

# THE Scroll

The Newsletter for the  
Cox Violin Community

Fall 2016

[www.coxviolins.com](http://www.coxviolins.com)

Dear Friends,

## Violinmaker-in-Residence

I was pleased recently to be invited by the Vermont Symphony Orchestra to be a violinmaker-in-residence for their 2016-17 season. The VSO has been looking for ways to involve their audience more deeply in the music making process. They thought looking at the story of the instruments themselves would reach their audience in new ways.

One of the signature parts of live symphony concerts is the direct physical connection between the audience's ears and the movements of the musicians, and between the brains at both ends. By making the creation of one instrument real and familiar we hope to make that connection closer and more exciting for the audience:

The audience, musicians, and the wider community will follow the process of building a violin, culminating with the finished product at the May 6 concert. I will be in residence at concerts, working on the VSO violin, with exhibits to explain the making process. I will also produce a blog to document and explain the process in more detail and add history, theory, and my personal observations. I invite you to follow this project via the blog at [www.coxviolins.com/blog](http://www.coxviolins.com/blog).



*From the idea to the music: the "Steinhardt Storioni" violin: tracing, form, back and top, finished violin #751.*

## On the Inside

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# From the Desk: Forty years of Forms

**Every year or so we undertake a research project in the shop. Sometimes we're looking back to the distant past for inspiration or a better understanding of what the great makers of the past were doing.**

Sometimes we use new technology to better understand what elements make instruments work better and how. Sometimes we study Doug's working methods over his 40-year career to understand and document his own work. We've studied and listed the wood used in the 900+ instruments that he has made, the working methods he's used and how they have evolved, and, this year, the forms he uses to build the instruments.

The form-board gives a foundation for the rib construction process, holding the blocks while they are shaped and the ribs bent and glued to them.

## How Forms Work

The form defines the size, interior shape and proportions of the instrument. I use collapsible form boards that make it possible to install all the rib liners before attaching the back, making the structure more stable. It is possible to build instruments with different appearances and acoustics on the same form by varying the way the rib corners are shaped and by different choices of rib height and arching design.



*Fitting ribs to the form*

Most of the forms I work on started as part of the process of building a copy of an old master instrument, and they are named accordingly. Many forms can be used for other more or less related projects; for instance a Storioni violin from 1795 fits exactly on a large Stradivarius form from 1713. Since Storioni most likely was copying a similar Strad, I use the 1713 Strad form-board when building the 1795 Storioni model. I use my Leduc Guarneri form

**This past winter** we had an inquiry from a prospective client about a Cox violin she had seen at a dealer. She was very interested in that instrument but it turned out not to be available, so she hoped to find something similar in our shop inventory.

She had a partial description and the year the violin was made, but no opus number or previous owner's name, so we had to guess which instrument it could be and what might be similar to it. Her description suggested that it was built on Doug's "Modified Guarneri" form, giving us a place to start.

This led us to realize that while we keep detailed records on each instrument, we have not consistently recorded form names or established a comprehensive list of all the forms

to make many different late Guarneri models, all of which were most likely built on the same form-board in Del Gesù's shop.

The shape of the ribcage plays a big part in the feel and sound of the instrument. The form sets size and shape, determining how the instrument feels to the player.

The sound of an instrument is the product of wood quality, air volume, plate shape, arching, graduation, varnish, and set-up. The form fixes the volume and shape, though volume is also dependent on rib height and arching. Other things being equal, a larger instrument will have a darker tone color. But of course they are never equal and the making process involves adjustments at each step to build on or modify what has been done already. The success of an instrument is the harmonic melding of all these elements.



*The form in action*

Doug has used over the years. Since he has made instruments on a wide variety of forms, that was an invitation to dig around amongst the forms and to document as much as we can about each form.

The resulting list includes more than 65 forms dating from 1976 to 2016. Each now has an official name, and the data includes which earlier maker – if any – and which instrument – if any – inspired the form; the year it was made, which instrument was first made on that form, and a narrative describing the circumstances that led to its making. If it is no longer in use, we note the last instrument made on the form, when the last use was, and whether another form has replaced it.



*Earliest: Cox Violin #1, 1976*

## Some Highlights:

### Earliest and Most Recent

The earliest form is, of course, "Cox Violin #1," dated 1976. Only three instruments were made on the form: #12, #15 and #17. The most recent form is based on a 1610 Maggini made in 2014 for the Maggini project described in last year's edition of *The Scroll*.

### Most Instruments on One Form

Henryk Szeryng owned the "Leduc" Guarneri del Gesù violin, and brought it to the shop of J. Bradley Taylor for routine maintenance before a concert. This was in the

late 1970s, when Doug was head of the repair department and chief restorer.

Doug later created his 1992 Leduc form, based on his recollections plus the measurements and photographs in Peter Biddulph's book, *Giuseppe Guarneri del Gesù*. He has used the Leduc form for most of his late Guarneri models. These late instruments are an amazing display of the diversity and personality that can be made on the same form through variation of corners, arch, and *f*-holes. This pattern works well acoustically, has a strong personality, and is fun to build. The current count is 104 violins, with two more on the bench.

### Happy Accident: The 15 5/8" Viola

A friend showed Doug a small viola made by Richard Cartwright, an amateur maker who had worked with Marten Cornelissen in Northampton, Massachusetts. Although we know little of the maker and nothing of the model he used, Doug was intrigued by the instrument's small size and elegant proportions. He first used the form in 1989 to build Viola #134, now played by James Buswell. Doug set up the most recent, #912, set up on September 5, 2016, and there is one more on the bench that will be ready to play next year.

*Laurie Indenbaum*



*Most recent: Maggini 1610 form-board and matching template*

# Player Profiles: Sarah Frank & Lauren Nelson



Sarah Frank & 5-String #82, © Kaitlyn Raitz

**Sarah Frank** is a Canadian fiddler/singer-songwriter who finds her home in bluegrass, Irish, and Quebecois music. She has a Bachelor of Music in classical violin performance from McGill University. She works full time as a free-lance musician and member of The Bombadils, and in the Birds on a Wire String Quartet.

Drawing from the Canadian, American, and Celtic traditions, the Bombadils - Canadian maritimer Luke Fraser and prairie-girl Sarah Frank - share a love of folk songs and fiddle tunes. They pour the spirit of story-telling and kitchen parties into their own writing. Luke brings guitar, mandolin and home-grown east coast vocals in harmony with Sarah's singing, lyrical fiddle playing and claw-hammer banjo. Luke and Sarah perform as The Bombadils in a variety of formations including as a duo, or in larger settings with instrumentalists such as Kaitlyn Raitz, cello and Spencer Murray, flute. They have a new album as of September 2016 and a US and Canadian tour. Details can be found at [www.thebombadils.com](http://www.thebombadils.com).



The Bombadils

Violist **Lauren Nelson** appears as a chamber and orchestral musician on both modern and baroque viola throughout the U.S. and internationally. She is principal violist with Boston Baroque, and performs regularly with Grand Harmonie and Harvard Baroque Chamber Orchestra on historical viola. She is a member of many regional orchestras in the Greater Boston area on modern viola, but mostly enjoys programing interesting and exciting chamber music concerts with delicious hor'd'oeuvres and drinks.

Lauren believes that music has the power to reach everyone. Growing up in rural New Hampshire, she was a regular participant at the Apple Hill Center for Chamber Music where she learned how chamber music has the power to create lasting relationships between people from disparate backgrounds. Nowadays, she's building a career that combines performing, teaching and social action to make an impact on her community.

Lauren has been a regular artist at the Lake George Music Festival, collaborating with Andy Akiho, Philip Ying and Brendan Faegre. She has also worked extensively with members from the Juilliard, Brentano, Borromeo, Ying, Emerson and Apple Hill Quartets as well as performed in Jordan Hall, Carnegie Hall, The Kennedy Center and abroad. She has two cats, Blue and Jazz, whose bow holds leave much to be desired.

For more information, visit [www.laurennel.com](http://www.laurennel.com).



Lauren Nelson & Viola #453 © Kate L Photography

## From the Bench: Revisiting the 15" Viola

Demand continues to grow for small violas with a rich, dark, big-violasound. Aging violists are motivated to down-size, while violinists seek to become more versatile by adding viola to their résumé and often look for small violas. More and more people want a great viola sound in a small instrument.

In the 2006 edition of *The Scroll*, I wrote about an experimental asymmetric 15" viola model I was developing. The major design innovation was to shift the acoustic centerline of the instrument (neck and string placement) to the treble side at the neck, and to the bass side at the tailpiece. The effect I hoped for was easy left hand access to the upper positions and the instrument as a whole brought closer to the player's body. The string length is as short as normal strings will allow and the neck-to-body proportion is close to normal.

In late 2005, I abandoned my reluctance to build anything smaller than the 15-5/8" model that continues to work well for me. My work on smaller violin models made me think I could deal with the plate stiffness issues inherent in smaller outlines, and the continuing success of a large asymmetric viola model I developed years ago gave a direction for the basic design. I did not want to move too far from the basic principals of proportion, symmetry and balance essential to good instrument design. My Opus 573 viola was the result, achieving the goals I was working toward. It is a very successful small viola with a dark, rich sound. Recently I have made two more violas on that form. Opus 885 is made with red sycamore and Opus 905 is made of the more conventional maple.

The characteristic dark viola sound is largely the product of the air volume inside the viola. Volume can be maintained in a short instrument by increasing rib height or increasing width, but there comes a point where lack of proportion in these elements leads to a reduction in efficiency and balance in tone. More is not better if it is not working efficiently as part of the whole system. I still want to see how much each of these elements can be compromised and still maintain an overall balance. These violas appear noticeably asymmetrical, but the overall design maintains classic design principles and details.

Fig. 1: The dotted red lines indicate the center of the plates, the solid gray lines indicate the center line of the strings.



Viola 885, 15" Red Sycamore

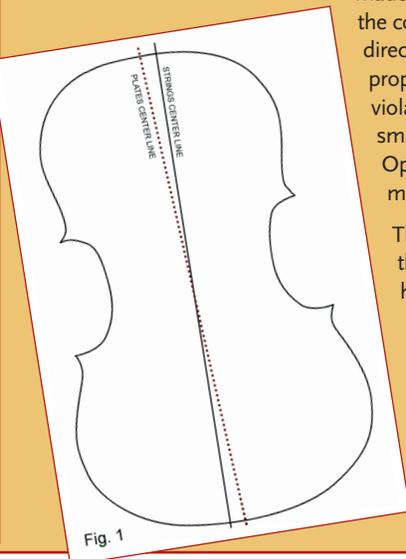


Fig. 1

## Instrument Showings

### BOSTON, 2016-2017

I will be bringing instruments to monthly Saturday office hours in Boston from September to May. These dates may be subject to change.

September 17, 2016	January 21, 2017
October 15	February 11
November 12	March 11
December 10	April 15
	May 13

You will find me in Room 308 on the 3rd floor of 295 Huntington Avenue at New England Conservatory.

Let us know if you would like to receive our Boston schedule emails, and check our website for date & venue updates.

### OTHER OPPORTUNITIES

My work can be seen at dealers of fine instruments in many cities. I travel occasionally and welcome the opportunity to meet people and show my work.

Visitors are always welcome at the studio in the hills of Southern Vermont. Call to be sure I will be available when you want to visit.

### ON THE WEB

Visit us on facebook at [www.facebook.com/violinmaker](http://www.facebook.com/violinmaker)

Visit our blog: [coxviolins.com/blog/](http://coxviolins.com/blog/)

We produce an email newsletter on no definite schedule. You can opt in via the website, [www.coxviolins.com](http://www.coxviolins.com).

The Scroll's purpose is to provide information and enjoyment to people interested in fine new instruments.

We welcome your inquiries and hope you'll tell us how we can be useful to you.

There are a limited number of scholarships for exceptional students who lack the resources to procure fine instruments. If you'd like more information about scholarships, let us know.

[www.coxviolins.com](http://www.coxviolins.com)

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1138 Sunset Lake Road  
Brattleboro, VT 05301



A wasp has just completed an internal inspection of Viola #912.

## Douglas Cox

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## What People Say

Such a lovely instrument! Such sweetness and resonance!

Uli Widmaier, Viola 863, Gaspar da Salò 165/g"

The look in my students' eyes when they hear my violin's sound is priceless, and inspires them to play their own instruments better. My violin continues to amaze me with its depth and I find myself unlocking new areas of sound and clarity daily. It truly is a joy to play.

Chloe Ross, Violin 462, "Vieuxtemps" Guarneri

I love my 5-string fiddle and I'm always eager to show it off. It is the most well-rounded 5-string I have played and it always makes me feel and sound like myself, whether I am playing a traditional fiddle tune or in a classical string quartet.

Sarah Frank, 5-String Violin 82

My future viola was there waiting for me. In addition to a well-rounded, sweet and complex sound, it also has a sweet *character*, sort of like an old friend one can always strike up a conversation with. I've grown very attached to it, and it has remained a source of great joy.

Zachary Evans, Viola 64, 16¾" Viola

To my surprise, I found one of the most knowledgeable and genuine people I have met in the luthier business. Gradually a clear favorite emerged. I could not leave the violin behind, I knew it was the one. Not only does the sound work well in various settings, but this modern instrument doesn't go completely crazy when you go from playing Mozart in the air-conditioned orchestra pit to playing Stevie Wonder at an outdoor wedding.

Melissa Wilmot Williams, Violin 592,  
"Koff" Vuillaume