During her extensive career in aviation, Nancy Miller Livingston Stratford was a trailblazer for women seeking to enter aviation at a time when it was still very much considered a man’s world. Along the way, she added an impressive list of accomplishments. Martin J. Pociask, curator for Helicopter Foundation International (HFI), interviewed Stratford for ROTOR magazine.
HFI: Nancy, tell us about your childhood, family, and formative years. When and where were you born?

Stratford: I was born June 12, 1919, in Los Angeles, California. But you shouldn’t ask a lady her age! I attended L.A. High School, where I played various sports and wrote for the school newspaper. Dad was an Episcopalian minister. Mother developed multiple sclerosis when I was 10 years old and thus was not too involved in my later upbringing, which passed without too much difficulty.

I later attended Occidental College and the University of California, Berkeley, with plans to be a schoolteacher.

HFI: But your career path was to take a somewhat different turn.

Stratford: On my 16th birthday, my brother presented me with a surprise gift — a flight over Los Angeles in a sightseeing plane. There were clear skies, and you could see for miles off to the ocean and to the mountains. I loved the view. It was a calm and smooth flight until coming in to land — the pilot made a sideslip, and it was exciting for me to feel the airplane dropping sideways to the runway. Unfortunately, my request to my dad for some lessons fell upon deaf ears at the time.

HFI: You did eventually go on to earn your CAA private certificate [the Civil Aeronautics Authority was the precursor to the FAA].

Stratford: Yes. I transferred from Occidental College to the University of California, Berkeley, in my junior year, in the fall of 1939. It was announced that a Civilian Pilot Training Program (CPT) course would be activated and that 10 women would be accepted, along with 110 men. I rushed to sign up but had to ask dad for permission, as I was not yet 21 years old. Fortunately dad did sign, bless his heart!

I and the other nine gals were assigned to West Moreau at Oakland Airport; the lads were sent to other schools on the airport.

HFI: How did you enjoy the experience?

Stratford: It was challenging! I was not a “natural” pilot (as few are), but I loved being up in the air and trying to make the airplane behave. When I first felt the sensation (as one said, “in the seat of my pants”) of properly landing three-point in a Piper J-3 Cub, I felt like I had conquered the world — and I wanted to continue to improve and learn more.

HFI: In 1940, you moved to the Los Angeles area. And in 1941 you obtained your commercial license and instructor’s ratings. What did you do then?

Stratford: I finished my commercial license and flight-instructor rating at Central Airport — just north of Compton Airport in the L.A. area — and immediately went to work as an instructor for another operator on the field. That lasted two weeks, when, following the attack on Pearl Harbor on December 7, 1941, we were all grounded as we came in from our flights.

My former instructor/operator had hired me to take care of the CPT students, but we had to move to Bishop, California (out of the 50-mile coastal zone, now a restricted area). I finished up my 10 students to their private licenses, then started with another group of 10.

HFI: By this time World War II was under way and, at the age of 23, you and 23 fellow American women decided to head across the pond.

Stratford: In December 1941 and January 1942, there were no women pilots in the services nor were any expected to be, according to one Air Corps recruiter I talked to. Then I heard of some women pilots flying in England. Renowned aviatrix, Jacqueline Cochran, the foremost woman pilot of the day, coming just after Amelia Earhart, was recruiting some American pilots for the British Air Transport Auxiliary (ATA).

Cochran happened to be in Los Angeles, so I made an appointment to see her. She was in bed with side effects from a bunch of vaccine shots, and I was told to see her secretary in New York. Things followed from there to a rail trip to Montreal, Quebec, Canada, for a checkout on an AT-6 Harvard [the British Commonwealth designation of the North American T-6 Texan], a big plane at the time. From there it was on to a cargo ship, the Winnipeg II, to cross in convoy to Liverpool, England, in June of 1942.

Early in 1942, the WAFS (Women Auxiliary Ferrying Squadron) and WASPs (Women Airforce Service Pilots), which performed similar duties for U.S. forces and were comprised of American women pilots, had not yet been formed.

HFI: Where were you stationed, and what was the nature of your service?
Stratford: First, we had some ground school and flight checkouts in the British elementary aircraft, the Miles Magister. I then transferred to White Waltham Airport, headquarters of the ATA, for advanced training — just checkouts and solos of maybe four to six hours in the AT-6 Harvard and another Miles aircraft, the Master. I also had a first solo in a Hawker Hurricane fighter. I was then seconded to a training pool where, under supervision, we began to ferry various types of single-engine aircraft and learn the procedures for ferrying, including all the forms and routines.

I was then transferred to Hamble Ferry Pool 15, near Southampton. It was one of the two all-women ATA stations, near three Supermarine Spitfire factories, which allowed us to ferry a great number of them to maintenance units and to squadrons. We also flew other “new-to-us” (solo, first time up) single-engine aircraft, such as the Swordfish, Battle, Proctor, Albacore, Barracuda, and Spitfire.

After a couple of months, I went back to White Waltham Aerodrome for twin-engine conversion in the Airspeed Oxford, a light twin. Then back to Hamble to continue ferrying different makes of aircraft, both single-engine and light twin-engines. Later on, I also had a conversion to medium twins, in the Wellington bomber (July 1943), and then again back to Hamble and later on to Prestwick, Scotland, to continue ferrying various aircraft. My final conversion (January 1944) was on a Lockheed Hudson for so-called Class 4+, which allowed me to fly nearly everything available solo or as PIC (pilot in command) except four-engines.

In between checkouts, there were normal deliveries of various aircraft. It was a progressive type of training and experience, and served us well. We also were helped greatly by a set of excellent handling notes, which had operating details for every aircraft.

HFI: What were some of the difficulties you and the other women pilots encountered on your missions?

Stratford: Because there were no radios and thus no instrument flying, nor any basic instrument training, bad weather was the foremost obstacle, which had no regard for either men or women pilots.

There were always a few of the men who had a decided opinion about women flying, as there are still some now, but most everyone accepted us as equal, and we were given equal opportunities to fly all types of aircraft, according to our progress and capability. Both men and women were given equal pay — unusual for that day or any day!

HFI: You ferried 35 different single-engine planes and 15 twin-engine planes. What were some of the aircraft you flew? Was there a favorite?

Stratford: Nine of my 50 types involved short, dual checkouts, and 41 were flown solo or as PIC (no copilots). Qualified flight engineers (nonpilots) accompanied pilots on the four-engines as well as on some twins, such as the B-25 Mitchell and C-47 Skytrain [known in Britain as the Dakota].

I loved the Spitfire — all different Marks — but especially Marks 11 and 14. I just fit well in the plane, and it flew so beautifully. I was happy to fly the P-51 Mustang and the F4U Corsair, as well as the Typhoon and Tempest fighters and the wonderful Mosquito bomber, but didn’t have as much time in them as with the Spits.

Besides these, I was always glad to see a “chit” for a Dakota, Mitchell, F4F Wildcat, F6F Hellcat (American planes used by the British), the Hurricane fighter, and even the British de Havilland Dominie, a light twin-engine that was used a great deal for air transportation. There were other interesting aircraft, such as the Fairchild Model 24 and twin-engine Avro Anson C19 that were used as taxi aircraft, taking pilots out to their starting points and bringing them back to base after completion of their deliveries.

HFI: During your time ferrying war planes to air bases throughout Great Britain with the ATA, you logged nearly 900 flight hours. What are some of your most memorable moments?

Stratford: I enjoyed all my flights to varying degrees, according to weather and aircraft, but it always gave me great satisfaction to deliver to a squadron. I recall taking a Spitfire to a Polish squadron on the south coast. One of the pilots came up to me, as I sat waiting for my “taxi” back to my base, and asked me if I had just brought in a Spitfire. When I answered in the affirmative, he told me about his flight just the day before: being shot down, having to ditch in the English Channel, and of course losing his plane. Then, in his broken English, he thanked me for bringing him “his” new Spitfire. It made my day!

HFI: In those days, a pilot’s headgear
consisted of leather helmets with goggles. Were pilots equipped with a parachute or other emergency equipment?

Stratford: The parachute was packed away in its bag, and we carried it along with a small overnight bag in case we got stuck out overnight. We wore the parachute in our ferry aircraft, where it also became the seat of our aircraft.

HFI: After the war, many pilots came home and found it difficult to find work. This must have been especially true for women pilots. After all, back then aviation was still pretty much considered a man’s world. Tell us about your experience finding work. How did you try to get your career back on track?

Stratford: It seemed that the menfolk just didn’t want to fly any more when they returned, or they wanted to be airline pilots, especially those with twin- and four-engine time. It also seemed that they would not like to instruct or come down to small aircraft. I had instructed before the war and enjoyed it.

In early 1947, I instructed at two different places, for about two months each. Later that year, I ended up in Corvallis, Oregon. The school had a contract under the GI Bill to teach some of the ROTC [Reserve Officers’ Training Corps] cadets from Oregon State College — now Oregon State University.

HFI: From 1947 to 1960, you worked in many capacities, serving as a ground- and flight-school instructor, director of training, crop duster, bookkeeper, as well as performing at air shows and delivering aircraft. It seems like adaptability was the name of the game.

Stratford: Primarily I loved to fly. But those were rather difficult times. With few students after the GI Bill, one just had to do anything and everything around the airport to keep the company going. I learned some bookkeeping through International Correspondence School so I could do the books. I even helped lift cut logs into the big wood furnace and performed janitorial clean-up. Actually helping out that way, extra hours and so forth, was one reason I kept working. The lads simply didn’t take on the extra work that was needed to help out the air taxi operator. I still say to any women and men pilots, “Do all you can to give your company a chance to succeed!”

HFI: In 1947, you earned your helicopter and seaplane ratings. You received instruction by Carl Brady in the Seattle area.

Stratford: I did have one hour of instruction from Carl Brady, just after he received his rating. Good experience for both of us. Tommy Hall was my primary instructor in 1947. A wonderful pilot, but he did not continue in aviation. I had little instruction after that. But fortunately I lucked out with my career — having no accidents and no regrets!

HFI: You were the first woman on the West Coast to receive a commercial helicopter rating, the second in the United States, and the fourth in the world. What kind of helicopters did you fly and what kind of work did you find?
Stratford: In the summer of 1947, there was a lull in instructing at the school I taught at in Corvallis, Oregon, so I was released until the start of college Civilian Pilot Training classes again in September. I went to Seattle and had about 13 hours in a Bell 47BS on floats (I soloed after three-and-a-half hours) and 14 hours in a Bell 47B on wheels. It was a fun deal!

But there was little work for choppers then, and I didn’t get back to flying them again until 1956, when Arlo Livingston decided to buy a Hiller UH-12B for the company. We did instructing and fair rides, some agricultural flying (not enough power!), delivered Santa Claus, and a little work for the government Forestry and Fish and Game Departments.

HFI: The Whirly-Girls were formed in 1955 by Jean Ross Howard Phelan, who wanted to build a community where female helicopter pilots could share and grow. That organization today numbers more than 1,700 members in 45 countries. You were charter member #4. Tell us about that early group of pilots and your experiences during the formative years of the organization.

Stratford: There were 13 original members of the organization, headed by #1, Hanna Reitsch of Germany, who had flown a helicopter for Hitler in 1938. Ann Shaw Carter was #2 and the first U.S. woman commercial pilot; Pat Swenson, with a private rating, was #3; and myself, #4 — all in 1947.

The first few years, 1955 to 1960, we met and just enjoyed talking about our experiences. These were fun years, and I think we all enjoyed the easy friendship we had with each other. Around 1960 or so, Jean said we’d have to organize and perhaps do something for women helicopter pilots. So was born the Whirly-Girls organization with a mission to raise funds for flight scholarships. In this respect, much credit, or nearly all of it, goes to Jean for her wonderful work.

HFI: In 1956, you married pilot J. Arlo Livingston. You moved to Juneau, Alaska, in 1960 and founded Livingston Copters, flying photo missions, sightseeing tours, and transporting skiers. In addition to flying, you served as bookkeeper, base operator, administrative assistant, and vice president of Livingston Copters, Inc. What prompted you and Arlo to move north?

Stratford: There was just not enough work available for helicopters at that time in Oregon. Both Dean Johnson and Wes Lematta were also helicoptering in Oregon, so work for everyone was scarce.

Mainly, Arlo was invited to do a three-month job in the summer of 1959 for the U.S. Geologic Survey (USGS) out of Ketchikan, Alaska, with a Hiller UH-12E. When he returned, he said Alaska was the place for choppers and that he was going to move to Juneau the next year. So he did!

Alo bid on some USGS contracts in Alaska and won two. He bought two more UH-12Es and hired pilots who flew to Juneau in June 1960 to start the contracts — followed by another UH-12E, with us flying up to start a base in the Juneau area on Douglas Island.

HFI: At that time you were the first and only woman helicopter pilot in Alaska. What was it like to be a woman bush pilot working out in the field? What were some of the difficulties you encountered working in that challenging environment?

Stratford: At that time (1960 through the mid-70s), it wasn’t “decent” for women to be out in the field two or three months with all these males! Actually, it wasn’t long before two women flew for the USGS in northern Alaska, having a tent to themselves and getting along just fine with all.

As for me personally, I did some of the daily local trips but settled more and more into the radio work, bookkeeping, and whatever else needed to be done, such as checking parts inventory, ordering parts, being sure mechanics wrote in the logbooks as necessary, scheduling, janitorial services, and so on.

I also alternated with my husband during the first few winters on taking residents up the hill to the base of the ski tow, for the skiers to enjoy themselves. There were a couple of times that the passengers were aghast at being flown by a woman (me), but they didn’t have time to get back out of the chopper! Later on, they all did ride with me, with smiles and no troubles. One of my trips up onto
the Mendenhall Glacier was with Sir Edmund Hillary of New Zealand, an adventurous person of his own, having climbed Mt. Everest!

**HFI:** During your career, how many flight hours did you log? How many of those hours were accrued as pilot in command (PIC)?

**Stratford:** When retiring in 1978, I had about 8,500 total flight hours in 103 types of aircraft, most of which were PIC and included about 1,500 in helicopters. I had to quit, as my hearing was getting poor, due to too much engine noise.

**HFI:** In 1977, you and Arlo sold Livingston Copters to Era Helicopters. Why did you two decide to sell, and what did you two do after the sale?

**Stratford:** We were both getting along in years. Arlo was nearly 70 and thought retirement might be a good thing. However, while we loved Alaska, Arlo could not bear to be near the old operation, so we moved to Anacortes, Washington.

**HFI:** Arlo passed away in 1986, and in 1988 you founded the Livingston Award in his memory. Arlo had been a charter member of the Men’s Auxiliary of the Whirly-Girls. The award is a lovely tribute to Arlo, and the list of past recipients is impressive.

**Stratford:** Yes, indeed. The award is given annually to a living woman helicopter pilot, a member of the Whirly-Girls, who personifies the high standards and ideals of women helicopter pilots and who contributed in a significant way to the advancement, recognition, and credit of women in helicopter aviation. I’m sure Arlo would, as I certainly do, appreciate the exploits and accomplishments of the women pilots. It just seemed right to honor those gals.

**HFI:** In addition to his being a pioneer helicopter pilot, Arlo was a past president of the Helicopter Association of America (now HAI). Can you speak about Arlo’s involvement and service with HAI?

**Stratford:** Arlo was quite involved with HAA, as it was known then, in the late 1960s and 1970s when it was struggling to become the voice of helicopter organizations. For the four years when Glenn McPherson [1969–71] and Arlo [1972–73] led HAA, the group began to become an efficient organization. The years before, it was mainly a reunion and celebration of the pioneer helicopter pilots — and it was fun! But, as usual with small groups, the organization had to grow and take on more serious aspects of an effective organization and be of use to the pilots and companies involved.

**HFI:** You received a special award from the Whirly-Girls in 2002.

**Stratford:** It was a nice plaque as a Lifetime Achievement Award, thanking me for my contributions over the years. It was and is much appreciated.

**HFI:** You are also involved with a scholarship for the Whirly-Girls.

**Stratford:** I’m really glad I’ve had the opportunity to establish and sponsor a mountain flying scholarship for the Whirly-Girls. It is so tough getting experience, especially flying in mountainous and unexpected places. Having that training, the recipients then have a chance to advance in their career — and definitely fly more safely.

**HFI:** In addition to the Whirly-Girls, what other organizations do you belong to?

**Stratford:** Twirly Birds, Silver Wings,

That same year you were invited by the British government to return to London to receive a medal, the Air Transport Auxiliary Veterans Badge, for your service in the ATA during the war. Presenting were Prime Minister Gordon Brown and the Parliamentary Under Secretary of State for Transport. You were the only member of the original 24 women recruited by Jacqueline Cochran to attend. Did you recognize any of the 51 surviving pilots, engineers, and ground administrative personnel who served in the ATA during your time of service?

Stratford: Honestly, there were only a few. Many had died, and others could not make the gathering. However, I did see several of the British women pilots with whom I had flown and even a former air cadet, the youngsters who flew with us occasionally in twin-engine aircraft to operate the emergency gear that would be out of our reach.

HFI: You also wrote a 220-page memoir titled Contact! Britain! A Woman Ferry Pilot’s Story during World War II in England, written as a message to your father.

Stratford: I wrote the manuscript for Contact! Britain! while waiting to come back to the USA in 1945. A friend of mine here saw and read it and insisted I publish it. I wasn’t sure, but my niece picked up on it and helped me publish it in January 2011. Anyone interested in acquiring and reading the book can find it at bit.ly/NLSbook. It was fun to do and gives a different aspect of aviation and wartime flying. Contact! Britain! is also available through Amazon.

HFI: I’m told your apartment houses an impressive collection of memorabilia, photos of vintage aircraft, and model planes and helicopters that you flew during your career.

Stratford: I do have a few models of the aircraft that I flew. Great memories! The Whirly-Girls, bless their hearts, presented me in February 2014 with a model of a B-25 Mitchell with British markings, which, with the Mosquito, Beaufighter, and Douglas C-47 Dakota, was my favorite twin-engine aircraft.

HFI: Nancy, do you have any advice for the next generation of helicopter pilots — particularly women pilots who want to advance in aviation?

Stratford: I really don’t know exactly what to say, as the environment is so different today. However, it still remains that one needs the passion and interest in learning to fly, and then the confidence, patience, and ability to do whatever job is necessary for the company, including nonflying jobs. You also need a ready smile and a sense of humor throughout it all!

If you really love to fly, you will be able to find a way to do it in civilian aviation or the military. This goes for both menfolk and the young women. Make the effort! Gung ho!

Martin J. Pociask is curator of Helicopter Foundation International.