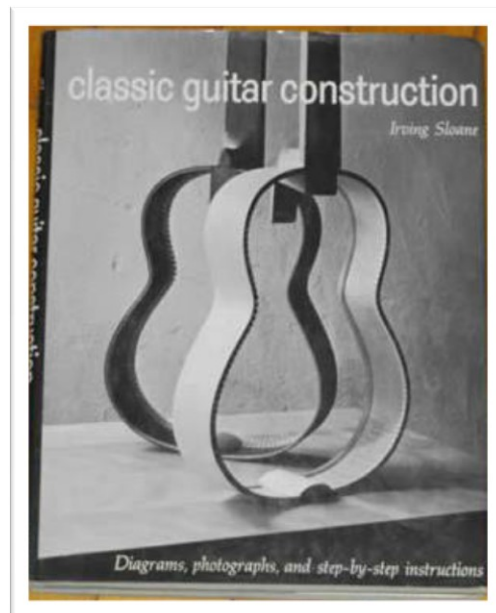


## The Story of Bourgeois Guitars

Known for tonal excellence, meticulous craftsmanship, and top-notch materials, played by six-string luminaries such as Bryan Sutton, Ricky Skaggs, Sean Watkins, Doc Watson, Ray LaMontagne and countless professional and non-professional enthusiasts, Bourgeois guitars have played a prominent role in the American steel-string guitar renaissance for more than two decades, helping shape acoustic music's most recent rise in popularity. What makes Bourgeois guitars unique? Why do they sound the way they do? How did Dana Bourgeois evolve from a guitar-crazy teenager in the 1970's to become a recognized authority on tonewoods and instrument design? Let's have a look at the instruments' history, explore the concepts behind their designs, and learn how they're built.

### In the Beginning

Dana Bourgeois' involvement with guitars predates by many years the company that carries his name. His work has, in fact, enriched the steel-string guitar world for almost 40 years. Although Bourgeois began playing guitar shortly after seeing the Beatles' historic performances on *The Ed Sullivan Show*, his journey with the craft of lutherie began in earnest while attending Maine's Bowdoin College in the early '70s. After devouring Irving Sloan's landmark book *Classic Guitar Construction*, Dana figured he'd give it a shot in his dorm room. "My grandfather was a machinist, and my father was an amateur wood worker, and between



Irving Sloan's "Classic Guitar Construction"



the two of them, I received enough help to actually build a guitar,” he remembers.

Clearly, Dana had found his passion. By 1977, he had established a one-man shop in Brunswick, Maine, which soon led to his first commission for a hand-built guitar. “From the mid-’70s to mid-’80s,” he says, “my bread and butter was

repair and restoration, but I never stopped building guitars.”

## The Schoenberg/Martin Connection

In 1980, Dana hired the young fingerstyle and ragtime guitarist Eric Schoenberg to play at a local folk club that he managed. “Eric brought along a couple of knock-out vintage guitars, and his playing really opened my ear as to what they were all about.” Dana soon discovered he’d



Dana Bourgeois & Eric Schoenberg

found a kindred spirit in Schoenberg’s passion for guitars and guitar design. Before long, Schoenberg started sending vintage guitars from his Cambridge store, The Music Emporium, for repair and set up. Recognizing the unique tonal qualities of many of these guitars, and in particular those of original, pre-war Martin OMs, Dana began incorporating some of their design elements into his own building.

## The Minimal Cutaway

“Eric got interested in the idea of putting a cutaway on an OM, so I built a couple of those,” says Dana. “He originally wanted a Selmer-style cutaway, having an extremely sharp initial bend followed by a straight line to the body. At the time I didn’t know how to make such a sharp bend, and ended up breaking a few sets of wood before settling on a rounder, and to my eye, more aesthetically pleasing shape.” Bourgeois and Schoenberg theorized that a cutaway of this style would minimally alter the size and symmetry of the top and air cavity, therefore causing negligible acoustical impact on the function of the OM guitar that they hoped to emulate. Their idea worked so well that the prototype built by Dana in the early ’80s, and its eventual use on the Schoenberg Soloist, inspired a class of cutaway now considered an industry standard and used on countless makes and models of guitars.





## Return of the Orchestra Model

Today, OM-style guitars are readily available from many manufacturers, at virtually every price level, but this wasn't so when Bourgeois

and Schoenberg began collaborating. Martin had introduced the original OMs between 1929 and 1933, and reissued the highly decorated OM-45 through its custom shop just before Bourgeois and Schoenberg met. At that time, however, no major maker offered the OM in a regular production version.

Bourgeois and Schoenberg knew they were onto something, and in 1984 they approached C.F. Martin and Co. with an idea for a collaborative effort. The duo would supply most of the woods, Dana would hand-voice every guitar's top, and Martin would assemble the instruments. The resulting instruments, promoted by Schoenberg Guitars, helped initiate a new generation of players to the uniquely versatile OM, leading to the reintroduction of the OM model into Martin's own regular line and the eventual re-issue of the model by countless other manufacturers and individual makers.

Today, the OM is one of the most sought-after steel string guitars, perhaps second in popularity only to the dreadnought.



## Reintroducing Adirondack Spruce

Although creating an OM-style guitar for contemporary players was Dana's primary focus during this time, his interest also evolved in other areas. In the early '80s he was one of the first of the contemporary builders to use Adirondack spruce



for the tops of many of his instruments. Adirondack was the topwood of choice for guitars built by premium American makers in the peak vintage years of the

1930s and '40s. Also known as Red spruce, the eastern species had become severely over-harvested by the end of the Second World War. Learning that Maine held some of the largest remaining stands of Red spruce, Dana independently processed some of the first Adirondack spruce guitar tops the industry had seen in nearly forty years. No longer considered suitable only for 2x4s, premium guitar-grade Red spruce now commands some of the highest log prices of any domestic woods, and Adirondack spruce is the soundboard of choice for thousands of high quality guitars made by dozens of builders.

## The Dreadnought's Allure

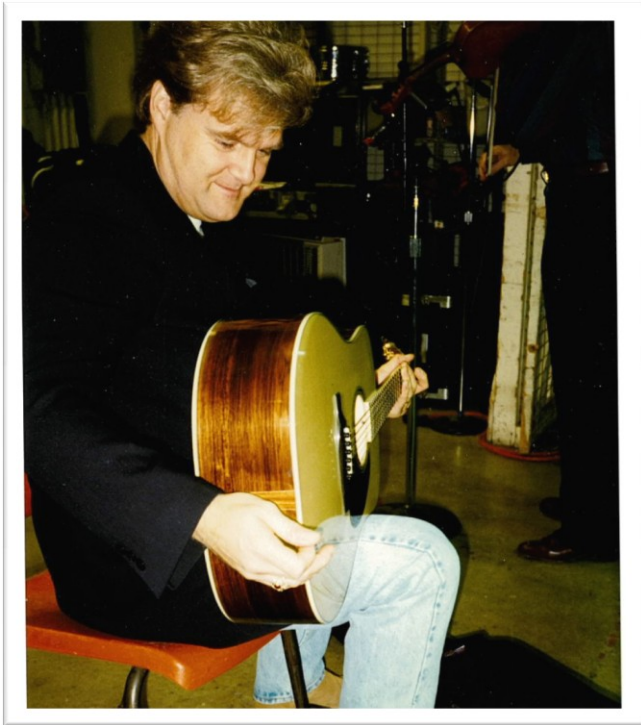


Bryan Sutton & Ricky Skaggs

During Dana's tenure with Schoenberg Guitars, he met and became friendly with flatpicking superstar Tony Rice. "I used to go to Tony's shows and show him my latest dreadnoughts," Dana remembers. "Tony usually gave my guitars a good test drive and graciously let me play his famous D-28. His feedback was always polite, though not always encouraging."

After a chance encounter with a Bourgeois' OM, Tony Rice suggested that Dana try making his dreadnoughts sound more like his OMs, explaining that flatpickers need a balanced sound, though without sacrificing power and volume. "It was clear that flatpicking technique had progressed way beyond playing G-runs in every capo position, and had begun to resemble jazz technique," Dana says. Players like Tony, Russ Barenberg, Mark O'Connor and Norman Blake used every note on the fretboard."

Dana accepted Rice's challenge and set out to build a balanced dreadnought, spending much of the next decade experimenting with nearly every element he could think of including woods, bracing, finishing, construction techniques, tuners, truss rods.



Ricky Skaggs

During that time, he lost contact with Tony but continued building prototypes without the guitarist's feedback. By the late 1990s, a young Bryan Sutton stumbled across Dana's guitars in Nashville and burst onto the bluegrass scene playing a Bourgeois Slope shouldered Dreadnought that he dubbed "The Banjo Killer", and a Bourgeois D-150 Dreadnought, convincingly

demonstrating that Dana had more than met Tony's challenge. A Ricky Skaggs Signature Model Dreadnought soon followed, and a new direction for Bourgeois guitars was launched. The influence of Sutton and Skaggs helped introduce the Bourgeois Dreadnought to a new generation of bluegrass players, eventually establishing the instrument as a standard option for serious flatpickers.



## **Bourgeois Guitars Founded**

During the late '80s Bourgeois consulted with Gibson while the company was opening its dedicated acoustic guitar manufacturing facility in Bozeman, Montana. Later, he built several prototypes for a proposed line of acoustic guitars for Paul Reed Smith Guitars, a project that was shelved though reintroduced nearly 20 years later in significantly different form.



Eventually, Dana decided it was time to go out on his own, leading to the founding of Bourgeois Guitars in 1992. Setting up shop in Lewiston, Maine, Dana augmented his own talents with those of a small team of craftsmen, a number of whom now produce guitars under their own names. Having a team of talented builders allowed Bourgeois to apply the innovative theories

and techniques he'd developed over the last decade.

## **Bourgeois'**

### **Production Method**

Now in a small-scale shop, Dana confronted a challenge: How does a production shop, even a small one, match the quality of an individual master luthier? In hindsight, Dana's solution seems simple.



**Drew Heinonen**

Operations requiring the highest level of precision, such as fret slotting, bridge shaping, saddle placement, inlays, etc., are executed using CNCs--computer controlled milling machines. Bodies and necks are hand-assembled and hand-finished by teams of highly skilled artisans, jointly responsible for overlapping operations. Tasks critical to the identity of an individual guitar, such as wood selection, top and back thicknessing, individual voicing, and setup are either executed or approved by Bourgeois himself.

Applied to this day, Dana's approach insures the level of consistency and predictability required by contemporary players, while allowing each guitar to realize its highest potential as a unique, individually created instrument. "It quickly became apparent that a guy who installs frets every day can do the job more



**Dana Bourgeois**

capable of rivaling the work of a master luthier.

competently than someone who works with frets only a few times each month. And the same goes with finishing, binding, etc.” reports Dana.

The overwhelmingly positive response from today’s demanding, sophisticated players removed the possibility that Dana simply got lucky a few times, and confirmed his vision of a production shop



## Voicing the Steel String Guitar

Perhaps Bourgeois' most significant contribution to the craft of lutherie is his method of voicing, which has been widely disseminated through various publications, lectures and public demonstrations, and taught to younger generations of luthiers at several guitarmaking schools.



In a nutshell, Bourgeois builds tops and backs to strict standards of cross-grain and long grain stiffness, while simultaneously teasing out the widest possible range of tap tones. In the process, wood is carefully selected and thickened for each individual guitar. At different points in the brace shaping process, flexibility is altered while preserving desirable resonance, and at other points flexibility is maintained while new resonances are generated. A team approach is employed throughout the voicing process, with considerable communication between participants, allowing for Dana's approval at several critical checkpoints. Bourgeois' method helps insure the high level of responsiveness and string-to-string, note-to-note balance that is the hallmark of his guitars, while showcasing the personalities of individual tonewoods.



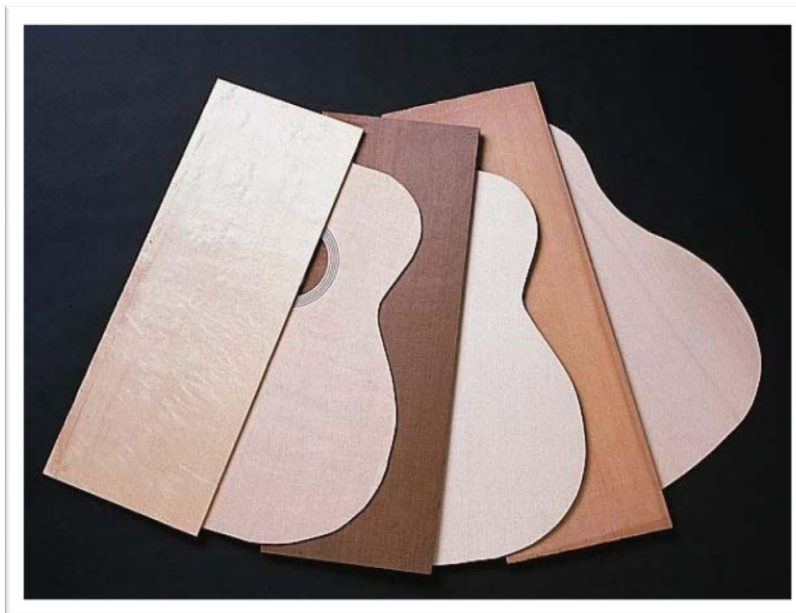
Part of Dana's approach was informed by an unlikely source: "I started reading about high-end marimba makers. These guys tune the fundamental note and the first three harmonics of each wooden bar," he explains. "I used to think that pitch always increased whenever wood was removed, but it turns out that you can raise or lower harmonic pitches by changing the length or width of the bar, by altering the scoop, or manipulating the undercutting of the ends, and so on. I started looking at a marimba key, and I thought, 'Aha. That's really just a scalloped brace!'"

Over the years, Dana has published a number of articles on the subject of voicing in *American Lutherie*, the publication of the Guild of American Luthiers. Through his writing, lectures, demonstrations and teaching, many younger luthiers have been influenced by Dana's method and techniques.

## The Sound of Wood

Bourgeois has put considerable thought into the design details of his guitars, creating a framework that delivers a consistent signature voice. Where does his use of a wide variety of beautiful tonewoods fit into the formula?

He maintains that, without question, wood selection has a direct impact on a guitar's individual tonal signature. "I try to match up the woods with the function of the guitar," he explains, quickly dispelling the idea that there is a magic bullet that will be "best" for every guitar and every player.



For example, while Adirondack spruce may make the ideal top for flatpicked dreadnoughts and guitars requiring sufficient "headroom" for aggressive playing, other playing styles present different demands. Dana often prefers lighter-weight German or Italian spruce for guitars that will primarily be played fingerstyle, additionally preferring

Italian spruce for a player with a lighter touch and German for a player with a more robust style.

And while individual species can have a great effect on dynamics and response, within each species exists a considerable range of nuance that can be applied selectively to the benefit of a specific model, to complement a specific selection of back, or perhaps to enhance a certain playing style. For example, beyond selection of species, a lighter, more flexible example of an Adirondack top might be Dana's choice for a player who often uses a flatpick but sometimes plays fingerstyle.

Armed with an intimate understanding that appearance is rarely a reliable indicator of tone, Bourgeois has always been a strong advocate of selecting wood primarily for tonal optimization, and secondarily for visual aesthetics.

Dana's articles on tonewoods in *Acoustic Guitar* and *American Lutherie* have brought him wide recognition as a leading authority on the topic. "People have even asked my advice on tonewood selection when commissioning orders from other luthiers," he says, adding his recommendation to trust the opinion of the guitar maker over other pre-conceived opinions.

## Architecture & Engineering



So what gives Bourgeois guitars their unfailingly balanced tone and distinctive voice? As with all instruments, there's no single answer, but several design elements contribute to the sum of the parts. One thing is for sure: while many Bourgeois models may look a lot like vintage instruments, they are far from replicas.



## A Different Neck Joint

Perhaps the most radical departure from the guitars that first inspired Dana is his use of necks that are bolted to the body, rather than employing a traditional dovetailed joint. “I started thinking about making a production-friendly guitar, and the bolt-on neck just made sense,” he says. “If a neck is rigid and the joint is sound, the manner of attachment turns out to be of little significance.”



Bolt-on necks are frequently praised for their easy adjustability as a guitar ages, but they also allow for a great degree of precision and custom-fitting in the manufacturing process, areas that are crucial if consistent tone and playability are part of the goal. “The traditional method of neck attachment allows for a variety of saddle and bridge heights, and this is determined after the neck has been set,” notes Bourgeois. “Because bridge and saddle height have a direct effect on tone production, we control that element by executing a rough and a final neck set at different points in the assembly process. And if we ever get it wrong, we can easily tweak the neck set again *after* string-up.”

### Easy Reset

While many makers bolt the neck but glue the fretboard extension to the top, Bourgeois guitars use bolts for both neck *and* fretboard extension, allowing complete removal of the neck with nothing but a set of hex keys. Noting that even

solid body electrics sometimes need neck resets, Dana anticipates that all acoustics will eventually require this traditionally arduous adjustment. Having one of the easiest necks on the planet to reset is a benefit even to secondhand owners of a Bourgeois guitar

### **A Truss Rod and Then Some**



Bourgeois' use of a double-action truss rod represents an additional departure from tradition. After considerable experimentation he settled on a model fabricated entirely from steel and of similar weight and resonance to the non-adjustable T-bars commonly used 70 years ago. Still, Dana noticed that though the neck/truss rod system can be adjusted into any desirable shape, an adjustable neck, when strung to pitch, is still more flexible than one reinforced with a T-bar. The problem was solved by addition of graphite bars--a strong, light,

space-age material also used on America's Cup racing yachts and Stealth aircraft--on either side of the truss rod. As is the case with the old T-bars, additional rigidity



increases clarity, responsiveness and sustain throughout the entire register, an assertion easily demonstrated by one-on-one comparison of removable necks.

### **Scalloped and Non-scalloped Bracing**

Bourgeois' approach to bracing is a major factor in the overall character of his guitars. Having studied countless pre-war era vintage guitars, Dana has as thorough an understanding of bracing patterns and shapes as anyone. And while he has great respect for tradition, he's found certain bracing adjustments that improve balance and help new guitars sound already broken-in.

Dana believes that tops tend to "loosen up" in the first few years of life, in response to 250 lbs. or so of string loading, and this has the effect of increasing boominess—otherwise described as a loss of focus in the bottom end. Years later, the top stretches to its limit and permanently sets in a distorted condition. Permanent distortion re-stiffens the top, causing high frequencies to open up and clarify and the bottom end to tighten and re-focus. "After 60 or 70 years you finally get a truly balanced and open-sounding guitar.

“I’ve found that fully scalloped dreadnoughts can sound boomy right out of the box,” he says. Because a boomy response won’t correct itself for quite some time, Bourgeois’ solution is scalloping only the bass side of the X-brace, leaving the treble side full and in a tapered shape. The result is a rich, but well-defined, bottom end, and strong, singing highs. Dana arrived upon this design feature after exploring Tony Rice’s suggestion that he try making his dreadnoughts sound more like his OM’s. The results were successful enough to impress the likes of Doc Watson, Bryan Sutton, Ricky Skaggs, Dan Tyminski, Ron Block, Keith Sewell, Bob Minner, Scott Fore, Scott Nygaard, Courtney Hartman, and countless other high-level flatpickers.

While the half-scalloped X-brace works wonderfully with the dreadnought and other large guitars, boomy tone is never a problem with smaller guitars. True to his philosophy that one size does *not* fit all, Bourgeois uses this half-scalloped bracing concept on larger guitars, which, besides standard dreadnoughts, include the slope-shoulder dreadnought, Small Jumbo, and Jumbo Orchestra (JOM) models. OM’s and smaller guitars get a more standard, symmetrically scalloped bracing pattern, because their reduced top surface and air cavity tends to promote a more naturally balanced voice.



## The Orchestra Model Lives On

Given the influence of the vintage Martin OM, introduced to him more than thirty years ago by Eric Schoenberg, it's no surprise that Dana still considers this the holy grail of guitar types. "With its unique combination of balance, responsiveness, tonal complexity and clarity, the OM became my Platonic ideal, my idea of what every steel string guitar ought to sound like," he says. "If you get a good one, or even an average one, you can fingerpick it, flatpick it, play bottleneck, whatever—any musical style sounds good." Through Tony Rice's influence, he realized that the best dreadnoughts share similar qualities, and can do so without losing their identity as dreadnoughts. "In many ways, I've applied this concept to every model I make. I think of them all as different sized OM's," says Dana. "Balance, responsiveness, tonal complexity and clarity: This is what I want out of every guitar."



## Musical Tools

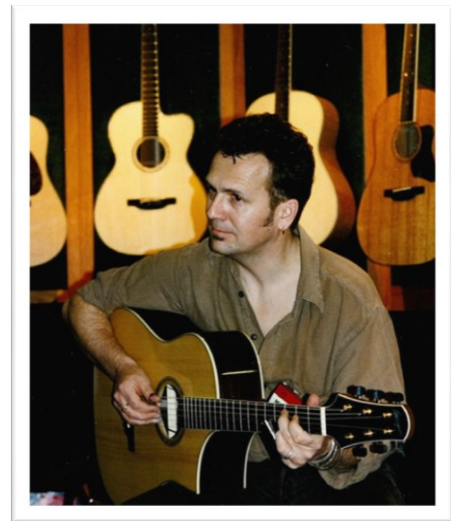


Bryan Sutton, Courtney Hartman, Keith Sewell and Bob Minner. IBMA

In a field where emphasis is often placed on duplicating classic designs, Bourgeois guitars stand out for their innovative construction and for original decorative motifs, inspired by, as opposed to being copied

from, classic design. But none of this would matter if the results weren't welcomed by discerning guitarists.

Working with and listening to the needs of virtuoso players since his early days of building has paid off for Bourgeois, and today he counts many of acoustic music's finest players among his customers.

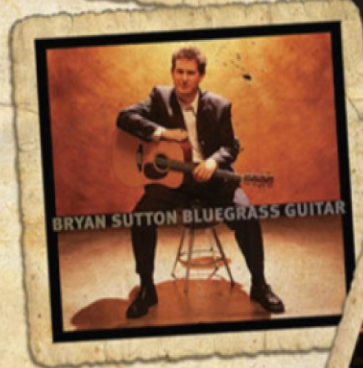


Martin Simpson



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**Bourgeois**  
Guitars



“One of the main things that drew me to Bourgeois guitars was their versatility in any situation I’m in,” says Bob Minner, who as a member of Tim McGraw’s band needs to cover a wide range

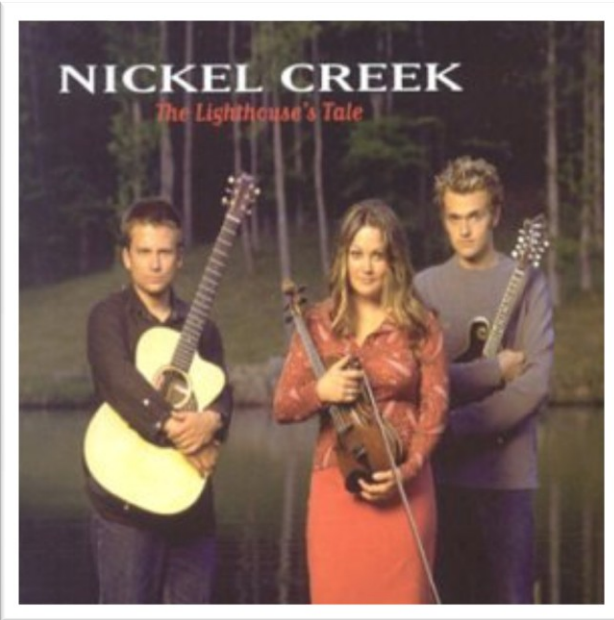
of guitar styles. “I also appreciate the fact that Dana only makes acoustic guitars. He has one vision and one passion, which is to build the best possible guitar out of the best possible materials.” 2002 National Flatpicking champion Scott Fore concurs: “Dana’s guitars always feel and sound *just perfect* every time I play them. He was the first builder I encountered that gave me this feeling. It doesn’t matter which of my Bourgeois



Wendy & Keith Sewell



guitars I'm playing; I never wish I was playing something else.”



Sean Watkins, Sara Watkins & Chris Thile

And while Dana owes much of his acclaim to flatpickers, the sound and versatility of his guitars is also appreciated by players who venture beyond playing with a plectrum. For instance, fellow New Englander Harvey Reid splits his time between fingerstyle and flatpicking. “My main guitar for many years has been a Bourgeois JOMC,” he explains. “I am

not the kind of guy who can travel with 12 guitars, so it makes sense to have a strong but smaller guitar so I can play it gently with bare fingers and get a good sound, but I can also bash it a bit for rhythm and snap some strings for blues.”

## Aged Tone Guitars

Dana’s drive to innovate continues to this day, and was most recently evidenced in 2012, with the introduction of the Aged Tone line of guitars. Several years earlier, he had begun experimenting with thinner, harder finishes, hide glue, alternate species of woods and a variety of



Ricky Skaggs



construction methods in an attempt to shave off years of “breaking in”—the transformational effect that ageing and playing has on a new guitar.



Courtney Hartman

One especially successful prototype ended up in the capable hands of flatpicker Courtney Hartman, guitarist for the band Della Mae and occasional duet partner of Bryan Sutton.

Dana’s quest to replicate the rich, responsive tone of Hartman’s guitar led him to experiment with Adirondack spruce tops specially treated by a process called *torrefaction*, which involves heating the wood in an oxygen-free environment. Torrefaction accelerates the natural aging process, promoting vintage-like responsiveness and expansive tonal qualities in right-out-of-the-box instruments.



In addition, Bourgeois devised a new, hard and extremely thin finish, which, although it's based on modern cyanoacrylate, exhibits desirable properties achieved by traditional nitrocellulose finishes after 50+ years of curing, including increased hardness, lower mass and appropriate flexibility. Torrefied top, Aged Tone Finish, and hide glue combine to create a guitar that fuses the best qualities of a modern

instrument with the previously inimitable qualities of a decades-old vintage guitar. Player response has been enthusiastic. Reviewing an Aged Tone OM for *Acoustic Guitar* magazine, guitarist and writer Teja Gerken says, "There was nothing I threw at this guitar that it couldn't handle."

## Looking Forward

In 2000, Bourgeois Guitars was reorganized under the name of Pantheon Guitars, LLC, whose only products, Bourgeois



guitars, are still made in Lewiston Maine. Bourgeois currently leads a team of a dozen or so highly skilled guitar makers. Working in a former textile mill constructed in the 1850s, they build about 400 instruments each year.



With a range of guitars that starts with the diminutive Piccolo Parlor, includes 0, 00, and 000-sizes, moves through mid-size Jumbo Orchestra and Mini Jumbo models before arriving at round-shoulder and square-shoulder dreadnoughts, and finally a full sized jumbo model, Bourgeois offers a steel-string flattop for every player. And combined with the nearly limitless possibilities

offered by Bourgeois' stash of first-grade tonewoods, as well as numerous options for appointments and custom features, Bourgeois guitars please the eye as well as delighting the ear.

But while Dana Bourgeois could easily stick to his proven formulas, he's constantly looking for the next challenge. "People continually ask me if I plan to build mandolins or ukes," he says, "but I'm still trying to get guitars right." Players of all ages, styles and abilities may at first scratch heads at such a notion. It's a fair bet, though, that Dana's future plans do not include abandonment of this lifelong quest.





**The Bourgeois Crew, January 2014. From left to right: Tammy, Elizabeth, Robert, Brian, Daniel , Cary, Will, Peter, James, Bob, Dana, Todd and Mike.**