Interview: Red Henry

by Joe Mendel

Red Henry has been playing bluegrass mandolin for many years with his family, wife Murphy & children, Casey & Chris. His main mandolin for many years has been Randy Wood # 1, Red was given Randy Wood # 3 as a gift by Murphy, purchased from the estate of Bill Monroe. When Red received it, it was fitted with a rosewood bridge, thinking that that was not the best, he put on an ebony bridge. It did not improve the tone, it sounded thin & lifeless. That episode caused Red to wonder if that was the reason Bill had a rosewood bridge on it, & got him thinking about using the bridge to help shape the sound of the mandolin.

JM: Hi Red, thanks for taking the time to tell about your mandolin bridge experiments. First, what was your reaction to receiving, Randy Wood #3?

RH: When Murphy gave me that mandolin, I was amazed and stunned. I had owned RW#1, and heard about Monroe's RW#3, for many years, but never imagined I'd own that one too.

JM: What did you not like about the sound of Randy Wood #3? By the way, owning one of Bill Monroe's mandolins is pretty cool.

RH: Right, I figure I get a few molecules of Bill every time I play it!

When Murphy gave me the mandolin it had not been played for perhaps 20 years, but in spite of that it immediately had terrific volume. However, the sound was pretty heavy toward the treble side. As I played it for the first few months it mellowed somewhat, but was still heavy toward the high end. So I decided to try a different bridge.

JM: What made you suspect the bridge might be part of the problem, or solution? Depending on how you look at it.

RH: Monroe had a put a rosewood adjustable bridge on it, and that turned out to be for a reason. The man had ears.

I had Randy Wood do a needed neck-reset soon after I got it, and he put one of his high-grade ebony adjustable bridges on it. I noticed that this pushed the mandolin's balance further toward the high end, so I put the rosewood bridge back on it and it mellowed back a bit. Then I thought, "Why not try a one-piece bridge, and as long as I'm doing that, why not try maple?" I reasoned that since Gibson used (and publicized) so many violin-like features on their mandolins (carved, arched tops and backs; elevated fingerboard and tailpiece; angled necks; f-hole tops), then perhaps I could take it one more step and try maple for the bridges. After all, Gibson did make maple bridges for some of their old guitars.

JM: When you began experimenting with different woods for bridges, did you choose the woods randomly, or was there some research put it into the choices?

RH: I just started with maple but tried every other wood I could find, to see what sounded best. I initially tried about 8 varieties of maple, then branched out into other woods. I must have tried about 30 woods overall, and I have two more woods here now to make bridges from. But so far, nothing has beat maple for overall response (tone and volume) on the majority of mandolins. Several woods have come close.

JM: How did you decide on the various wings & cut-outs and the placement of them for your bridges?

RH: I tried as many designs as I could think of. Nothing was out of question, and I tried to approach the problem without preconceptions. See my "bridge development" page for details: http://www.murphymethod.com/redbridge.html

JM: What effects do the various cut-outs and their placement, wings & one foot vs. two feet have one the sound?

RH: Speaking briefly, a well-designed winged bridge will yield the richest sound. (I played my H-2 mandola with its winged bridge one time for a mandolin builder, and he said, "That's the most beautiful thing I've ever heard!".

However, the holed bridges without wings yield greater volume and overall response, and can have quite good balance. A 6-hole bridge generally maximizes the high end, but an 11-hole bridge gives more low-end balance, especially on f-hole mandolins, and is a very reliable design, working well on nearly every mandolin I've tried. For very low-profile bridges, however (typically on flat-tops and tater-bugs) I still use a 6-hole design, and in any case on oval-hole instruments there's little if any difference between a 6-hole and an 11-hole bridge.

JM: What are some of the woods you have used?

RH: Well, let's see: many kinds of hard American maple and soft European maple, also, cherry, rosewood (Brazilian and Indian), mahogany, yew, locust, ebony, blackwood; bloodwood; two or three kinds of oak; plain and burl walnut; dogwood, lacewood, Osage orange, cornel, teak, persimmon, satinwood—those come to mind immediately, and I've tried probably about 10 or 12 more.

JM: How much difference does the type of wood make? For instance two bridges that are essentially identical, but for the type of wood?

RH: In each trial, I made several bridges of the same design from different woods, so I'd

be comparing apples to apples. Some woods were very disappointing (all rosewoods and walnuts, for example, turned out to have a weak sound), but some other woods stand out. Maple, cherry, and yew are usually excellent. Satinwood was good, but I only had enough of it for one bridge, so that's not a big sample. Mahogany, almost surprisingly, gives the richest low end, but it does not have a lot of treble and can be too "thunky" on a mandolin that's already well-balanced. Ebony, persimmon (which is American ebony), and blackwood all yield a similar mid-range sound that many people associate with Gibson mandolins—but I think that sound is not all due to the mandolins, but a lot of it's due to the ebony bridges they come with. Some builders and experimenters have found that a winged ebony bridge can sound really good.

By the way, many, many experiments by myself and others with bridge woods and designs, as well as hints for making your own bridges, are detailed on my bridge website: http://www.murphymethod.com/redbridge.html

JM: How important is having the bridge perfectly fit to the top?

RH: There is some debate about this. Some people want to almost polish the bridge to the top. But I have seen quite roughly-fit maple bridges sound GREAT the first time they were put on, from one end of the mandolin-quality scale to another—from a Gilchrist to a Rover, in fact. I think the bridge should be fit pretty well, but there's no need to get a fetish about it. The fit itself may be less important than for the bridge feet to be the right size, and with the right spacing, and in the right places. And, of course, these things can vary from one mandolin to another!

JM: What would your recommendations be if I had a mandolin that was overly dark sounding, as opposed to one that was overly bright?

RH: For very bassy mandolins, use hard American maple for the bridge. It works great, for example, on old Gibson A- and H-models, and in addition to providing balance, maple bridges almost always give more bell-like treble and a smoother, more resonant bass.

JM: What if my mandolin was too quiet, but I liked the tone, how could the volume be increased?

RH: Try an 11-hole maple bridge. This will usually maximize the volume, but keep in mind that the bridge can't produce more sound than the mandolin actually has in it.

JM: When you change one thing in the system, naturally it affects other things, have you been able to narrow down the best compromises for a given instrument to a manageable level?

RH: The 11-hole bridge design is a compromise that works best for me on the majority of mandolins I've tried. But I continue to experiment, and I certainly encourage others to do so as well.

JM: How did you choose the designs for the bridges? Did you consciously copy other bridges? Did you study the old Gibson bridges before you started making your own, or did the similar designs come about as result of trying to accomplish a similar outcome?

RH: I traced an old Gibson solid ebony bridge onto a strip of maple. That was my starting point. Then I began trying variations in bridge shape, cutouts, and foot size and position, beginning with that outline of a standard 4" wide Gibson A-model bridge. This size and resulting very light weight were serendipitous, because as numerous subsequent experiments have shown, many mandolins respond best with bridges between 4" and 4 ¼" wide (as opposed to conventional large, wide, and heavy adjustable bridges).

JM: Do you have any designs you'd like to try, but haven't yet? Would it be radically different from your current bridges?

RH: I have tried the major variations I could think of. Since every mandolin is so different, the 11-hole design which works well on most of them is what I'll stick with for the present.

JM: Are there any woods that you will be experimenting with soon? Or, that you'd like to try?

RH: Just yesterday, passing by where a tree had just been removed from a city park, I found an small unidentified piece of wood, actually orange in color, which is intriguing. That'll be the next wood I try.

JM: Have you considered experimenting with any other parts of the mandolin to shape the sound?

RH: There is a lot to do, and the trouble is that mandolins vary physically so much from one to another (more than fiddles, for example), so it may not be possible to find any universal rules. But I suspect that overly-large pegheads may soak up some of a mandolin's sound by a pendulum effect, so smaller pegheads may yield more response (this could be one of the reasons why the Gibson snake-heads have such a good reputation for sound).

Also, I've found that a very light mandolin may not necessarily sound better than a heavy one—it matters where the weight is located, and even a heavy top, like the one on RW3, may develop a very powerful sound in time. A heavy neck-shaft seems to increase sustain on some instruments, and it may occasionally increase the volume. I have experimented some with tailpieces, and it could be that in many instruments, the lighter the tailpiece, the better (again, check the very small tailpieces on the Gibson snakehead A-Juniors, mandolins, which are famous for their sound).

JM: Are there mandolins that you haven't been able to improve the sound of with different bridge designs?

RH: There have been two or three (out of 755 bridges I've made so far), mostly f-hole

mandolins which departed significantly from the Gibson form-factor and top-bracing that my bridges were developed on. However, I suspect that with some experimentation I could find a bridge design that they liked. But I can't remember a single oval-hole mandolin that didn't like a maple bridge.

JM: What are the most important factors in the design of a mandolin bridge?

RH: Speaking broadly, they seem to be: (1) bridge wood, (2) bridge weight, (3) bridge width, and (4) bridge outline and design.

JM: Thanks, again Red for taking the time to be interviewed, and talking about mandolins & your bridge designs. It's been a pleasure.

RH: I enjoy talking about the bridges. Thank you for the opportunity.

Red's bridge page has a lot of pictures of Red's bridges, as well as notes about those bridges & his experiments on and with them, and links to several other people's experiences with different bridge designs and materials. It is a very interesting read, even if you don't plan to try a new bridge on your mandolin. There is a lot of food for thought about why the bridges on our mandolins are the way they are, & possible improvements to them. Check Red's other webpage also:
http://www.murphymethod.com/red2.html
Some samples of how my mandolins sound with these maple bridges can be heard on the CDbaby page for my "Helton Creek" CD:
http://www.cdbaby.com/cd/redhenry