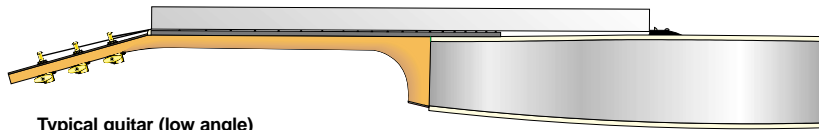


NECK AND NECK: HUMIDITY AND THE TAYLOR DIFFERENCE



Typical guitar (low angle)

Fig. 1

Some of you might be wondering, why is Taylor Guitars making such a big deal out of “humidity” these days, when it hardly was mentioned before?

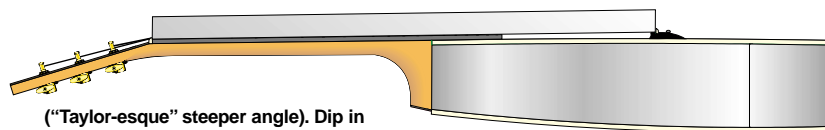
It shouldn't come as a surprise that people have been aware of the effects of drying on fine furniture and other quality wood products for a long time (hence the numerous oils and polishes on the market). But, it *might* surprise you to know that pianists, violinists, and other players of wood instruments dealt with the humidification issue centuries before the advent of the modern soundhole humidifier.

One old-time method for maintaining proper moisture levels called for placing sliced apples or potatoes in the instrument case (I still come across people who do this, and occasionally enjoy a snack while protecting their valuable goods). Unfortunately, many players of the past were not into fruits-and-vegetables, and ended up with the all-too-common “vintage” instrument, complete with cracks.

Today, of course, there are more and *better* solid-wood acoustic guitars on the market than ever, and many players are just as prudent as their forerunners when it comes to caring for their instruments. Some people, however, are under the mistaken impression that they need to take “special” precautions with their

Taylors. I occasionally hear that Taylors are “lightly built” or “delicate,” as though humidity, or the lack thereof, affects only Taylor guitars. Being a Taylor “insider,” and a guitar builder myself, I can assure you that is entirely untrue.

Over the years, our persistent



(“Taylor-esque” steeper angle). Dip in front of bridge and bump behind bridge. Notice the straight edge touching the top of the bridge.

Fig. 2

emphasis on humidification, and our ongoing efforts to educate guitarists about it, have led some to conclude that Taylors are structurally less sound than other guitars. This is partly the result of our conscious decision, several years ago, to be the ambassadors of humidification for the sake of *all* acoustic guitars (indeed, we get letters from non-Taylor owners thanking us for “saving” their guitars). The sheer number of available humidifying products indicates a real *need* for such care, no matter *who* makes the guitar. Nevertheless, some continue to see this as a “Taylor problem.” When you consider that the Dampit brand of soundhole humidifier came into being around 1967, but that few people heard of them until we started the humidity ball rolling in the ‘80s, you

begin to see how easy it is to make the connection.

The fact is, Taylor guitars are built to be just as tough as other high-end brands, and are more heavy-duty than others. Generally, we use the same woods (frequently, from the same trees, purchased from the same suppliers); kiln-dry it; and build guitars at the same temperature/humidity ratings as other fine guitar makers.

Naturally, if you keep your Taylor humidified to factory recommendations,

such comparisons become moot, anyway. And, because older instruments stabilize over the years (instruments 10 years and older do not react as soon or as much to temperature/humidity swings as do newer ones), those of you with mature guitars have less to worry about. Nonetheless, I feel compelled to set the record straight regarding acoustic guitars and their natural reactions to adverse climatic conditions.

Occasionally, I field the question, “Why do my Taylors act up during the dry season, and my others don't?” What might make Taylor guitars *appear* more sensitive to humidity has nothing to do with the woods thickness, it's processing, or the durability of the materials. It has to do with the way the instrument is constructed. Ironically, the same things



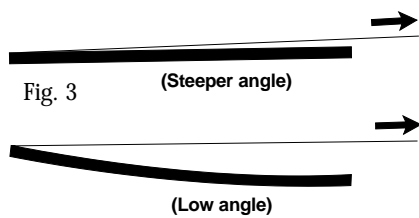
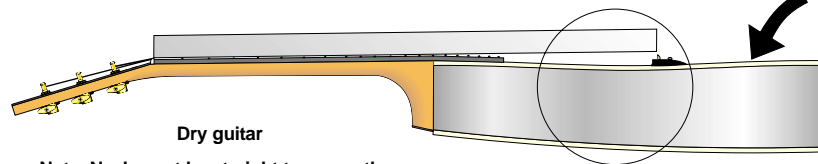


Fig. 3



Note: Neck must be straight to gauge these discrepancies correctly.

Fig. 4

that might attract you to Taylor guitars in the first place provide a direct connection to their apparent “sensitivity” to dryness — namely, sleek necks, low action, excellent tone, and so on.

Crucial to making an acoustic guitar “tick” is the neck angle, or the pitch (slope) of the neck relative to the body. For this tech sheet, we’ll define a “low neck angle” as a low degree of neck-to-body pitch, and a “steeper neck angle” as one with a higher, more pronounced (“Taylor-esque”) neck-to-body pitch. Most guitars, electrics included, have low neck angle — a pitch that ranges from one to two degrees (see illustration, figure 1). Traditionally, these neck angles tend to be inconsistent and a bit low for our taste. (If your Taylor guitar seems to match this description, it might need a neck reset.)

On acoustic instruments, the degree of pitch often determines the longevity of the guitar, strength-wise. A low neck angle leaves a guitar vulnerable to string tension, which can pull the guitar together and cause it to cave in. This is especially true when a low neck angle combines with high action, because the higher the strings rise above the fretboard, the more leverage they have to pull the neck and body

together (see illustration, figure 3).

Years ago, Bob Taylor decided to make guitars with a steeper neck angle than tradition dictated (see illustration, figure 2). We continue to build guitars with the neck angle set at a “sweet spot” — steep enough to neutralize (as much

as possible) the tug of the string tension on the neck and body, but not so steep as to create problems associated with low action. You could say that we have pushed the limit of how steep a neck angle can be for the sake of a stronger, better-playing, better-feeling instrument (if you are a fan of Taylor guitars, the sound speaks for itself).

As you might imagine, a steeper neck angle, combined with our typically lower action, leaves little room for the top to drop from dryness. With less “play,” or margin for fluctuation, a sinking top will bring the strings too close to the fretboard (see illustration, figure 4), causing buzzing and occasional dead notes, particularly in the upper register.

THIS IS THE KEY TO UNDERSTANDING WHY YOUR TAYLOR WILL EXHIBIT THE ADVERSE EFFECTS OF DRYING BEFORE OTHER HIGH-END ACOUSTICS: IT IS PRECISELY CONSTRUCTED WITH A NECK ANGLE THAT ENSURES OPTIMAL PERFORMANCE, AND AS SOON AS THAT ANGLE IS COMPROMISED BY DRYNESS, IT WILL LET YOU KNOW, USUALLY BEFORE ANY SERIOUS DAMAGE CAN OCCUR.

In a real sense, Taylor guitars are great “hygrometers,” because they often are the first among their peers to cry out

for water when dehydration starts setting in. This is why someone might conclude that his or her Taylor is “the only one giving me problems.” What that person might not realize is that his *other* guitars are not far behind in terms of dryness-related problems, and are equally in danger of cracking. While these other solid-wood instruments might *seem* okay, particularly in terms of playability, *the dryness is affecting them*, often without the owner being aware of it. What’s especially unfortunate is that the tops probably have already sunk, possibly to the point of cracking, without giving any external warning signs. (It takes a trained eye to notice that a great-playing guitar is actually dried out.)

The underlying message in all this, of course, is simply to keep your guitar(s) humidified as needed. For essentially the same reason you maintain proper oil levels in your vehicle — to keep it running smoothly — you should maintain proper moisture levels to ensure that your solid-wood instruments continue to play their best. I probably have written enough on that subject to drive everyone crazy, so I will leave you to refer to older issues of *Wood&Steel* and other tech sheets for specific information on the subject.

Just remember that, as odd as it might seem, less-expensive instruments usually require less care, and can even be relatively impervious to weather-related problems. That’s because they frequently are made of laminates, or multiple layers of solid woods held together with multiple layers of glue — a type of construction that results in a very strong, stable instrument. Tonally, however, they do not share the reputation of solid-wood instruments. This is something to consider when in the market for a new acoustic guitar.

by Terry Myers

