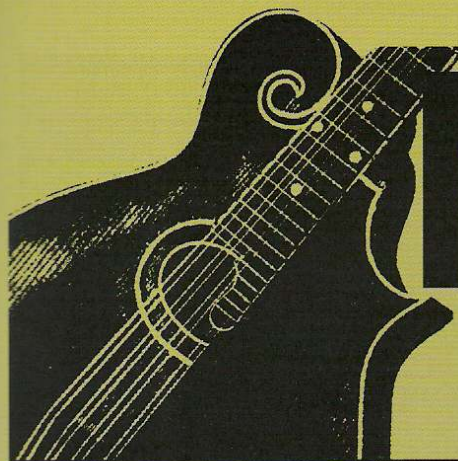


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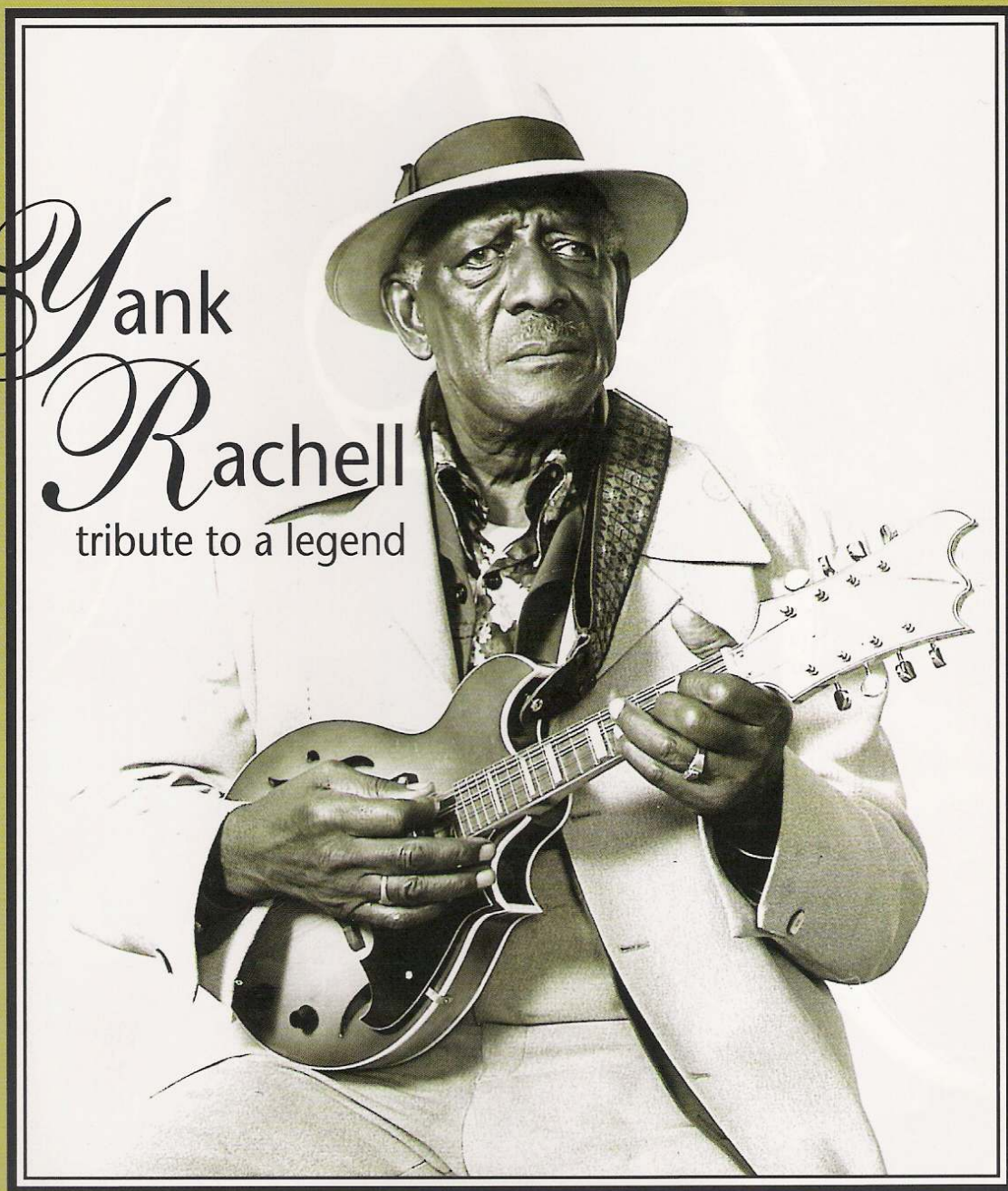


MANDOLIN

M · a · g · a · z · i · n · e

A quarterly magazine for mandolin players & enthusiasts.

Yank
Rachell
tribute to a legend



Inside: Builder Chris Standridge



the luthier's toolbox

by James Condino

Eleven New Luthiers

A few years ago, I applied to several graduate schools in architecture. I had built well over 125 instruments and felt that my portfolio was diverse and very strong. One of the schools responded rather candidly and told me my portfolio was weak and that all of the instruments in it had absolutely nothing to do with the study of architecture. Imagine my smile when I came across this story.

Bumping into your neighbors can lead to some interesting conversations. When luthier Stephen Marchione and the guy a few doors down the street, Rice University architecture instructor David Guthrie, started chatting it up they realized they had common ground. A friend of David's had just built a new building for the folks at Collings Guitars.

David had thought that designing an advanced production facility for an instrument manufacturer would make a great design studio project for his more senior students, but he didn't know anything about building instruments. A bit more conversation and Stephen was on board and the project was rolling. The basic template for the class was to design two instruments, an introductory simple one, a more complex, then design a production facility.

The first Friday of class, all 12 students were told to bring the following items to the studio:

- 1"x10"x24" western red cedar
- 1 machine head
- 1/8" dowel

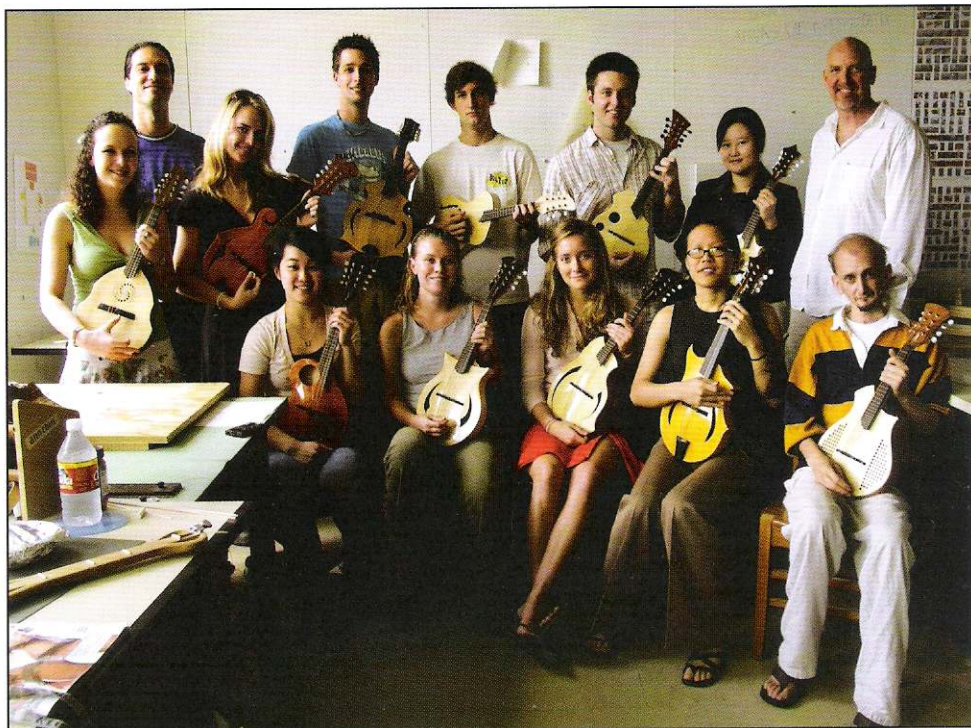
They were also given a link to a website that would lay the foundations of musical acoustics. Stephen laid out the basic parameters for a simple one-stringed instrument. He told them, "Make something and come back Monday." It was intended as a simple math problem.

Monday everyone showed up with a lot more than just a rack of Spam-can violins; they were pushing boundaries and getting into it. The students enjoyed it and went outside the ideas and shapes of this simple task. (See photo, second from bottom, page 22.) The response went so well that for the next project everyone wanted to build a whole instrument. David and Stephen chatted a bit. What about a guitar? No way too big, too complex. Violin? Too boxed in by tradition. What about a mandolin? Nice size, and there are a

number of commercial sources easily accessible for parts and materials. Done.

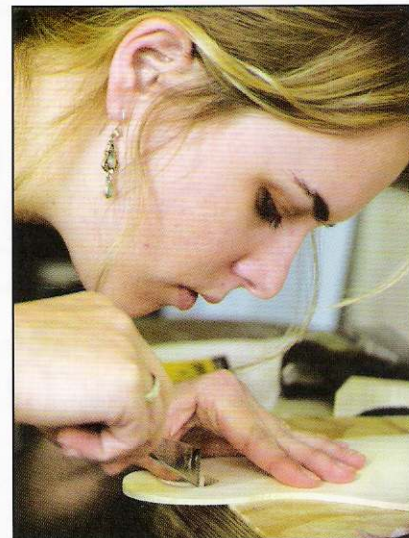
Stephen laid out the design parameters in the A5 and F5. This was as much about commercial design as it was about mandolins. The known mandolin specs allowed a non-negotiable fixed parameter. There was an initial fear from the students that this would restrict their creativity, but after doing analysis of some instruments, they began to see that most modern instrument's proportions are the embodiment of that scale and very precise in their respective proportionalities.

Most of the students were proficient in Computer Aided Design (CAD) drawing. That gave them technical prowess, but they still lacked a sense of real-world application. Stephen insisted that they all do 1:1 full-scale drawings by hand. The reports back from the first field trip to his studio were that he got pretty worked up over their drawings and let them have it, *"I need to be able to give these to my apprentice so they can build something! There isn't even a center line here!"* They got his point and things began to get interesting. Stephen's approach to it all was exactly like a master would evaluate an apprentice's work.





David told me, "Everything that matters to an architect was in this project — creativity, materiality, objective limitations, structural integrity, physics, proportion, beauty and cooperation." Stephen and David made a great team, each providing insight and application of two very different but complementary fields. The project was the embodiment of



of maximum span with minimum material. A similar expansion of the ideas in David's earlier book, *Cube*, the object here was to push the limits of design and still remain true to the original form of a mandolin.

After their traditional drawings passed Stephen's inspection, they were transferred to CAD, rendering an accurate digital draft of the intended final product. This came in handy when one of the students, Doug Shilo, used a Computer Numerical Control (CNC) machine in the architecture department lab to mill everyone's body mold out of construction foam. All the students had to produce a specific workboard and a number of jigs during the process.

A huge priority for David was that the studio had to be maintained in ship-shape order. Everything that was not necessary was removed and it had to be thoroughly cleaned every day. "Mess and disorder take over and disaster shows up in your work." This was four weeks into a 12-week semester and every minute counted. Inspiration came from all over the place.

Carving with sore joints and bandaged fingers, not one student ever complained to David throughout the entire semester.

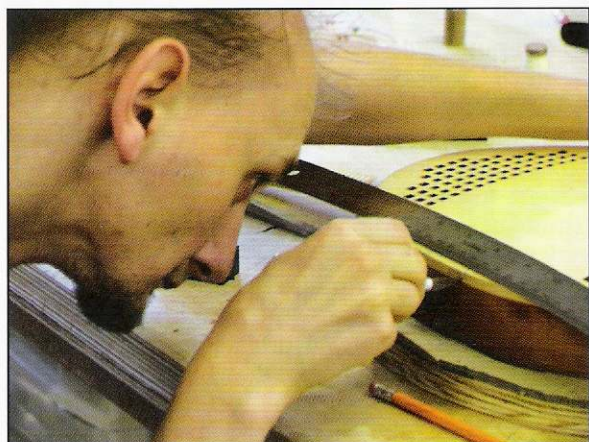
These were intended to be working mandolins, not just mandolin-shaped objects. For a seasoned luthier to design, build the jigs and infrastructure and crank out a finished new prototype instrument in nine weeks is a good pace. For a group of novices to pull this off is a testament to their enthusiasm, tenacity and the teaching skills of David and Stephen. They both told me stories of how Stephen would pack up all of his delicate specialized tools in a travel kit, bring them to class every day, and then pack them up and run back to his own studio to work on his instruments.

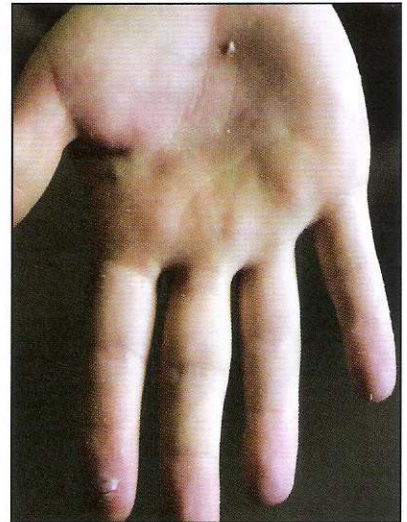
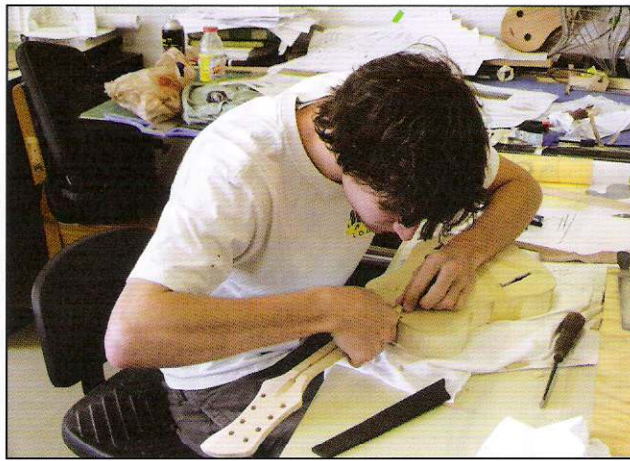
Once the word was out on campus, students and professors from all disciplines would come over and peek their heads into the studio to watch the excitement and wonder why their class wasn't this fun.

Eleven bold students produced 11 bold new mandolin designs, each reflecting their own personalities, yet all true to the core elements of the mandolin. None of the 11 students were mandolin players prior to the project's beginning — two of them had perfect pitch.

At the end of the year at Rice, there is a senior class competition. Every student is given an 8'x8' wall space to make a presentation.

Having the initial line drawings, CAD drafts, finished photographs and a background in design, all of the mandolin-project students were lined up in a presentation like the mandolin world has





never seen before. It was open to the public and was well received. Everyone brought their finished instruments and passed them around to inspect and play.

David said the music department turned up at the review, "100s of people arrived and it turned into a huge three-hour jam session."

This class was a one-time offering at Rice. David filmed the entire project. He has enough video and stills for a documentary and book and is looking for collaborators.

Where did everyone go with this? David relayed stories of two students going out on job interviews. After an unreceptive showing of their portfolios and school work they were presented with, "So... do you have anything else?" They both pulled out their new mandolins and got the job on the spot. He also told me that he recently got a card from one of the students that included a photo of the new electric bass she had just built. For David, the project has huge potential to take beyond the confines of just school and can be used as a framework to empower and build confidence.

Remember those folks who said my portfolio of instruments had nothing to do with architecture? Their letter also said my writing sample was weak. It arrived in the mail the same day that payment arrived from another source that published two of my articles.

See you next issue. ♪

James Condino builds the mandolin, guitar and double bass in Asheville, North Carolina. He built his first instrument in 1978 at the age of twelve and in the years since has worked solo, built for one of the large manufacturers, and taught lutherie since 1996 through his Cascade School of Lutherie. He has built 160 instruments, many of which can be viewed on his website, www.condino.com.

When not building instruments in the studio, he can be found field testing them on whitewater expeditions in the Grand Canyon and other wild areas.

Photos by David Guthrie

