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Restoration of 1938-1940 Kumalae Ukulele



Completed by Ron Cook

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For Rocky Sullivan

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 family 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.

Jonah Kumalae passed away in 1940, and the business closed. It appears that the last Kumalae ukuleles were made by a few family members with remaining wood stocks that didn't have the curly koa of earlier instruments. The business closed shortly after Jonah's death. In recent years, Kumalae branded ukuleles have re-emerged, and several models are being manufactured in Japan and sold through an Ontario, Canada, company. 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 Kumalae Style 0, which was the entry-level soprano uke. It does have the three thin rings around the soundhole. Kumalae ukuleles came with wooden friction pegs, but if ordered, or purchased at Sherman, Clay, & Co., celluloid-style tuners could be installed. This Kumalae ukulele was probably one of the last ones made and has violin-style ebony friction pegs instead of the earlier hand-carved koa pegs.

Kumalae brand ukuleles in all states of repair and disrepair 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 second of six Kumalae ukuleles I've restored that has what seems to be its original case.

I feel that this Style 0, 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, being probably one of the last made, was not in too bad a condition.

The back had a stress crack running up from a chip at the tail end. On the top, a slight hump and small crack was evident also at the tail end. These might have been caused from being dropped.

The inside label was missing, but it didn't show evidence of ever having one. The head decal is there, but pieces are missing. The discoloration and roughness on the front of the head looks like some moisture had been there at one time, which would have caused the decal to get brittle so any rubbing would cause pieces to come off.

Kumalae ukuleles from the 1920s and 1930s usually had hand-carved koa friction pegs. This ukulele has friction pegs, but they are standard violin pegs slotted for ukulele strings, as are the earlier hand-carved pegs. They don't appear to be replacements. This is another reason for me to believe this is one of the last Kumalae ukuleles to be made.

Day 2: Interior Inspection



Before continuing work on this ukulele, I did an interior inspection to see if there were any maker's marks, numbering, or damages.

Earlier Kumalae ukuleles had pencil marks that matched similar figured koa tops and backs. The same number would be on both surfaces. This ukulele had no numbering. Also, the top wood and back wood were not similar. The top, which is nicely configured koa, was quarter sawn as was the custom. The back was completely different koa and was plain (flat) sawn or rift sawn so the wood's rings are more exposed. My assumption is that at the end of the Kumalae production, the family was using up their wood stock.

Day 3: Removing Back



To do a good repair on the back crack and to be able to stabilize it well, I removed the back.

Part of the back, at the tail end, had a small area where the glue joint had failed. Kumalae ukes were all assembled with hide glue. Hide glue is preferred in most stringed instruments because it is reversible. A little water and a little heat make the glue viscous again.

After dampening a small area, I used a special heating tool, like a wood burning tool, that has a fine blade to fit in the seam between the sides and back.

This is a delicate process and took several hours to loosen the back.

Day 3 (continued): Bracing Differences



1938-1940 Kumalae



1924 Kumalae

I noticed the difference in bracing from this ukulele and older ones when I did the earlier internal inspection. It wasn't until the back was off that I could really see the differences.

This ukulele has two flat top braces, hardly 1/16" thick. Also, the top brace is short, not reaching the kerf strip, and was glued in reversed. The angled sides should be angled upwards, not down, and should have been long enough to glue to the kerf strip. The second top brace, under the sound hole, is in the correct position and is touching and glued to the kerf strip.

The left photo is this 1938-1940 Kumalae showing the top brace above the soundhole. The right photo is of the same brace in a 1924 Kumalae I restored a few years ago. All the early Kumalae ukuleles I've restored have this type of bracing.

I did notice on this Kumalae that the back brace (top photo) was nearly poking through one side of the body. The side piece of koa had been thinned during manufacture for the brace to fit. I found this a little odd and did see a slight crack at that location.

Day 3 (continued): Surface Blemishes



One thing I noticed right from the start, was the blemishes in the finish. Some older instruments might have a cracked look, called alligator skin. This one has more of a “frog skin” look.

This type of finish happens if the lacquer is sprayed on damp wood or sprayed on too thick and too quickly.

I’m not sure if this is the original finish or a refinish job someone did later. Kumalae ukes were French polished to produce a clean, lovely shine. This uke was sprayed and not French polished. It’s one more reason to believe this uke was completed quickly at the end of production.

Day 4: Loose Top Brace



With the back off, I noticed a slight gap in one of the top braces. I slipped an Xacto blade under to see how much of the brace had come loose.

To fix, I forced glue under the brace and clamped it shut.

Day 5: Gluing Back Crack



Today I began working on the back crack.

I forced glue into the crack and gently clamped the sides of the back to close it up.

On body work, I use hide glue. On cracks, I often use white glue. Sometimes, if a quick fix is needed, I'll use instant glue that's formulated for wood work.

Day 6: Stabilizing Back Crack



After the glue in the crack dried, I made up some thin cleats of scrap koa and glued them across the length of the crack.

This helps to stabilize the crack so it won't open again or expand.

Day 7: Chip Repair



The tail end of the back, where the crack started, had a chip out of it.

I glued in another scrap piece of koa to fill it. Later I'll sand it down.

Day 8: Sanding Back



Now with the crack repaired, I needed to sand the back to remove any glue residue. At the same time, I was sanding down the finish so there was no more “frog skin” look.

I started with 100 grit, and went through all the sanding stages down to 600 grit and 0000 steel wool.

Day 9: Fixing Top Crack



Where the small top crack was there was also a slight bulge, and the glue joint was slightly open. I assume this was from the end being bumped or that the uke had been dropped on its end at one time.

I put a clamp on the end to see if the bulge could close. It did, so once again I forced glue into the joint and tightly clamped it shut.

Day 10: Gluing Back



With the cracks and interior repairs completed, it was time to put the pieces back together.

First I needed to clean off any clumps of old hide glue. A little warm water made the glue viscous again, and I used an Xacto knife to scrape it off.

Once the old glue was removed, I applied new hide glue and clamped the back in place.

The owner had mentioned that the action seemed a little high. One reason was that the body had bowed up a little when strung up, probably because of the one loose top brace, but also because the braces were so thin.

To compensate, I slightly bowed the ukulele in the opposite direction when I glued the back on. I kept using a straight edge to check the height from nut to bridge. A very slight reverse bow did the trick.

Day 11: Cleaning and Sanding



Now that the ukulele was back together, I needed to clean off any glue residue.

In the right photo, you can see the little crack where the back brace is nearly poking through.

Day 12: Repairing Side



To fix the small crack where the back brace was pushing into the side, I opened it a little and cut into the brace a little with a micro chisel so I could place and glue a small piece of matching koa into the opening.

Day 13: Cleaning and Dressing Frets



Today it was time to clean and dress the frets.

The frets were a little corroded and the fret ends were exposed because the neck wood had shrunk. The fret ends were very sharp and if not dressed again, could cause cuts on the player's fingers.

I have a full supply of luthier's tools including small diamond files I use to file fret ends.

It is very common for wood to shrink and expand in different environments. Ukuleles made in Hawaii, where humidity levels are high and then shipped to drier locations, would shrink. If the koa used for a uke was not cured (dried) completely, cracks would form on the top and/or back. The neck wood will shrink across the width more than length, so the frets, which don't shrink, would stick out. This is exactly what had happened.

Day 14: A Lot of Sanding



Now it was time to prepare the surface for finishes. I spent most of this day sanding the rest of the ukulele, working from 100 grit to 600 grit sandpaper.

Days 15-17: Applying Stain



After a final sanding with 0000 steel wool, I cleaned off the uke with a tack cloth and began applying a stain that matched the original, a light oak stain.

When I finished putting the first coat on, I could see a couple of areas that needed some additional sanding so the finish would look even on the whole instrument.

After sanding, I applied two more coats of finish over the next couple of days.

Days 18-21: Applying Finish



After the stain dried fully, I started the final finishing steps. For four days, I applied four coats of tung oil varnish. I brushed it on, and wiped it off with a lint-free rag so there would be no drips.

I let the varnish dry 24 hours before applying the next coat.

Day 22: Polishing Process



A few days after I applied the last coat of varnish, I began the polishing process.

I started with rubbing the finish with pumice. Pumice is a light abrasive. I sprinkled a little on the instrument, one section at a time, soaked a lint-free rag with mineral oil, then rubbed the wood along the grain. Pumice helps remove any irregularities that might be in the finish, like dust.

I did the same thing using rottenstone. Rottenstone is a very light abrasive. After using rottenstone, the surface began to shine.

Next, I used a clear past wax to give the ukulele its final shine.

Day 23: Stringing Up



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 Kumalae ukulele sounded great.

Day 23 (continued): Completion



This Kumalae ukulele is approximately 80 years old. I'm sure that with proper care it will make beautiful music for another eighty.

Day 24: Something Extra



The uke case does seem original to Mr. Sullivan's Kumalae ukulele. It is identical to other cases for Kumalae ukes I've restored. Unfortunately, the thin leather hinge and straps had dried out and split apart, making them unfunctional. The main part of the case was in fair shape, and the handle was still attached and functional. One metal locking mechanism for the lid still worked.

I glued a thin piece of leather to the inside of the case and to the loose end of the lid. This allowed the tail-end lid to function. With the locking mechanism closed, the lid now worked well. I also added a leather end strap to replace the one that was missing.

I added a few thin felt pads on the inside to cover the metal ends of the handle. This was to keep the ukulele's sides from getting scratched. I had noticed they were slightly exposed and the ends were a little sharp.
