

PLAYERS|LUTHIERS|COLLECTORS

GUITARBENCH

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THE INTERVIEW:

CHUCK MOORE



Thank for taking the time off your busy schedule to speak to us, Chuck. Maybe we could start at the beginning with how you got started?

I moved to Moloka'i in the late 1980s and after building my house I found myself with little else to do. Like many of us that went through the hippie movement, I had learned a lot of the hand arts including pottery, wood carving, leather work, stained glass, jewellery making, even scrimshaw. So I had the hand skills but no focus.

After a while I became known as the local fixit guy mainly because I had a bunch of tools and a whole lot of time on my hands and I was too foolish to refuse people. Folks would bring be all sorts of projects to make or repair in exchange for lobsters or a few hands of bananas.

Some one once brought me a basketcase uke for me to look at. I don't remember anything about it except that the neck was off, the bridge was gone and the top was peeling away.

When I took it apart to repair, the inner mysteries were exposed and I knew it was something I could do.

After all I've built my share of bird houses and cutting boards and even a dulcimer from a kit many years before. Since my tiny public library offered no clues on instrument building I ordered a Stewart MacDonald parts catalogue (I didn't want to invest in a book at that point), figuring out the steps and putting the pieces together in my head.

I immediately caught the bug (or flea as it were) and started building ukuleles from scratch using the most common materials I had at hand-- coconuts!

I made a couple dozen of these that were pretty awful but they fuelled my desire to pursue more traditional style instruments. This was during the pre-Internet days of the 1980s, and information on building ukuleles was scarce. Being as isolated as I was, my learning process was long and slow.



What originally attracted you to Hawaii?

I had little to do with it. Fate played a major role and I just went along for the ride. I've always had a love for tropical, exotic destinations and I would take any opportunity to flee the Bay Area where I was living and seek out remote palm laden beaches.

In 1985 we had just returned from a trip to Rangiroa in the Tuamotu island group, looking at a small, rustic, dilapidated hotel that was for sale which we were considering buying.

On our way home we stopped at crafts fair and at one of the booths I bought a raffle ticket to support a local canoe club. A couple of weeks later I received a phone call to inform me I've won first prize, which was a trip to Hawaii, any island of my choice.

I've always felt that everything happens for a reason so we turned right around, jumped on a plane, and headed for Moloka'i which is one of the least visited islands in Hawaii. We immediately fell in love with the people, music, culture, and the Hawaiian lifestyle.

To our surprise, we flew home with the deed to a small plot of land in our pockets and within a year the Matson shipping containers were packed and we were making our way back across the Pacific, this time for good.

So being self taught in those days, on the least visited island in Hawaii, meant having to build pretty much from scratch? Breaking down billets?

Billets? My materials were as rough and raw as life on Moloki'a was. A lot of the wood I used was scavenged and recycled. I lived on the beach and occasionally we'd get large Douglas fir logs or redwood slabs wash up on the reef after storms. Most of the wood guys then were bowl turners and I'd go through their piles.





Sometimes a tree would blow down and we'd be out there with the chain saws. I don't remember ever buying any wood. These were back in the days when everyone seemed to have a lot more time than money. Even koa at \$4 a board foot was too expensive.

I'd spend all day hand carving a set of tuning pegs from ivory, back when it was still legal. Some finishes were merely pressed kukui nut old, real old school stuff. I really didn't know there was any other option. I made some pretty bizarre instruments.

I'd look at a Kamaka ukulele and think it was pure magic, having no idea how they were made. I feel very fortunate to have never received any formal training. For someone who learns any craft or skill in isolation, there are no limits and no one to tell you, you can't do this or that.

“Lessons learned on your own are lessons learned well”

Lessons learned on your own are lessons learned well. But the learning curve is sure slow. I think even with the best instruction and resources it probably takes a luthier upward of 100 instruments or so to start coming into their own and to begin getting a grasp of the total picture, of what's happening on every level.

Many of the techniques involved in this craft can be taught, but they can only be learned from experience, doing the same thing over and over again until you are successful. And there is so much to learn, from proper wood selection and seasoning to finishing and setting up.

It just takes time and paying attention to your results. The intriguing thing about instrument building is that I still learn something from every one of the 500 ukuleles I've built. It keeps things interesting.



Now, it's very different, specialised tools and the ability to find an experienced builder to ask questions have changed things, wouldn't you say?

I moved to the Big Island shortly after I discovered the Internet. YouTube videos along with all the other information available made it a lot easier to discover and share information.

One of the big benefits is that it also brought a lot of builders much closer, being able to talk story with builders in Atlanta and Portland and the far corners of the globe.

One of the biggest complaints about the Internet is that it tends to de-socialize people. I think it's had the opposite effect on me.

I'll spend a couple of hours every morning on the Internet talking with builders all over discussing everything from finishes to customers, and occasionally engaging in mutual luthier therapy.

I was also fortunate to have moved in close proximity to builders like Bob Gleason and David Hurd. These guys were setting new standards in ukulele building and knowing them really rocked my world.

We also have a fairly active builders guild here so there's no lack of builders to exchange ideas with. With the strong Hawaiian music influence, positive peer support, and koa almost growing in my backyard, I really couldn't ask for a better place to be.

I understand you build almost exclusively with Koa?

From my perspective it would be silly to be a Hawaiian ukulele builder working in Hawaii and not to be using koa. Koa has been the traditional tonewood for ukuleles for over a hundred years. It's even been suggested by some that it's not a genuine ukulele unless it's built from koa.

When customers contacts me they want and expect a koa instrument. If they had another wood in mind they'd be more likely to contact one of the many builders on the Mainland.

Although acacia koa is found on all the major islands of Hawaii, the vast majority is grown right here on the Big island and it grows nowhere else in the world. How could I ignore such an amazing resource right in my back yard?

While koa doesn't excel in any one particular are, it performs quite well over a large spectrum, especially on small bodies instruments as ukuleles.

The weight, stiffness and density of koa can vary greatly from tree to tree and board to board.

I have some that is as light as cedar and others that resemble ironwood.

Building by a specific set of numbers is impossible and every koa set has to be evaluated on it's own merits.

With rare exception, the majority of my ukuleles are built using koa and I honestly don't have much experience using other species of tonewoods.

If Koa is so variable, would you say it might be better for an all Koa uke to be make from different pieces of Koa as opposed to a matched top/back/sides?

I guess it would but I don't get that far into it. Traditionally, Hawaiian ukuleles have matching tops, backs & sides. I do have some gorgeous koa that is too dense and stiff to build a complete ukulele from.

In that case I'll use it for backs and sides and throw a spruce or redwood top on it. I deflection tune my tops so that takes some of the guess work out of it and all of my all-koa ukes sound pretty much alike.





And what do you usually use for bracing and necks?

For necks I'm using either Spanish cedar or Honduran mahogany. I like Spanish cedar because it's incredibly light and strong.

We also have a lot of toon (Australian red cedar) growing here and I find its properties to be somewhere between Spanish cedar and Honduran mahogany.

Regardless of the wood used, every neck gets reinforced with a non-adjustable carbon fibre rod installed under the fret board.

I also build in a tiny bit of relief. The carbon fibre rod is cheap insurance against the neck deforming against the string tension and environmental changes.

Depending upon the colour of the koa body, I will sometimes tint the neck lacquer for a better match. I use traditional three fan bracing for my tenor tops, five fans for anything over four strings.

David Hurd introduced me to carbon fibre and I'm currently using it as a bridge patch. (I also reinforce my sound holes and side sound ports with it.) I buy Sitka spruce billets and hand split them, later resawing them and running the bracing through the drum sander. Honduran mahogany is used for back braces.

I use Titebond Original for all assembly work. I've been tempted to use hot hide glue but having a glue pot plugged in all day would be just another strain on my solar system.

All building takes place in a climate controlled room where I maintain 70 degrees and 45% RH by means of a small room air conditioner and/or a dehumidifier. My rough wood and wood sets are also kept in this room.

Speaking of which your workshop is solar powered, how does that affect the way your work process?

People are impressed by how much I can accomplish being off-grid and on solar power.

When you consider I run a full wood shop, my wife's jewellery studio and a fairly good size house it's really quite a challenge. Luckily we are blessed to be in a location where the sun shines on most days.

Having to rely on the sun for my electrical needs really dictates the rhythm of my work schedule. What it means in my business is that I often have to juggle my tasks.

“I'm constantly playing energy cop, turning this on and that off”

I have a 3,000 watt solar system, which seems like a lot but you certainly can't turn everything on at the same time! The climate controlled room has to be maintained all the time and that draws about a third of my power at.

When I'm spraying or running the drum sander with the dust collector on I'll sometimes have to shut down the air conditioner while I'm doing that.

I'm constantly playing energy cop, turning this on and that off. When bending sides I run directly off the generator because heating elements are hard on the batteries.

I might devote rainy days to sanding or other less demanding task if the generator can't keep up with my needs. Those are also good days to do book work, clean the shop or just go into town.





Modern solar inverters and controllers are pretty much trouble free, requiring little attention. The weak link in the system is the storage batteries, needing to be replaced every 2 or three years. They also need constant maintenance to keep them charged. Because the storage capacity is limited it means I can't work at night, which is probably a good thing.

Other things like providing my own water collection system, cellular communications and broadband Internet service are cumbersome, unreliable and come with their own set of problems. Every day there's something to fix. It's a rather small price to pay however, in exchange for living where I do.

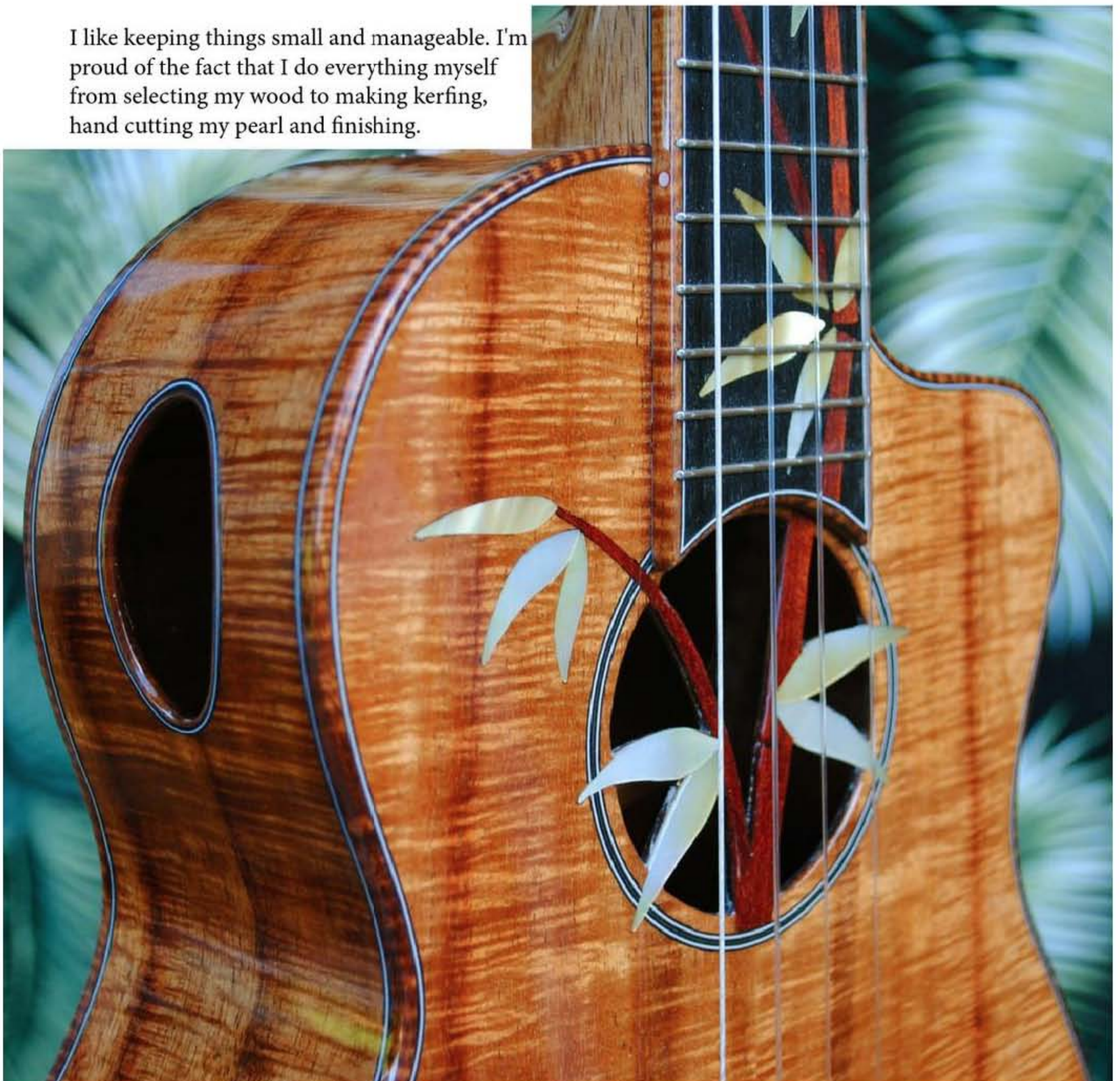
In my shop I'm restricted to motors of under 2 horsepower so my equipment is a bit on the small side. I have a couple of 14" bandsaws, a 16"/32" drum sander, table saw, joiner, drill press, etc.

The only thing I'm incapable of doing efficiently is resawing. I buy saw time and do all of my resawing off-site on a saw that's meant to do the job quickly and accurately. With koa being as expensive as it is, it's really the only option that makes sense.

The set up I have is really quite adequate for a one man shop. If I had lots of power available, I'd be tempted to expand my business and then I'd have to contend with all the headaches of running a larger production shop.

I like keeping things small and manageable. I'm proud of the fact that I do everything myself from selecting my wood to making kerfing, hand cutting my pearl and finishing.

“I’m proud of the fact that I do everything myself from selecting my wood to making kerfing, hand cutting my pearl and finishing.”





What finish do you favour? And what are you using at the moment?

I think a good finish should be thin, hard, easy to apply and repair. Nitrocellulose lacquer fits all those requirements for me. I'm also fond of the look of nitro and the way it ages. I'm not going to argue the variety of finishes available to the luthier. I've tried most of them at some point and they all have their merits.

As with anything else in this business, I think the choice comes down to finding a material and application schedule that suits who you are as a builder and choosing what is comfortable for you to work with. I spend a lot of time on my finishes and am proud of the results I'm getting.

It's one of the areas where there is always room for improvement and at any luthier's gathering the discussing will inevitably turn to finishing techniques at some point.

Between the spraying, pore filling, sanding and buffing I can easily spend 12 hours finishing an ukulele. Proper finishing requires more focus and attention than any other aspect of building.

And speaking of finishing, your ukes often feature inlays and intricately engraved art....

Doing inlay work is an opportunity for me to get real creative. When I start the inlay work the instrument is almost finished. It's at that point that I can stop holding my breath and have some real fun.



Inlay gives the customer an opportunity to personalize his or her instrument, making it truly unique theirs, whether it's one of my ideas or one of theirs.

While other aspects of building can become mundane, creating new inlay work is always challenging for me and keeps my interest piqued. One of the difficult parts is in successfully interpreting the customer's vision into an expression of shell, wood and stone that will satisfy them.

Educating them as to what can and cannot be done has to be done from the very beginning. The materials I use are cold, static and hard, and blending colours is difficult. It's almost impossible to render things like rainbows, wind, rain, etc.

Ideally, the process begins with a customer giving me some guidance as to what they want, and they usually trust me to complete their vision.

I spend as much time in thinking about, designing and drawing up the patterns I need as I do in the actually cutting and inlaying of the pieces. This will often begin weeks or months before I make the first sketch and it's often difficult to come up with new ideas.

I find the actual process of cutting shell to be soothing, almost meditative, in the experience. I can also tap into my experience as a scrimshander to etch details on the fossil ivories I sometimes use. About one week a month is reserved for doing inlay work and I welcome the change to do something really creative and different. I see the finished product as playable, functional art.



So we've spoken about woods, your workshop and art, now is the dreaded construction part- with the modern ukes, more and more resembling guitars in terms of looks and construction, what is your take on the modern techniques (like say Kasha bracing?)

I think every thinking builder at some point attempts to reinvent the wheel. But you need to remember, ukuleles are not guitars. When it comes to top bracing, there's only so much you can do with a sound board that's 50 square inches or smaller.

Keeping in mind that most tenor uke string tension loads are under forty pounds the most important consideration is keeping the top light and responsive while making sure it's structural strong enough to last. If there's one common flaw I see in many ukuleles, especially amongst novice builders, is that they are over-built.

A look at some of the old bench-mark ukulele, Nunes and Martins for example will show them to have a minimum amount of bracing. I think the standard rule of keeping it simple applies here.

I applaud those who experiment with different bracing ideas in ukuleles. The ideas can be talked to death, but in the end there is no substitute to building lots of instruments in order to develop the sound you're after. At some point or other I've tried most of the more common bracing patterns.

X-bracing and lattice bracing, while not very common, have their advocates in the ukulele world. And I'm not sure Kasha has ever lived up to it's initial hype, but several uke builders are incorporating that pattern and are pleased with the results they get. For me it's hard to beat the classical Torres style bracing for the unique "Hawaiian" sound I'm looking for in my instruments.

I've always come back to the traditional three fan pattern for my tenors, two for my concert and none at all in my sopranos. I've even given up on the idea of tap tuning a ukulele top. While it's an amazing thing to watch a guitar sized sound board come to life through tap tuning,

I've never seen it successfully done with such a small plate such as one you'd use for an ukulele. Instead, in addition to tactile inspection, I deflection- test with a dial indicator and map out all of my sound boards (and to a lesser extent, the backs) so that I can repeat my results with fairly good consistency.



So do you think it is the luthier's job to bring out the very best in the materials or to follow as closely as possible what the player wants out of the instrument? Is there a happy medium between the two?

My focus is to get the wood and materials to respond to the best of my ability in an effort to achieve the sound I'm looking for. The first responsibility I have as a builder is to myself.

The advantage to pigeon-holing myself into building only ukuleles, built primarily of koa, is that I've spent enough time around the wood to know it intimately. Even at ten feet away I can get some pretty good clues as to how a specific koa board will react sonically.

It's grain and colour are good visual clues of how it will respond, and if I get close enough to touch it, feeling it's warmth or coolness and the raspy tone it makes as I run my hand against the board will tell give me clues of its density.

The choice of woods I have to offer, primarily koa, naturally limits the customer's options. A lot of customers need to be in total control of the building process, whether their ideas are right or wrong. Much of their input is based on what they've read or heard and has no substance in reality or in the luthier's actual experience.

I'm able to quickly spot them and I happily refer them to other builders. Almost all of my custom business is through word of mouth these days, many going to repeat customers or friends of theirs. They've all seen an heard my work before and they've liked what they seen and heard.

Lately I've become less of a traditional custom builder in the truest sense of the term. I may be a bit unique in that I build every thing as if I were building it for myself, considering both sound and design. I tell customers early on that I will only build an instrument that excites and appeals to me, one that I would be proud to own and keep for myself.

While I appreciate customer input, the final decisions are mine. Instruments of all types tend to be traded like baseball cards. No matter how many hands of ownership an instrument I'll build will change in the course of it's lifetime, it will always have my name on the label and I will always consider it mine.



So I build what I want, and if the customer wants the same thing then we're both happy. Life's too short not to be doing exactly what you want to be doing. I've never had an ukulele returned to me because the customer was unhappy with it in any way.

Does that make it hard to ship your ukes off to customers?

I should clarify, I start building every uke as "if" I were building it for myself. The sound, the design elements, the colours and materials I choose all stem from my own biases and preferences. The finished uke is a significant part of who I am and it reflects my years of experience as an artist and designer.

At the same time, it's very important for me to know as much as I can about the customer I'm building for including any hobbies or outside interests. I'm going to be spending a lot of time thinking about who the customer is while I build the instrument over the period of a few months.

Because I take the relationship between myself and the customer very seriously it's important to recognize whether or not we are a good match before the process gets too far along. If we aren't a good match, the uke doesn't get built.

This doesn't mean that I'm closed to any new ideas though. Some of my most creative designs have been inspired by customers and they've pushed me and have allowed me to grow even despite my sometimes initial resistance.

I'm just not into harp ukes or hybrid ukes or carbon fibre ones, or transparent coloured finishes or LED lights as fret markers or inlaying your wife's portrait in the head stock, or any one of a thousand goofy ideas I've heard.

I just can't see spending up to 70 hours doing something that doesn't interest me. I learned a long time ago that the time in my shop that is best spent is the time I take in choosing my customers.



It's usually a mutually positive experience, one that both parties benefit from in many ways. I've made many close friends as customers and we continue to stay in touch over the years.

Many will bring their families on vacation to visit the place where their ukulele was born. Making these close friendships is probably the most rewarding aspect of the entire process.

So by the time I'm finished with the uke I'm ready to turn it over to the customer whom I've gotten to know fairly well and have become friends with. Still, there have been many unique ukuleles that I've wanted to keep, at least for a while.

There've been a few where I've thought to myself "If I could build only one more uke in my life to keep for myself, this would be it." But once these "artisan" ukes are finished my heart's not into it anymore and those designs seldom get repeated. I haven't run out of fresh ideas yet.

Thanks for that Chuck, before we let you go, would you have any exciting projects on the horizon you'd like to share?

That's a good question. I haven't had much time to think about what I'll be doing in the future. Besides, when you are neighbours with one of the world's most active lava flows you tend not to plan too far in advance!

I have a fondness for the old days, the pre-statehood days of Hawaii, what are sometimes referred to as Hawaii's golden era when the island group was a far away, exciting and exotic destination.

I'd like to incorporate more Hawaiiana inlay themes into my work, especially those representing the early days of air and cruise ship travel, the Pan American Clippers and Matson cruise lines. There is something very romantic about those times and those modes of travelling.

I'm also a big fan of Hawaiian steel guitar and it's been my intention to try my hand at building Weisenborns. Several years ago I started playing steel guitar so that I'd have a better idea of how to approach it. I've had the plans and the wood set aside, collecting dust- it's just a matter of finding the time to do it.

I learn something from every instrument I build, no matter how insignificant it may seem. I find that the more I build, the harder it gets, as I raise the bar and my personal expectations. My goal is to keep learning, to keep growing and pushing the limit in the attempt to make the next instrument better than the one before.

