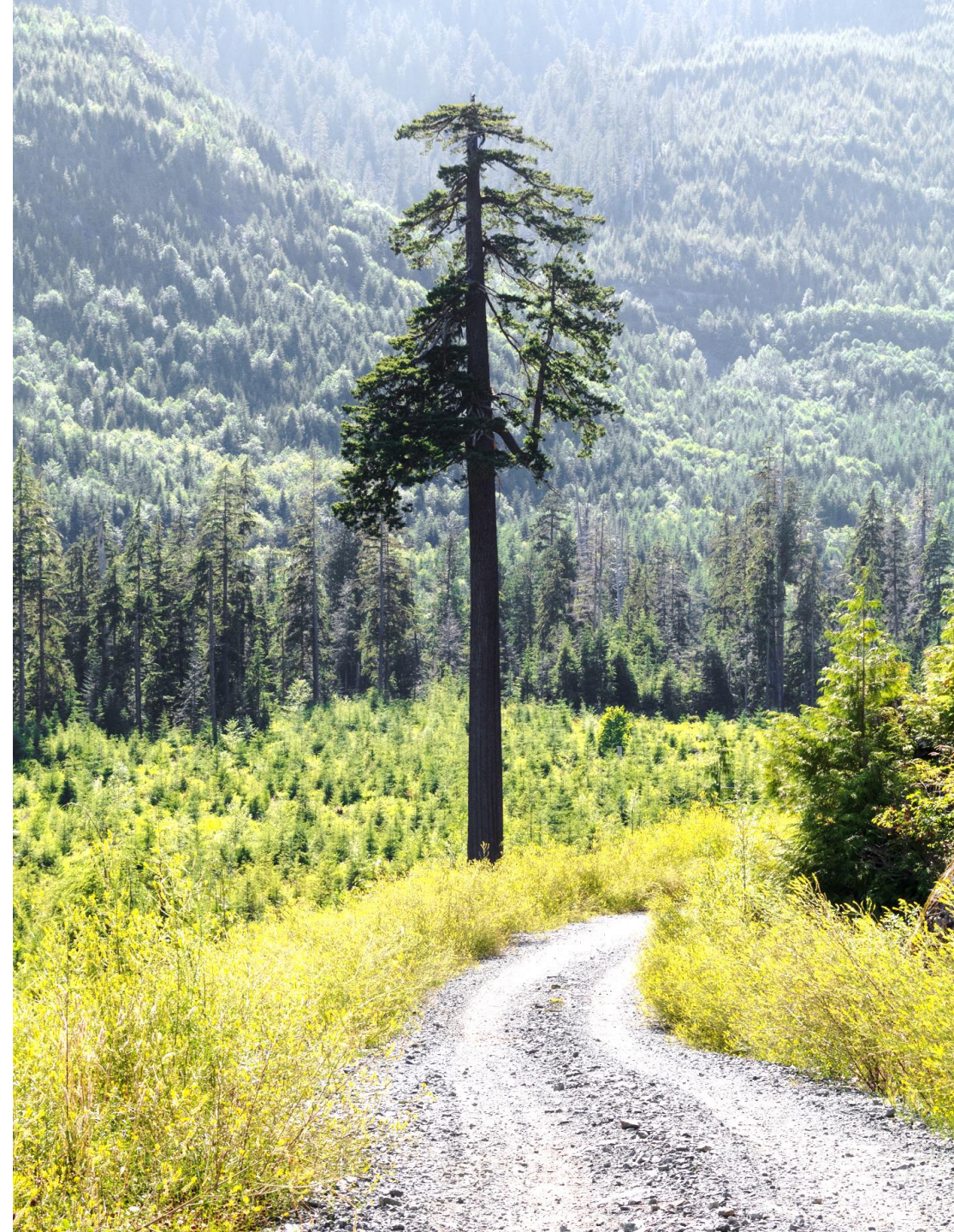
3. Reduce waste

- Avoid, or limit the use of endangered species for limited editions, special projects, or restoration of period instruments following legal guidelines.
- Prioritize species with large, healthy populations for most of your projects.
- Find uses for your scrap wood and shavings (small pet litter, compost, soundposts, linings, peg bushings, edge grafts, give to arts and craft schools, sell pen blanks to wood turners, etc.).
- Find use for scrap ebony fingerboards (turning cello fingerboards into viola, violin fingerboards or nuts and saddles).
- Look for secondhand tools and supplies.
- Store your wood and wood-based products appropriately to avoid wasting material.
- Look for reclaimed wood.
- Qualify usually discarded material by mainstream builders (ex.: adding wings to a back or top that would otherwise be too narrow to use, make guitar back from 3+ pieces, etc.).



4. Get involved, you are not alone!

- Participate to tree planting efforts in your community.
- Donate to organizations dedicated to green practices or invite your clients to participate in the effort with small donations included in invoices.
- Volunteer for environmental sustainability projects.
- Monitor your shop's carbon footprint and develop ways to reduce your impact.
- Join a reputable lutherie association to share your concerns and best practices with peers.



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