

---

---

*Ron Cook Studios*



*147 Sacramento Avenue - Santa Cruz, CA - 95060 - (831) 425-4933 - www.roncookstudios.com - ron@roncookstudios.com*

# **Restoration of 1924 Sherman Clay Kumalae Ukulele**



**Completed by Ron Cook**

**March 2016**

**For Kathleen Armstrong**

---

---

---

---

## Background

Jonah Kumalae made a decision to set up a booth at the 1915 Panama Pacific International Exposition in San Francisco and never looked back. He showcased his finely crafted ukuleles with Hawaiian musicians brought over to play them and won a "Gold Award". He proudly displayed a decal of it on all his ukulele heads from that point on.

A friend of mine and ukulele enthusiast indicated that over 600 ukuleles were produced each month in Kumalae's workshop during the 1920s and 1930s. He also mentioned that Kumalae ukuleles were often handed out to passengers on cruise ships heading to the islands and classes were given during the voyage. Some hotels had Kumalae ukuleles in rooms for guests to have and play. By the end of 1930, thousands of Kumalae ukuleles found their way to homes around the world. At its height, Kumalae employed 50 people and had a 20,000 square foot factory, where he also made instruments for other companies, like Sherman, Clay & Co. (see below) and for some mail order catalog companies.

Kumalae ukuleles were known for their beautiful curly Hawaiian koa wood and the ornate bindings on the higher-end instruments. Like many other ukulele manufacturers, Kumalae closed his business in the early 1940s due to a falloff of business during the war. As of 2012, Kumalae branded ukuleles have re-emerged, and several models are being manufactured in Ontario, Canada. However, these are more modern with various wood types and mechanical tuners and have no relationship to the originals except by name.

The following photo is from a 1925 Sherman, Clay & Co. catalog showing five models numbered 21 through 25, which correspond with Kumalae models A through E, or 1 through 5, respectively. Described but not shown in the catalogue is a Style 20, a plain, "straight grain koa" ukulele with one inlaid ring (some had three very thin rings) around the soundhole. It sold for \$9.00. This model is also known as a Kumalae Style 0. All models of Kumalae ukuleles were French polished. Celluloid and mechanical friction tuners could be ordered in place of the stock wood pegs at additional cost.



---

---

## Valuation

Even though Kumalae and Sherman Clay sold many thousands of ukuleles in the 1920s and 1930s, a small number have shown up for sale. More than likely, this is because of the very delicate nature of the instrument. The koa wood is very thin and susceptible to damage if handled roughly. Once away from Hawaii and in dry environments, the koa often dried out, cracked or split. Sometimes when stored in a damp environment, the hide glue softened and the instrument basically fell apart. Many were thrown away.

This particular ukulele is the Sherman Clay Model 20, which was the entry-level soprano uke. Kumalae ukuleles came with wooden friction pegs, but if ordered, or purchased at Sherman, Clay, & Co., celluloid-style tuners could be installed. This lovely Kumalae ukulele has the original wooden friction pegs.

I haven't found examples of Sherman Clay Kumalae Model 20 Ukuleles, but Kumalae brand ukuleles in all states of repair and disrepair that I've recently found for sale on ebay have been priced from under \$100 to over \$2500. I also found some information about Tiny Tim's Kumalae Ukulele that sold at auction for \$1600. The fancier Kumalae models, with intricate bindings and inlay, are showing up on auction web sites for up to \$3000. This is the first of five Kumalae ukuleles I've restored that has what seems to be its original case.

I feel that this Model 20, in its restored condition, should be able to sell in the \$100 to \$300 range. It does fret true, producing a beautiful tone that, as a friend described, is "the real Hawaiian ukulele sound."

---

---

---

---

## Day 1: Assessment



On Day 1, I made a full investigation and assessment of damages. As I've mentioned in other ukulele repair logs, Kumalae ukuleles are known for having almost paper-thin wood on the body. This is great for sound and one reason Kumalae ukes have a wonderful tone.

But thin wood can also cause problems if the instrument is dropped, stored improperly, roughly played, or sat on. This ukulele had large side cracks all around it, and the neck was very loose. The top had a couple of cracks and an area on the top bout (upper left photo) where the finish was worn off, probably through years of strumming with fingers or a pick.

As in other Kumalae ukuleles I've restored, the 12<sup>th</sup> fret was missing. This happens when the neck becomes loose and flexes. The fret probably popped out decades ago and was lost.

This uke has the original tuning pegs, but was missing one. Fortunately, the back was in good shape.

---

---

---

---

## Day 2: Back Removal



On Day 2, I removed the back. Recently I acquired a specialty heating device that included a type of matte knife that attached to the end. This is basically a wood burning tool, but it came with several attachments for different types of work. It has a rheostat I can set from warm to very hot. For the old hide glue, I ran a damp sponge around the edges, already loose, then set the burner on warm, and slowly ran the knife around the edges. Within an hour, the back was off.

After I took the back off I noticed that some of the interior braces were loose on both the top and back. Before taking the back off, I noticed a slight warping on both surfaces. This was due to the loose bracing. One top crack ran under the loose part of the brace.

Some Kumalae ukuleles have lost their labels. This one has a very good label with some initials and a date penciled in. The D.N. is in a different handwriting style than the others and was probably the initials of the original owner, who penciled it in through the soundhole. The other initials, W.P. and B.T., and the date, 7/24, look to have been written on the label during manufacture and might be the makers' initials. This is the first of the five Kumalae's I've restored that had initials and a date.

---

---

---

---

## Day 3: Fixing Loose Bracing & Beginning Crack Repairs



The first thing I did was to fix the loose back brace. I then began working on one section of the side breaks, forcing glue in the cracks, and clamping them shut.

For repairs such as these, I use standard wood glue (Titebond) to make for a more permanent repair.

---

---

---

## Days 4 & 5: Continuing Side Crack Repairs



For the next two days I continued working on the side cracks. Because cracks were present most of the way around the sides, I had to work on one section at a time. The types of clamps I use do not use a lot of force. With the sides so thin, around 1/16 of an inch thick, heavy clamping would crush the wood. These small bar clamps are perfect.

---

---

---

## Day 6: Bracing and Top Crack Repairs



Early in the day I repaired the loose top braces by forcing glue under the loose areas and clamping them down. Not only did this fix the loose braces, but it also leveled the top. With loose bracing, the top had a slight “wave” to it.

Several hours later, after removing the clamps, I noticed the small crack alongside the bridge was not level after fixing the bracing. One side of the crack was slightly higher than the other. To fix this I forced some “instant” glue into the crack and clamped it so both sides of the crack evened out. The instant glue I use is specially formulated for woods.

Toward the end of the day I repaired the crack above the sound hole. Again, I forced instant wood glue into the crack and clamped the ukulele’s sides.

---

---



---

---

## Day 7: Stabilizing Top Cracks



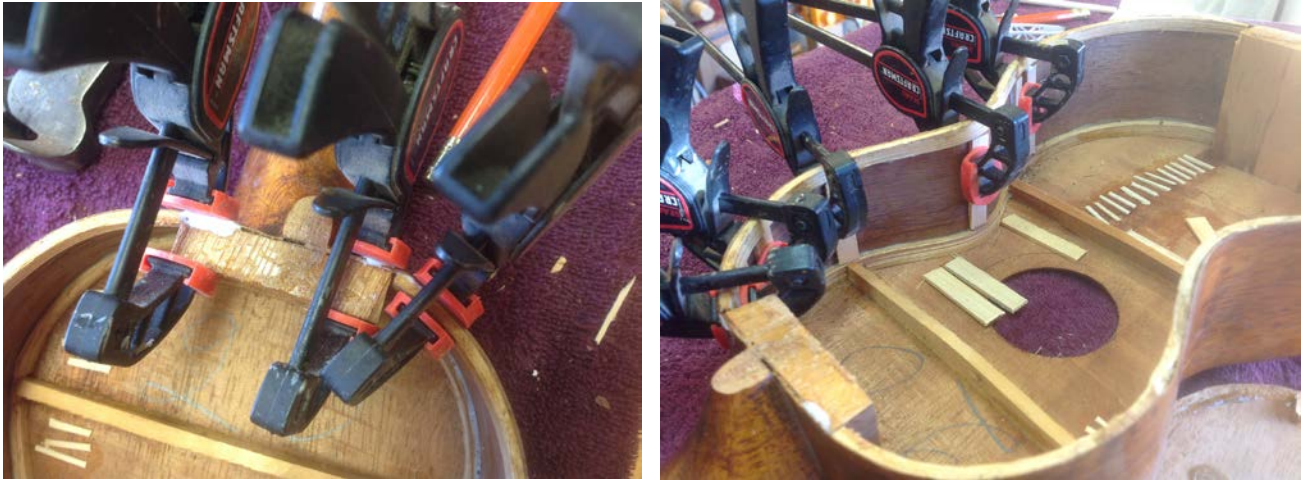
Even though all the cracks were glued and closed up, with the ukulele's body woods so thin, it wouldn't take much for cracks to reappear.

For any top and back cracks, I stabilize the repairs by adding tiny cleats across each crack.

---

---

## Day 8: Stabilizing Neck and Side Cracks



The sides of the ukulele, where they attach to the neck block, were loose. The old hide glue had failed. I cleaned as much of the old hide glue off as I could and forced new hide glue into the joint.

A few hours later I began stabilizing the side cracks. Here I used some larger, thin cleats and clamped them a few at a time, slowly working my way around the inside of the body.

---

---

## Day 9: Making a New Tuning Peg



I took a break from the side repairs this day and made a replacement for the missing tuning peg. The original tuning pegs are a wood I couldn't identify. They aren't koa, but probably another Hawaiian hardwood.

I turned a small piece of maple on my lathe, then began shaping the head on my spindle sander. I have a peg "sharpener" that is like a pencil sharpener. However, this device creates a taper on the peg just like the originals.

The color of the originals have darkened over time and use, so I used a combination of stains to duplicate the color as best as possible.

---

---

---

---

## Days 10 & 11: More Side Stabilizing



For the next couple of days, I continued gluing the thin cleats to the sides.

After finishing the cleats, I'm confident no cracks will reoccur.

---

---

---

---

## Day 12: Gluing Back



Now with the top and sides repaired, it was time to glue on the back.

I once again used hide glue. Hide glue is reversible. If ever an accident should occur where this ukulele would need repairing/restoring again, the back could be removed again the same way I removed it for this restoration. If a PVA glue (yellow wood glue) were used, the gluing would be permanent and a future restoration would be extremely difficult.

---

---

---

---

## Day 13: Fixing Missing Pieces



Now that the ukulele was back together, I could concentrate on the couple of missing pieces.

A small chip was present at the edge of the top. I took a piece of scrap koa I had, sanded an edge very thin, clipped it off and trimmed it to fit the small opening.

A larger piece of koa was broken and missing where the sides met the neck. This was where a large crack at been. Again, I carved a piece of thin koa to fit and glued it in place.

---

---

---

---

## Day 14: Sanding and Cleaning Frets



Now that the body repairs were complete, it was time to begin the long finishing process.

On this day I sanded all the repaired areas, making sure no glue that squeezed out remained. I also cleaned the fretboard and polished the frets.

Two other things I did that I neglected to take a photo of, was adding the missing fret and filing the frets.

Because of the cracks and flexing of the neck joint, the 12<sup>th</sup> fret was missing. I salvaged a thin fret, similar to the originals, and installed it in the empty slot.

Wood coming from a relatively humid tropical environment, like Hawaii, and drying out causes the wood to shrink. The neck had shrunk enough that the edges of the frets stuck out, exposing their sharp ends. I used fret files to dress the frets and smooth them out.

Dressing frets is the process of creating a smooth playing surface on the fretboard. With sharp fret edges, it's possible to actually get tiny cuts on your fingers or hand.

---

---

---

---

## Days 15 & 16: Staining



Because sanding left some bare wood, for the next couple of days I hand rubbed a reddish stain all over the ukulele to duplicate its original color.



---

---

## Days 17 to 20: Applying Finish



Each day, for several days, I brushed and rubbed on a tung oil varnish. Each coat needed 24 hours to dry before putting on the next coat.

I applied four coats. Before each coat, I rubbed any impurities (dust, drips), with a super-fine 0000 steel wool.

---

---

## Day 21: Polishing



Kumalae ukuleles were originally finished with a French polish. French polishing is a wood finishing technique that results in a high gloss surface. French polishing consists of applying many thin coats of shellac dissolved in alcohol using a rubbing pad lubricated with mineral oil.

My finishing technique creates very similar results. I also use rubbing pads lubricated with mineral oil, but I use them first with pumice, then rottenstone. Pumice is a very fine abrasive that will even out tiny imperfections in the finish. Rottenstone is an extremely fine abrasive that brings out a polished surface.

After cleaning off any pumice or rottenstone residue, I apply a dark paste wax. (If this were a light wood instrument, I would use a clear paste wax.) Once the wax has set for approximately 10 minutes, I finish polishing.

---

---

---

---

## Day 22: Stringing and Completion



Finally the day arrived to complete the restoration by stringing it up.

After stringing, I tested the uke by playing each string up the neck to make sure the action (string height) was correct. It was. I played a few chords, then tried my hand at the only ukulele song I know, “Has Anybody Seen My Gal”. This old Kumalae ukulele sounded great.

This ukulele is over ninety years old now. I’m sure with proper care it will make beautiful music for another ninety.

---

---