

Kelp Violin

Chris Henderson

Design Tasmania





Making a Kelp Violin

Chris Henderson

“Making a violin is a gift from the luthier to the musician, and above all to the music. For me there is something captivating about listening to an instrument that started life as discarded kelp washed up on a wild beach.”



This kelp violin is made from Tasmanian bull kelp (*durvillaea potatorum*) which grows on the west coast of Tasmania. Kelp can be found on the beach after rough weather. Intact pieces of the right size and thickness are cut from one or two fresh kelp fronds.

The kelp is dried for 2-3 weeks in a grid to hold it flat. When fully dry it is up to 70% thinner and 50% shorter. It distorts considerably as it dries. Working with it is difficult. No glues fix it permanently, it cannot be sanded or carved. It will twist when damp.

However it is thermoplastic and elastic after heating so it can be shaped, although it needs screws and glue to hold in place. An oil finish prevents it from absorbing moisture.



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As you would expect the finished violin does not have the depth and richness of a standard violin because the many factors which add up to the 'voice' of a wood violin just aren't present in kelp.

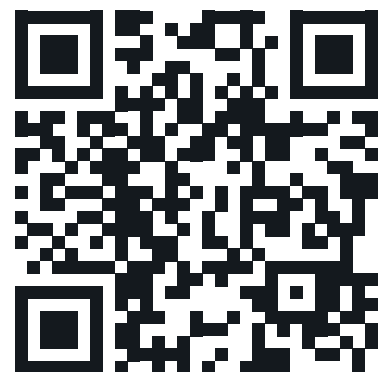
Nevertheless it does sound similar, and has a clear voice (follow this link). The lever arrangement under the bass bridge foot transmits vibrations from the bridge directly to the back plate, enhancing the volume and depth of the sound.

Three internal bars keep the front and back plates in shape, while the central carbon fibre rod stops the whole body from bending under the 20kg downward pressure on the bridge from the taught strings.



See the violin in action and learn more about how it was made:

<https://designtas.info/kelpviolin>





Chris Henderson

Chris Henderson has been making things since he can remember. Now retired he has had three careers, as scientist, engineer and doctor. Much of the enjoyment Chris gets out of life is in finding a way to make and understanding how things work: from brain science to disease, houses to shoes, and now kelp violins.

This all started when Chris saw a kelp violin made by his friend Roger Bodley. Who in turn was challenged by Emily Sheppard, a professional violinist. Emily had made a kelp resonator for her violin, showing it to Roger after a performance. Roger then made a couple of violins and showed them to Chris.

Chris thought the problem of making a violin out of kelp was difficult enough to be worth thinking about. He set about making a violin in the classical tradition, having been taught the craft by John Ackerman, a luthier in Howrah, 15 years ago. Getting a piece of kelp to sound like a violin took months of development - and mistakes. Gradually understanding of the material and how to work with it developed into three finished violins. Excursions into the mathematics and physics of the violin were part of the journey. Resulting in an instrument that sounds like a traditional violin, but with its own characteristics. The 'voice' of a violin depends on many factors, most of which kelp simply doesn't have, but the aim is not to make a wooden copy, but an acoustically strong kelp instrument with its own sound.

As far as we know the kelp violins in this exhibition are the first successful kelp violins ever made.

Organology

Design Tasmania x Mona Foma 2022

The science of musical instruments and their classifications. This collection of curious and master-crafted instruments all relate to Tasmania in some way. Electrophones, aerophones, membranophones, idiophones and chordophones.

As well as the instruments, Design Tasmania will become a little party-spot every afternoon: they'll be firing up the charcoal grill, shaking up cocktails and putting on sweet tunes (from DJs and musicians). Swing by for a margarita in the courtyard.

Organology:

Friday 21 January - 21 April 2022.

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