

Introduction

What should a viola sound like? How can a player select a viola without a clear idea of what an ideal viola should sound like? How can a violinmaker set up and adjust a viola he has just made without a clear idea of viola sound and tone? How can a violinmaker select a model to base his own productions on without this knowledge?

How many people would criticize the tone of the Soil Stradivari violin in the hands of Menuhin or Perlman? History reveals the excellence of the violins of del Gesu in the hands of Paganini and Kriesler. How many would criticize the tone of Stradivari's Forma B cellos, in the hands of Rostropovich or duPre.

But what about the viola? Before Tertis and Primrose there were no soloists of repute or examples of good viola tone to follow. Even Primrose had criticisms of his own Guarnerius viola as stated in the Preface. The Richardson -Tertis viola never got off the ground, but at least Tertis brought attention to the problems of large violas. Primrose stated his belief that even attempts to describe the tone of a viola can be *extraordinarily difficult* (Dalton -p 45).

So where do we go from here? Etienne Vatelot, at the 1989 Violin Society of America competition and meeting stated that violinmakers should listen to music as much as possible, and attend as many concerts as possible. Today there are numerous recordings of violas with excellent tone, yet we know nothing about the viola used for the recording. A recording may have flaws in viola tone, such as a gravelly or fuzzy C. Yet the same viola in the hands of an accomplished player may sound superb, including a clear resonant C in live performance. A viola may sound superb in recordings, yet fail to produce the same result in a live performance. There are many things we cannot know, such as whether the instrument used had been adjusted sometime before the recording or concert or even whether another viola had been used. What about playability, as important as tone to the violist? This should be considered the first step in the evaluation of tone in violas for the maker as well as the player. The problems of playability and tone evaluation are discussed in Chapters 1 and 3.

The most valuable sources for the writer have been the availability of recordings and live performances. The writer is grateful for the availability of excellent violas brought by makers to the Viola Congresses as well as the performances of superb artists over the years (see Pounds, Riley). It is possible here to not only play on violas but to take a look at important features, which could affect viola tone. Even more important is the ability to hear each viola brought by makers to the Viola Congress played on by a great artist in sequence, while listening in a hall with reasonably good acoustics.

Hearing Roberto Diaz at the Seattle Viola Congress in 2002 as soloist with the Philharmonia Northwest orchestra playing the Viola Concerto for Viola, Op. 37 by Miklos Rozsa on a viola just over 16" was a remarkable experience for me. It was the most beautiful music that I had ever heard. The viola could always be heard above the orchestra and the emotional impact was great. Each note was articulated, clear and distinct, yet each note was expressive. His viola, a 1739 Camillus Camilli was copied by a contemporary luthier, Gabriel Kundert, and was played along with thirty other violas by Roberto Diaz earlier that afternoon, before the evening concert! It was in my opinion the

best viola, along with two others. This experience would lead to the production of my last cello after using the last wood I had, and future intended life long production of violas.

At the 2004 Viola Congress I was able to take measurements of Paul Coletti's 16 1/8" old Moennig viola, which I had admired on CD's and in his performances at the 2002 and 2004 Viola Congresses. Both the Moennig and Camilli violas had top plates higher than the 1676 Andrea Guarneri, (the Camilli having an arching that extended to near both ends of the plate) but the finding of C-bouts 93 mm long in the Moennig viola (the size of a del Gesu violin C-bout) raised the question I have asked others, including dealers and elite makers of today's violin establishment. Why should violists need a longer C-bout? I asked Paul Coletti whether the shorter C-bout could lead to a violist hitting the upper corner? He said no.

The 2005 Primrose Competition and Festival May 23 to May 28th at BYU in Provo, Utah was another landmark event. As a violinmaker I was interested primarily in how the violas sounded and hoped to develop a method for evaluating viola tone as a listener. I planned to rate each viola in all three rounds of the competition and then see how my evaluations of viola tone as a listener compared to the decisions of the judges. This experience would provide the basis for the methods of evaluating viola tone as a listener as well as presenting some of the problems in evaluating viola tone. I did not expect to hear the marvelous performances of one of Roberto Diaz's students who played on the same 1739 Camillus Camilli viola Roberto Diaz used for his magnificent performance at the 2002 Seattle Viola Congress. I see no need or reason to make a viola larger than 16 inches. The chapters to follow provide the rationale for this.

The 2006 Viola Congress in Montreal presented many fine examples of viola tone by artists playing on a variety of Brescian and Cremonese old violas as well as a few by modern makers. By far the most notable viola was in the hands of Kim Kashkashian at her recital June 11, 2006. Her viola, a Nicola Bergonzi viola of about 16 inches body length was in my opinion the greatest example of a "standard viola" that I had experienced, and Ms. Kashkashian agreed. She also gave consent for me to obtain measurements (see text and appendix C).

What is the origin of this "standard viola"? In my opinion Andrea Amati was the founder of not only the violin and cello, but also the standard viola. The Brothers Amati violas of 1615 and 1620, had the standard body length as well as the stop, and were no doubt based on a contralto Andrea Amati viola (see chapters 2 The History of the Viola - Introduction, and chapter 4 The Standard Viola).

I had played on an old Austrian viola, almost 17 inches body length, which I purchased from Rembert Wurlitzer in 1960. I had started making violas about fifteen years ago using a 16 1/2 inches Andrea Guarneri model. Realizing the difficulty in playing on the highest register of the A string, and cognizant of the fact that many string players are women, I wondered what would be the effect on tone and playability by reducing the body length of the viola from 16 1/2 inches to 16 1/4 inches (the body length of the Primrose, 1697 Andrea Guarneri viola), with reduced stop of 222 mm. and neck 148 mm. I found no difference in tone by reducing the body length but the violas with the smaller body length were a little easier to play as I had reported in the January (Part one) and February (Part two), 1993 *Journal of the Arizona Violinmakers Association*.

Recent research has led to a focus on the early Brothers Amati violas, as illustrated for the 1615 and 1620 violas which were 16 and 16 1/8 inches body length and

which had measurements for the stop comparable to those used by most makers today - 222 to 225 mm. Based on reviews of several other violas that had shortened C-bouts, such as the small da Salo, the undated Maggini and some of the Guadagnini and Testore violas, I have made all subsequent violas with C- bouts no longer than 93-95 mm. This simple procedure, by getting rid of the unnecessary extra space, lengthens the upper bout by about ¼ inch.

The width of the C-bout is also important, - 136 mm. to 140 mm. or so. I believe the Brothers Amati as well as the Stradivari violas had C-bouts too narrow. Another thing I have found important is that the arching of the top plate should be higher than even the 1676 Andrea Guarneri viola and should extend to near the ends of the plate. Arching as well as plate thickness are discussed in Chapter 7 below.

Finally, in matters even more controversial is my belief that Nicolo Amati had a corner on violin wood, since all other violinmakers died during the Plague. His students, including the Guarneris and Stradivari were very particular about selecting the right wood to be used. In Chapter 5 *Is it the Wood*, I reviewed the photographs in Herbert Goodkind's marvelous book for Stradivari's violins, cellos and violas, finding years when it appeared that the same wood was used. Chapter 6 presents the writer's concepts of arching and the methods for determining graduation of plates. All the maker's efforts can go down the drain by faulty adjustment. Adjustment is presented in Chapter 7. Chapter 3 *How to Evaluate Tone*, as a player and as a listener provides the writer's basis for determining the final adjustment.