

## Docent Profile: Mary Ellen “The Fabricator” Conrado

By Savanna Sargent



Mary Ellen restores an airplane's wing with new fabric.

Mary Ellen is one of many wonderful restoration volunteers at the Pima Air & Space Museum. She has proven to be a valuable asset to the museum with her rare aircraft fabric covering skill, which involves stretching fabric over the body of an aircraft. Some older aircraft structures were covered with fabric rather than metal. Whenever an historic airplane needs to be recovered with fabric, she's the gal to do it. Her skill is so valuable that in 2009 and 2010, the Historical Aircraft Restoration Society (HARS) sponsored her to go to Australia to restore some of their aircraft. During those 3 ½ month trips, she did fabric work on the DC-4, Vampire, Wirraway, and Harvard.

She assisted on other restoration projects, but only gives herself credit for those mentioned. At Pima Air & Space, she has worked on about 18 different aircraft. Some of her handy work is on display in Hangar 4, where the “Modern Aircraft Fabric Covering Process” display, explaining her process, is also located.

She originally joined the museum in 2000 after meeting another Pima Air & Space volunteer through Habitat for Humanity. She then began doing miscellaneous restoration work, eventually finding her specialty in fabric covering through the tutelage of another volunteer. When I asked Mary Ellen if there is a specific name for her skill, she didn't know of any, but as a joke, likes to tell her friends she is a “fabricator”.

One of her recent projects, the Stinson L5 Sentinel, proved to be a challenge given its unique structure. Its wings are covered with stained wood. Usually, wings have a metal structure but the L5 Sentinel has a wooden one. This meant she had to do some woodworking before starting the fabric covering process. She had never done this before, so this restoration project became a learning experience. The most difficult part was curving the wood over the leading edge. This leading edge has caused some frustration. As she was showing me the wing, one of her fellow volunteers jokingly commented on the furious hammering she was doing just before I arrived. However, I had no doubt this self-proclaimed “able bodied seaman” was up to the task.



Seaman Mary Ellen on a ship.

Before she began volunteering at the museum, Mary Ellen sailed the high seas for 10 years, serving as boatswain (boh-suh) on several traditional sailing ships. As boatswain, she oversaw the ship's daily maintenance. She began sailing in 1983, after volunteering for Galveston's Historical Foundation to help restore a 202-foot square-rigger originally built in Scotland in 1877. The *Elissa* was the first boat she had ever been on. Through her volunteer work, she learned the ropes and continued to sail for 50,000 sea miles. She saw a lot of the world as a seaman, sailing the East Coast, the Great Lakes, the Caribbean, and one trip from Australia to Turkey. She said it was a very dirty and gritty way of life, but she loved it. At the age of 54, her seafaring ways landed her

a feature in *People Magazine*'s July 7, 1986 issue. She retired at 62, taking her final voyage on the Coast Guard's Barque Eagle. A "cool" experience as she recounts it.

While I was in the restoration hangar, Mary Ellen also showed me some aircraft parts she had already covered with fabric. Seeing these parts up close enlightened me to how much detail work goes into fabric covering. On a typical aircraft, she removes the old fabric then sands and primes the bare structure. Then, she lays new fabric with fabric cement and clamps it with clothespins to let it sit. She shrinks the fabric with a household iron then proceeds to install reinforcing tape, lace the fabric to each rib, and coat with protective sealants at various steps along the way.

In total, she has spent around 7,400 hours restoring aircraft by dedicating 2 to 4 days of her time each week. When she is not at the museum, she spends one day a week at the local Community Food Bank. As mentioned earlier, she has also volunteered for Habitat for Humanity, and says she has spent the last several decades making a career of volunteering. What a great career.