

From timber to timbre

Instrument makers use their intimate knowledge of wood to achieve beauty of tone as well as appearance.

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Which is the most important wood product? Is it the timber or the timbre? Some might point to wood's role in building nations or sailing the seas. But ash can also leave us spellbound on sporting fields. And from whiskey to mushrooms, certain timbers have a key role in food production, not to mention the magic that oak can work on maturing wine.

Indeed, many would say wood has the power to warm our hearts as well as our homes. And this is where timbre really comes into it. Skilled craftsmen search for different types of wood to create musical instruments which leave audiences spellbound.

One such craftsman is Paddy Cleere from Tullaroan in Co Kilkenny. Paddy has been playing music all of his life. At the age of 10, he started on guitar, banjo and mandolin, and by his 20s was an expert on the bouzouki.

In 2012, Paddy decided to leave the world of construction and return to college. Paddy had a clear vision – to turn his passion and skill into a business. He attended St John's College in Cork, completing a course in musical instrument making and repair. He then set up his workshop in Tullaroan and is regarded as one of Ireland's leading stringed instrument makers.

Getting the right timber can be difficult at times. Paddy cites Paul Doyle and Tommy Cussen from Galway who have a great knowledge of all woods and are two of the most experienced luthiers he works with. Paul himself has a worldwide reputation and is brilliant at sourcing the right timbers.

Like the best guitar-makers, Paddy never needs to advertise: all his work comes through word of mouth. Paddy is the cardiologist of the guitar world. You have to have an eagle's eye and great patience in this business.

"It's a completely different set of skills to making furniture. Instead of rulers, we use digital micrometers. Our product is the very sound the instrument makes," says Paddy. "Precision is everything, there's no margin for error, because it affects the sound."

Paddy makes mandolins, mandolas, bouzoukis, acoustic guitars and tenor guitars.

What may surprise many is that the first species Paddy speaks of is spruce and cedar. The top of the instrument is made with spruce or cedar. Sitka spruce, in particular if grown slowly, is an excellent species for guitar tops. Many may decide on cedar; this is because of colour and tone. Cedar will give a more mellow sound and is better suited for strumming, whereas spruce gives a more punchier sound, which is sometimes better-suited for picking single notes Paddy says. The reason why soft woods are used for tops is because of the vibration.

All these trees are quarter sawn. "We need strength and sound." Some of the Irish spruce does grow quickly. But there are forests out there that may not be as "productive". This is the type of spruce we need in this business.

The next parts of the instrument are the back and the sides. The backs and sides are made from the same species, usually a hard wood. Rose wood, a tropical hard wood, is preferred by many musicians. However, it is hard to source in Ireland. Paddy sources it from suppliers in the UK, Ireland and Spain.

"I'm looking at using Irish walnut at the moment and other native hard woods for this purpose," he says. Currently, Paddy is making a mandola using Irish cherry for the first time. "I experiment with wood, every day is a learning process. It's one of the joys of this job," he says.

Paddy then braces the instruments with spruce. "The tension in the wood is key to generating vibration and



sound," says Paddy, as he repeatedly taps the surface and makes adjustments to perfect the construction.

"This is where the sound is produced and if well made, the instrument will improve over years of playing."

The necks of the instrument are usually a three-piece construction for strength and appearance. These consist of a variety of woods like mahogany, walnut, maple, ash, sycamore, etc, and is picked by the client. This will have a fret-board usually of ebony or rosewood. This is also important for tonal properties and as a hard-wearing wood as fretboards get a lot of use over years of playing.

The final part of the instrument is the head stock. One guitar Paddy is finishing at the moment has a bog oak head stock, showing that Paddy uses all timbers from many places in time in different parts of the instrument to look beautiful and sound magnificent.

"The lighter soft woods give a punchier sound and the darker woods give a more mellow sound," says Paddy.

The last piece of the jigsaw is the binding. The instrument frame is

routed and then it's banded. If it's a dark tropical hardwood body, it's banded with a light Irish-grown hardwood, such as sycamore or ash. If it's a light coloured body, it's banded with dark woods, such as walnut rosewood or mahogany.

Paddy has sold instruments all over the world. But his craftsmanship lies not simply in his hands. It's his knowledge of woods and how best to bring them together. His key knowledge is how to make pieces and species of wood work together in harmony.

Paddy reflects on his time involved in music. "I look at players playing my guitars and I look to see if the instrument responds to them. I place their initials on guitars to give the owner the real sense of ownership.

"Seeing a new player coming in and purchasing their first bespoke instrument gives me a lot of satisfaction. When that happens I know I've cracked it."

Forest owners can sleep well knowing that there are people like Paddy out there waiting to bring their product to its ultimate destination. To make the world a better place.

