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Crafting a violin with Tobias Widemann:

part 1 Selecting the materials

Traditionally violins are made from the same timbers that have been used for the past 500 years.

A violin should be pleasing not only to the ear, but also to the eye. Without the assistance of a physics laboratory with an acoustic chamber, and computer-aided design, ancient craftsmen developed an instrument that worked its way up the ranks to become one of the top performers of today. Their choices of timbers were based on what produced the best sound, and what looked good. Different timbers produce different sounds.

Tobias is no exception. He trained in the Mittenwald School for Violinmaking in Germany, and learned the European traditions.

His first choice for the violin top is spruce from the alps of Switzerland or Italy, or possibly North America. The long winters there slow the tree's growth so that the grain is very regular and straight. The top is only 2–3mm thick, and must be strong, yet vibrant, to reflect the full tonal range of the instrument. It has been dried for thirty years to make sure that it will remain stable.

For the sides (ribs), the back and the scroll he imports maple hardwood from the mountainous regions of Bosnia. It must be stable and straight-grained, but



Wood for backs — maple up the top, some spruce underneath



Looking at a nice piece of Bosnian Maple for a back



A block of maple for the scroll



A set of wood for the body: Maple back on the left with strips of maple on top for the sides and spruce to the right for the top



Ebony for the fingerboard

he also seeks timber with ‘flame’, the tiger-stripes that bring a fiery glow in the reflected light. For the larger instruments in the family, backs can also be found made of poplar.

Fingerboards, pegs, nuts and tailpieces are usually made of ebony, that very black, hard wood that was once used for bowling balls and the sharps and flats on pianos. It grows in Africa and India. The fingerboard must be hard to resist the pressure of the strings, and even then it will develop grooves after years of use. The topnut too must resist the strong forces of the strings. Sometimes the peg fittings are made of other hardwoods, like rosewood or boxwood.

Finally the bridge is chosen from selected maple and the soundpost from spruce. To show the sort of forces involved, each tiny foot of the bridge supports several kilograms of pressure from the strings.

Next time: body building

Photos and illustrations courtesy of Tobias Widemann



