

the 49th

OFFICIAL PUBLICATION OF THE INTERNATIONAL WOMEN PILOTS ASSOCIATION

November, 1979



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History of the Ninety-Nines, Inc.

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ON THE COVER

From Amelia Earhart's license in the foreground to Dr. Margaret Rhea Seddon, one of NASA's six women Astronaut/Mission Specialists, the Ninety-Nines have filled their first fifty years with a proud heritage. Stories inside.

Cover photo: Kit Lewis

Special thanks to Guest Editor Jan Million for her invaluable assistance in producing this issue.



Space Specialists Carolyn Griner, Ann Whitaker and Dr. Mary Helen Johnston after successfully passing their checkout in pressurized space suits at NASA-Marshall Space Flight Center. More Photos Inside

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Membership Count 5104 as of October 24, 1979

the 99 news

USPS 390-740

Volume 6 • Number 9 • November, 1979

Betty Gillies Remembers Early Days	6
<i>Episodes from her early days in aviation</i>	
Learning to Fly in Spite of Myself	11
<i>The sprouting of wings</i>	
99 Headquarters	5
<i>From a humble beginning to a 5-acre home</i>	
99s & Aviation—Years of Change	8
<i>You've come a long way, baby</i>	
Reflections on the Past 50 Years	4
<i>Excerpts from President Thon Griffith's Annual Message</i>	
To the Shores of the Artic Ocean	12
<i>A flying adventure to the frozen north</i>	
A Salute to Women in Aviation	15
<i>"If enough of us keep trying, we'll get someplace"—AE</i>	
We Couldn't Have Done It Without YOU!	31
<i>The many faces of a Ninety-Nine</i>	

Advertisers

Cessna Inside Back

Circulation Information

The 99 NEWS is published ten times yearly. January-February and July-August issues are combined. Annual subscription rate is \$7.00 and is included as part of the annual membership of The Ninety-Nines, Inc. Subscriptions are available to non-members at the rate of \$7.00 per year.

Postmaster: Please send Form 3579 to: The Ninety-Nines, Inc., P.O. Box 59965, Will Rogers World Airport, Oklahoma City, OK 73159.

Reflections on the Past 50 Years of Ninety-Nines and Aviation

—excerpted from President Thon Griffith's Annual Message



Fifty years ago the issuing of pilot's licenses was a relatively new procedure. Lindbergh's crossing of the Atlantic Ocean had occurred only two years before, commercial aviation as a means of transportation was in its embryonic state, airlifting of cargo was unknown and the dirigible was looked upon by many as the future of transoceanic aviation!

Today we see thousands of people transported daily across oceans and continents. We see valuable cargoes of all kinds measured in tons hauled daily and currently flourishing general aviation transports as many people on intercity flights within the United States as do 25 of the 31 air carriers combined. What tremendous progress aviation and The Ninety-Nines have made in 50 years!

What has been The Ninety-Nines' role in this astonishing progress? From a mere 117 licensed women pilots in the United States fifty years ago, to an estimated 18,000 today—combined with women pilots of other countries, Ninety-Nines have qualified as Flights Engineers, First Officers and Captains on airlines in several countries and are daily carrying out their duties in the same cockpit with men—or in some instances with other women. Ninety-Nines by the hundreds fly as corporate pilots and many have been accepted as pilots in the Armed Forces. Ninety-Nines are active in the space program and are in key positions in the design and manufacture of aircraft aerospace vehicles and equipment. The sit on the policy making groups affecting all segments of aviation, and are active in the political arenas where decisions affecting the future of aviation are made. As I have said before, a Ninety-Nine can represent almost any walk of life. We have grown—we have achieved—and

we will continue to expand our influence in the fields of aviation.

A significant event of our 50th year was the publication of our book *History of The Ninety-Nines, Inc.* This book, registered with the Library of Congress, is a great credit to the organization. It is the unique and remarkable work of several dedicated Ninety-Nines.

Our Headquarters, located on Will Rogers World Airport in Oklahoma City, continues to receive valuable memorabilia from our pioneer members and other dedicated members and friends. During this past year we set up files for the Archivist we hope to have in the near future to relieve the load on our Headquarters Staff.

Headquarters now has a tour tape, made by former 99 NEWS Editor, Jan Million. By carrying the small cassette tape recorder with you as you slowly walk through the Headquarters, she explains the items and articles on display. This makes it convenient for visitors because they may take as long as they like to pore over old 99 NEWS magazines, examine the memorabilia in lighted cases, spend time looking at the many

pictures and to see the fine library we are building.

Dozens of chapters now hold "Flying Companion Seminars"—a vital contribution to educating the non-flying public. Many chapters put on Safety Seminars and three-day Instructor Revalidation Clinics.

At our Golden Jubilee it was announced that another Ninety-Nines section has formed—this one in New Zealand. This past year the South Africa and South Central Africa Sections chose to amalgamate and be known as Africa South. We have grown to 164 chapters. With the two sections in Canada, eight in the U.S. and nine in other countries, plus several Members-at-Large (those who live in countries where no sections exist) we have grown to over 5,000 members. We recognize our need to add to our strength by welcoming capable and energetic women to our ranks to further the goals of women in aviation and of aviation in general.

We came into being when aviation was an awakening child. We have grown with aviation and become an integral part of it. Our future is unlimited. 99

Courage

Courage is the price which life exacts for granting peace.
The soul that knows it not, knows no release
From little things.

Knows not the livid loneliness of fear
Nor mountain heights, where bitter joy can hear
The sound of wings.

How can life grant us boon of living, compensate
For dull gray ugliness and pregnant hate
Unless we dare

The Soul's dominion? Each time we make a choice we pay
With courage to behold resistless day
And count it fair.

—Amelia Earhart

99 Headquarters

The Ninety-Niner, a mimeographed newsletter that served as a communication link between members in the earliest years, tells about the first Headquarters in the January 15, 1933 edition.

"Official Headquarters for the Ninety-Nines and for all women pilots in the United States are at the office of the National Secretary-Treasurer, Laurette M. Schimmoler, at Cleveland Airport, Cleveland, Ohio. On December 11, the National President, Amelia Earhart, presented a flag which says—Woman Pilots "99" Headquarters and this completed the designation. Margaret E. Lennox and Abby R. Dill, two Cleveland Ninety-Nines, were also present at the little impromptu ceremony."

In the early years, the Ninety-Nines officers handled the entire business of the club themselves. As the organization grew, some more permanent arrangement seemed desirable, and in the early Forties, the Ninety-Nines made arrangements to have the NAA in Washington, D.C. handle the organizational records, etc. Continued growth made it feasible to set up a separate office in New York City in 1951, which was attended by Alice Klutas.

Headquarters was moved to Oklahoma City in 1955. Office space was rented in the Will Rogers Terminal Building and Ninety-

Nine, Dorothy Morgan was hired as the first secretary with the task of setting up the books and records. New and larger facilities became available when a new terminal building was constructed in later years.

The concept of our own separate Headquarters building was presented in the early '70s. A five acre plot was made available by the Oklahoma City Airport Trust on Will Rogers World Airport, and a 5000 square foot facility was built and dedicated in 1975. The Ninety-Nines are currently using a little over one half of the space available; the remainder is being leased to AOPA's Title Search offices.

As well as containing the organizational records and business offices, our Headquarters houses treasured memorabilia given to the organization over the years. On display are many items which once belonged to Amelia Earhart, including the bracelet and scarf which she wore on many record-breaking flights as well as an early license and trinkets she accumulated during her flights. Numerous photographs are on display as well as scrapbooks depicting earlier years in the organization. Collections belonging to other early-day women pilots have also been presented to Headquarters and are being readied for display.



(Above) Amelia Earhart flew from Detroit to Cleveland in a blinding snow storm to honor the women pilots in the Cleveland area and to establish the first Headquarters for women pilots on any airport. (L-R) Laurette M. Schimmoler, National Secretary-Treasurer; Beverly Dodge, Margaret "Peggy" Lennox, Abby Dill and Amelia Earhart.

(Below) The Ninety-Nines International Headquarters is located in Oklahoma City on the grounds of Will Rogers World Airport.



Betty Gillies Remembers Early Days

Betty H. Gillies, a Charter Member of the Ninety-Nines, has remained an active pilot throughout the 50-year history of the organization. She was on hand at the 50th Anniversary Jubilee in Albany where she recalled for Ninety-Nines and guests at the banquet, some of the episodes from her early days in aviation.

We reconstruct for you here, from notes Betty used for her speech, a picture of aviation and the roles of women in it around the time the Ninety-Nines originated.

In 1929, when an organization of women pilots was first suggested, there were 117 licensed women pilots. To be licensed in those days, one had to accumulate 10 hours of instruction and 10 hours of solo. And what was the climate for women who wanted to fly? Here is a quote from *Aeronautics Magazine* dated August, 1929 which addresses that point.

"The possibilities of the airplane for the sportsman are unlimited and the smart people have taken to flying with a vengeance. And how the members of the FAIR SEX are jumping at the opportunity to get ahead of their lesser halves! While friend husband is busy in his office, friend wife can be found at the field taking lessons or getting in her solo time. For this is one game that can be played by both sexes and it has come into its own right in the midst of the period when equality of sexes is an issue."

Please note this date—AUGUST, 1929!!!

And the AIRPORTS! What were they like?

On the occasion of the opening of a brand new airport in Trenton, NJ, I was interviewed by the local newspaper. From the Trenton paper dated October 26, 1929, here is what I had to say about this modern, new airport.

"This airport is one of the nicest in the country. I am deeply impressed by the fine turf, which I prefer rather than sand. In fact, this is one of the few times that I have left an airport without my eyes full of sand!"

After that came hard surface runways. No brakes. The difficulty of taxiing cross wind. How to do it in a Moth at Newark airport! And there was AERIAL BOMBARDMENT!

Date line: New York City, December 19, 1930, with partial quotes from the *Milwaukee Sentinel* article dated December 20.

"Four women flyers perpetrated an air raid on New York City at noon and



bombarded the midtown sector with appeals for contributions to the \$500,000 fund which the Women's Emergency Aid Committee is raising towards the Salvation Army's \$2,500,000 budget for unemployment relief. The four women flyers (Miss Marjorie Doig, Mrs. Betty H. Gillies, Mrs. Opal Kunz and Mrs. H. Foster Bain) were escorted by a number of Army, Navy and Police planes, making quite an impressive procession in all. Circling the Woolworth Building they flew uptown toward the Grand Central zone and proceeded to shower the crowds with literature advertising the benefit supper dance to be held at the Biltmore under the auspices of a subcommittee composed of women flyers. Mrs. Samuel Clark, Chairman of the committee (but not a pilot), broadcast a talk from a plane loaned by Charles L. Lawrence who heads a concern known as Voice of the Sky, Inc. From an altitude of more than 1,000 feet, Mrs. Clark's voice was clearly audible above the roar of traffic. "These wonderful girl flyers have formed a team to help us. Come to their party at the Biltmore this evening and help us go over the top."

Imagine throwing papers out of an airplane in 1930.

And WE THREW FLOWERS, TOO! A New York paper told about it in September of 1933.

"Fifteen feminine flying aces thrilled thousands yesterday with an NRA Air Pageant over Manhattan. Ten planes, led by that of Elinor Smith, carried the flyers through maneuvers and ended with dropping bouquets. This was to advertise the National Reconstruction Act when Gover Whalen, City Chairman, unfurled a huge NRA banner atop the RCA building in Rockefeller Center."

I have a note in my diary about that! "A very much disorganized formation of women pilots happened over NYC this morning in honor of the NRA. And I was one of them, flying #2. It was all terrible. Never again!"

AND WE HAD AIR TOURS in those days. (Fortunately, Emergency Landings were practiced continuously by all pilots in those days!)

I remember particularly the United States Amateur Pilots Association Tour which commenced at Hicksville, Long Island on a very cold January day in 1932. Its ultimate destination was Miami, Florida. There were 22 aircraft on the tour, and many of them were open cockpit. On the second day as the armada approached Pinehurst, North

Cont. Pg. 7

Carolina, the weather suddenly deteriorated. Only four planes made it into the airport (**They had not** stopped for tea at Richmond!) and the rest of us were scattered all over the place.

(Remember, in those days we did not have aircraft radios. When in trouble, we followed the iron compass and identified the towns by reading the signs on the railroad stations!)

- The patients in Dr. Dickies' Sanatorium in Southern Pines were aghast to see an airplane settle over the trees in their backyard. Many of the trees had to be cut down in order to get the ship out again under its own power.

- Tiny Goddard landed her Monocoupe in a recently cleared pasture near Cameron, N.C. It was very rough. Tree stumps had to be removed before Tiny could fly the Monocoupe out.

- In a Waco F, I picked a fairway of the Mid-Pines Country Club, about two miles from the airport, and stopped rolling about six inches from a sand trap. (I recall flying up and down the railroad track with the water tanks going by, and then a Stinson coming on in the opposite direction.)

- Powell Crosley's big seven-passenger twin-engine Douglas Amphibian, piloted by Eddie Neimeyer, buzzed me and then landed on a golf driving range just over my head.

Aboard were Powell Crosley, Mr. and Mrs. H. S. Weaver, George Rand, Major Paul Burwell, C.B. Allen (Aviation Editor of the *New York Times*), and all of our excess baggage! This was the "Official Airplane".

- And George Pynchon put his aircraft down on another golf driving range—on Midland Road between Pinehurst and Southern Pines. He had three passengers.

So it was **AND NOT ONE AIRCRAFT HAD EVEN A SCRATCH ON IT!** The following day found them all safe and sound at the Pinehurst Airport.

AND WE WERE KIDDED. Here is an example from the *Allentown Morning Call* of June 26, 1932.

"Ode to Lady Fliers"
by No Gentlemen

There are no horses in the sky
So, Lady, won't you take a chance . . .
Can't you even learn to fly
Without those GD riding pants?"

And here is still another, also by an unknown author.

"I think that I shall never see
A student quite as dumb as she.
She who wears, it might be said,
A nest of cuckoos in her head.
Whose lovely hand is tightly pressed
Upon the stick, like one obsessed—
Who banks too much or not at all—
Who flies nose-high into a stall.

Fools like her can start a spin
That God, Himself, can't stop again!

But enough of that.

In closing, I would like to share with you my poem written to read at the 10th reunion of my high school class at Ogontz School, May 1936:

"If You Have Flown"
by Betty Huyler Gillies

There are no words that can express
The magic of that wilderness,
That wilderness away up high
Where banks of clouds float softly by
And hide the problems of earth below.
But then you know,—
If you have flown.

If you have flown, then you know
The beauty of the world below,
The meadows green, the water
sapphire blue.
You've felt that it belonged alone to
you.
And as your ship obeyed your
slightest will
You've felt a thrill,—
If you have flown.

For to those who sail the sky above
Comes peace of mind and under-
standing love.
There is no bitterness in the sky
As gently earth and clouds drift by.
All is beautiful, serene,—
You know exactly what I mean,—
IF YOU HAVE FLOWN.

The Ninty-Nines Meet

1929



The first Ninety-Nine meeting was held November 2, 1929 at Curtiss Field, Valley Stream, New York.

1979



Fifty years later, The Ninety-Nines celebrated their 50th Anniversary Golden Jubilee in Albany, New York. Over 600 members attended the festivities.

The 99s & Aviation — Years of Change

By Mardo Crane

Fifty years. What a lot of years. What a lot of changes we've seen.

Ours is an organization made up of highly talented and **individualistic** women pilots. We sometimes have explosive differences of opinion. In some ways we are hampered because we are an organization of unpaid volunteers—from the President to the chapter member. Volunteers have a way of drifting—in and out of the mainstream of the current 99s' activities and commitments. But, we have a steady asset that most volunteer organizations don't have—our Headquarters. We have come a long way from the Curtiss Field hangar.

So, how was it **then**? And, how has it all changed? Will fifty years of gradual change in flying cause radical change in some of the philosophy and aims of our organization?

The purpose of this article is to get you to think about "the way it was", and "the way it has become." The interesting views expressed were taken from tapes and letters from a few of our remarkable leaders.

We remember Charter Member, Phoebe Omlie. She could make a "politic" person feel uncomfortable with her blunt honesty. Her early-day accomplishments are part of aviation history—wing walker in a flying circus in 1920; record parachute jump in 1921 when she was 18; early women's racing; flying school owner in 1923; first woman to get a transport pilot's license in 1927—just to mention a few.

Phoebe was very much disturbed over what she termed the "mutilation of facts" concerning aviation history. She was especially incensed when the news media did not publish the fact that Helen Richey was the first woman to fly as co-pilot (1934) on a commercial airline (Central Airlines), giving credit instead to a Colorado pilot (a 99, who apparently had little control over what the publicity people said about her). Phoebe, Louise Thaden, Helen McCloskey Rough, and Nancy Harkness Love drew up and signed a petition in which Phoebe stated, "The news media and the authors of recent books have been so flagrant in the coverage of aviation history, that steps must be taken NOW to correct the mistakes that are abundant."

Phoebe was disappointed that more "aviation folks, including 99s" wouldn't take an active part in preserving "the true aviation history for posterity." She felt, further, that when community meetings were held, "aviation people are very conspicuous by their absence." Phoebe believed that the 99s and other aviation



Phoebe Omlie



Helen Richey

people missed the boat when it came to a chance to set the general public straight on both true history and the problems of aviation.

Phoebe was one of Amelia Earhart's greatest friends and staunchest admirers. She was the only **woman pilot** (according to her own statement) who saw her off at Miami for that "last flight". As one result of this fact, she became convinced that the 99s "have ridden the coat-tails of Amelia ever

since she was lost." She felt that some 99s manifested this "coat-tailing" for "their own aggrandizement". She said, "I guess I knew Amelia as well as anyone outside her immediate family, and she would be the last to condone such action."

However, as Phoebe doggedly badgered the 99s to get more involved in "private aviation" (now called general aviation), she also asserted, "There are many 'gals' in the 99s who are really dedicated to the truth in aviation history and should be given recognition. It isn't only the "head-liners" who have contributed to aviation; it is the ones who have diligently worked to try to build a sound, stable industry in a quiet way. Living in the very beginning, and being a charter member, I am naturally interested that the organization continue."

Louise Thaden is another of our "great ladies of the 99s". She may not explode like Phoebe, but she waits until a few direct words let her nail down the facts. Her credits in early-day flying are reflected in her book, *High, Wide, and Frightened* (if you are lucky you have a copy, for it is now out of print). She was catapulted into international prominence as a pilot in 1936. The first time women were allowed to fly in the previously all-male Bendix Trophy Race—**Louise won it!** The general public loved it and her.

Of the early air races 1929-1938, Louise

Cont. Pg 9



Louise Thaden

says, "Aviation was new. The first National Women's Air Derby caught the fancy of the public. Three towns—Pecos and Midland, and one other—actually bulldozed out airports so that the women would come in. The crowds were tremendous. There was great promotion, thanks to Cliff Henderson."

Louise goes on to comment upon the changes in aviation from the racing and air show types of activity.

"We were flying for the most part, good aircraft, but no manufacturer had done anything to really develop and improve the plane. Competition in air races and shows brought this about, plus the big purses Cliff Henderson was getting—not from aviation, but from business. Suddenly the aviation industry seemed to get the message and began to add this and that. As a result, 3 years after the start of our Derby, civilian aircraft were out-performing the military. Consequently, when WWII came along, instead of being caught with our britches clear down, we were caught with them only half way down. Money started coming to manufacturers from the government, and we began to see faster, more efficient aircraft. This is the time, I think, when the fun-and-games, and even some of the basic blood-sweat-and-tears that we had known began to change. Of course to gain something in aircraft, we eventually had to lose something of the fun part. But so-called 'progress' always makes for some change that is questionable. Now flying has become so complicated, that many of the old time pilots wonder if maybe we have 'perfected' the fun out of personal aviation."

And how did the 99s adapt to a new concept of flying?

"It wasn't only the plane that had to be changed," says Louise. "It was the attitude of the male-pilot's world toward women. Our idea was to interest women in flying. To that end, with me as secretary, and Blanche Noyes as treasurer, more or less holding the organization together, Amelia as first president felt very strongly that her biggest job was to reach women and get them flying. So she made many talks and became well-known, which was good for the 99s. We had to prove that women were good pilots. In an age where some men didn't think a woman should drive a horse and buggy, much less drive an automobile, it was a job to prove that females could fly. We all, in our own ways, tried to push it, but Amelia probably had more determination.

Are there too many differences of opinion now, as to what is really the destiny and ultimate job of the 99s' organization?

"Perhaps," Louise says, thoughtfully. "But you must realize that our group is made up of many old timers, like you and me. I'd make a guess that at least 50% are the newer pilots, who never had our type of 'basic training'. They fly with VORs, and other navigational aids we never dreamed of. I bet you still fly with **your** finger on the map." I admitted, I did. "We started out with a

purpose of communicating with other women pilots, and proving we could fly in a male pilot's world. We wanted to fly together—a fellowship in the air sort of thing. I still believe this is one important part of 99s we shouldn't forget. Yet, unless a 99 flies into the smaller airports by choice, she will be glued to a transportation-only type flying. She will miss a lot of fun!"

Louise Thaden is one of our beautiful pilots, and she does say it all beautifully, too.

Another early "bird", and Charter Member of our 99s, is the indomitable Nancy Hopkins Tier, still an active pilot. She is also a very candid person.

Of early-day flying she says, "Pilots and others were mostly friendly—certainly more so than now, when it is all taken pretty much for granted." In her opinion, "We formed the 99s to keep in touch with one another. I still think that is the best part. I do not approve of the present statement that 'we are exclusively charitable, educational, and scientific'. It is not the truth. We do these things on occasions." And she believes that there are two reasons we don't attract more women fliers to our ranks: One, we have too many members who don't fly; and two, the monthly meetings are often dull.

Nancy thinks that proficiency races are good, that they will adequately replace the Powder Puff Derby, and bring in as much or more favorable publicity. She believes 99s should take part in programs such as the CAP. She is convinced that we should fly the small airports and encourage this direction as a sport. "Small fields need our support. We are a bane to the large ones."

"Teddy" Kenyon is another Charter Member who still flies, and has her helicopter rating. Her claim to fame after her 1929 private pilot's license acquisition was



Nancy Hopkins Tier

the job with Grumman Aircraft as a test pilot in the early '40s. "Fighter Hell Cats, Bear Cats, Bomber Avengers, and Amphibians—what a barrel of fun!"

"In the old days," says Teddy. "We had a ball because there were so few of us, and such sport to run out and greet anyone who came in and find out where they were from, and so forth. Today people are busy with their own things. Even a small airport, such as I fly out of, you are scarcely noticed. There is no friendly smile any more, and I do miss a smile here and there."

Cont Pg 10



Teddy Kenyon



Teddy muses over today's pilots who, as she puts it, fly and are trained on avionics, and seldom know where they are, or enjoy pure flying and the scenery. They don't know the "iron compass", as they used to call the railroads, and miss the excitement of true navigation. She believes both professional and 'fun' flying is needed. However, a pilot does have to take it up as either a sport or a profession, because of the expense involved in each. And Teddy believes that although all 99s have different ideas of what they want to accomplish, they all do extremely well, whatever their choice.

Enterprisingly, Teddy has invented an instrument which "makes it easier to know what you are doing when you can't see anything. It is really quite simple. When it is perfected further, I want to consult the 99s and see what they think of it." She promises to let us know.

One of our "great" 99s is a former International President, Betty McNabb. Although she didn't start to fly until 1951, she is one of our 'senior' pilots. Her determination and verve is certainly demonstrated by her very recent acquisition of her ATR—an ego trip, she admits, for she doesn't intend to use it commercially. She has about 7,000 hours, during which time she accumulated many top ratings—Commercial, Instrument, Instructor, Single Engine & Multi-Engine Land & Sea, and Glider.

She uses her plane in her business and for pleasure. She admits she couldn't afford it for pleasure only, and that the professional pilot is here to stay. She says, "The cost of a plane is out of reach for most pilots—ten times what a car costs. Because of this fact, and because we don't seem to be making good use of our smaller airports, the picture of flying for fun is going out to stay out."

Betty has some provocative things to say about the business of attracting other women pilots to our organization.

"I agree we don't do enough, but this is because the name has to be explained. Much as I love the name and how it evolved, I must admit it sounds whimsical. "99s" has to be explained, and thus not knowing what it means, women pilots' attention is not immediately, and often never, drawn to it. Nor does it cause a deep desire to become a member. I tend to agree with those who want a name change. It could be the 'Women's International Association of Women Pilots', as one suggestion, and still carry the sub-title 99s."

Betty also feels, as did most of those interviewed, that the 99s' meetings don't amount to much, or enough, nowadays. Professional women, who also fly, have too much else to do to drop everything, maybe fly or drive a good distance, for a meeting made up of reports and light talk. She believes, "There is nothing in aviation now that women don't do and do well", and that there should be enough interesting and important programs to make a meeting worth coming to. "Some chapters are very



Betty McNabb

active in this regard, and they have found, as I did, that what you get out of 99s depends 100% on what you put into it. Recognition comes by work. This is one reason I believe we should keep former active members in the organization. These would be listed as "Supportive Members"—members who believe in the 99s even though they can have limited participation.

"While originally the women wished to present a united front against a majority of men, most of whom didn't want women in aviation to begin with, now our aims have changed. We have a wider spectrum which covers everything in aviation. Although women have broken the barriers, they realize that they must do everything better than their male counterpart. We must chip away yet at some of the die-hard male chauvinists, from M.D.s to Pilots."

Betty thinks she may have had a small part in getting women into the airlines cockpit. She made a talk before the University of Southern Florida, and in her usual frank way she expressed in no uncertain terms WHY she thought women would do as well as men in the airlines. To her surprise the AP picked up her remarks. As a result, among her many letters and phone calls, came calls from 3 different airlines. They wanted her to give them names of women she thought could qualify, and stated that, "We will give them jobs". It does pay to be heard.

Another past International President, Alice Hammond, expressed a conservative view in regard to encouraging women pilots to join us. And while she believes most chapters "are trying to welcome new members dedicated to the same ideals as we are, to exchange ideas, to donate time to educational projects, and to be ambassadors of good will for general aviation," she does not approve of actively soliciting such membership. She feels that posting notices about the 99s in airports is "advertising" for members. She does not believe we should be primarily interested in "numbers".

Alice joined the 99s two-and-a-half years after it was founded, and recalls with



Alice Hammond

pleasure the uncomplicated, informal organization and the comradeship of flying members. She declares that today "the place for the private non-professional or non-instrument rated pilot is away from the high density areas. General aviation has changed immeasurably since I got my ticket 48 years ago!" She remembers the Rand-McNally railroad charts of the early days, and the contrast between the unsophisticated plane of yesterday and the avionics-oriented plane of today. Yes, she agrees, some things have been added both to aviation and to the 99s with today's challenges.

There will come a time when the "old" will be gone—it almost is now. Then, as the "new" in aviation completely takes over, it may well be the 99s who will use this change to "grow". We may differ as to how, but we should listen, as we have in this article, to those who believe in our organization and want to have all the best in aviation for it.

About the Author



Mardo Crane learned to fly in 1933. She joined the WASPs in 1943 and two years later became a Ninety-Nine. A writer by trade, Mardo's works include "Fly-Down Of The WASP" and "Ladies! Rev Up Your Engines! (PPD)". The last book is the story of the Powder Puff Derby which she founded in 1947. Mardo is a member of the Aviation & Space Writer's Association and a member of The Author's Guild. She is also a past editor of The 99 NEWS.

Learning To Fly In Spite Of Myself

By Lonnie Wilhelm

The summer dragged on, long and hot. 'The hottest summer in 200 years' said newspaper headlines. Here we were, my husband, myself, and two children, on a long-anticipated return trip to Europe. Four sweaty bodies were packed into a small, non air-conditioned, German Ford for six weeks of sweltering driving over the major portion of the continent of Europe. For this we had saved and skimped for years on a teacher's salary. The driving seemed interminable; my humor became as cracked and brittle as the German autobahn pavement that buckled from the heat; I yearned for the small comforts of relief and rest.

Experiencing great relief while crossing the Atlantic in a Boeing 747 jet on the return trip home, I suddenly realized: I'm not afraid of flying any more! In fact, as the revelation sunk in, I discovered something even more startling—I **LIKED FLYING!** It beat the heck out of traffic jams and crazy drivers. It was as safe as, no—safer than, driving in the fanatical traffic of Rome and Paris. It was comfortable, convenient, fast, and—best of all—it was **COOL!**

The solution to summer heat and lengthy automobile trips was suddenly simple. From now on we would travel by air. My husband could learn to fly!

My marvelous idea, however, was immediately and abruptly squelched. "Sorry," my spouse responded curtly, "I don't have the time to spend on flying lessons!"

"Well, if I can't fly, I won't ever go anywhere again!" I announced loudly. "Moreover," I continued in my instant insanity, "if you won't learn to fly, then I will!"

My statement was received with general amusement. Mom—learn to fly! Mom—the person who flew only under great duress! Mom—the person first in line at the flight insurance counter! Even I must admit that I was everyone's last choice to begin pilot training.

Why had I been so frightened of flying? Was it too much of a miracle for me to accept? Every time I saw a plane lift off, did I secretly disbelieve that it could fly? Was it blasphemy to expect that thousands of pounds of airplane could defy nature, gravity, and possibly even God? I saw, but I did not believe.

The folly of publicly announcing my imminent flight training became apparent. Once we were home, my initial enthusiasm subsided rapidly. As I reviewed my position,

my earlier fears reasserted themselves. I had never flown in a small plane before. I hoped my husband would reconsider, and let me off the hook gracefully. No such luck. I had to begin flight instruction or listen to what would undoubtedly be an endless array of jokes. After a week of procrastination, I called the local airport. My pride was on the line.

Prior to my first lesson, I weighed my chances of survival with a sense of finality. I cautiously explained to the instructor that I probably would be unable to do this. After all, I am a woman saturated with the inhibiting concept of "woman's place." I had no understanding of aerodynamics or engines or mechanics.

Ignoring my protests and describing the importance of a thorough preflight, the instructor commented, "These planes are maintained in pretty good condition, but in the course of your flying career, you will probably fly some real clunkers." **IN THE COURSE OF MY FLYING CAREER! WOW!!** Powerful words, those. Now it was too late to back out and disappoint this nice person who believed that I actually had a flying career in my future. Listening carefully I walked around the plane, checked cotter pins, and repented heartily for past sins and transgressions.

Everything was a blur of confusion as I taxied to the runway for the first time. The run-up completed; the throttle was pushed forward. Suddenly—we were flying! The awe of sudden flight was overwhelming. I felt a peace, a pleasure, a love that transcended fear and ignorance. There was

no fanfare, no dramatics. Just a simple—yes, even natural—transition into the sky. No longer mortals, but gods, we.

My instructor, having guided so many others through this initial flight, reminded me of my responsibilities to the plane. Unfamiliar words bounced off my brain. "Watch the plane's attitude!" Attitude? What does that mean? Throttle? Do I push or pull? Tachometer? Where? Turn to a heading of north? Ohmygosh! Where's north? Look at the what? The D.G.? What's that?

So many new things to learn. But learn I could. And—with much pain and forbearance on the part of our instructors—learn I did. It was not easy. I often made things doubly difficult for myself through my own ineptness and ignorance. But in the process I became a changed person.

The exhilaration and the grandeur of flight was mine. Very simple. I fell in love. In an inexplainable way, my love affair with airplanes enveloped me in a larger and greater essence than I have ever known or experienced before. In learning to fly an airplane I found that I could learn that which I had previously thought to be impossible. I encountered new learnings and new understandings that have added a richness of new meanings to my life.

Flying is liberation beyond the rhetoric of any movement or group. Flying is a gift of joy. A new world has unfolded before me—a world to which I belong. It is a world in which I am accepted. It is a world in which—at last—I am home.



Lonnie Wilhelm

About the Author

Lonnie Wilhelm had accumulated over 300 hours by the time this article was written, and was conscientiously working toward her instrument rating with plans to follow up with a flight instructor certificate.

She is the mother of two teen-age sons, a schoolteacher in a junior high school in Lawrence, Kansas, and the wife of a 110-hour pilot. (Yes, he finally decided to get his ticket after Lonnie got hers!)

Lonnie maintains that nothing she has ever done has given her as much pleasure and sheer joy as learning to fly.

To the Shores of the Arctic Ocean

By Sandra Dexter

Alaskans are notorious for their tall tales of life on the last frontier, and justifiably so. What is sometimes difficult for an "outsider" to appreciate is that no embellishment of these stories is necessary to give them that flavor of the unique. It's built in! It's part and parcel of life in the 49th state. And it was all there for the Alaska 99s July fly-in to Prudhoe Bay, a weekend of superlatives!

Undaunted by the date, Friday the thirteenth, 17 members, spouses, offspring and friends of the Alaska Chapter gathered at the Anchorage Flight Service Station at Merrill Field for a pre-flight briefing. The cloudcover and threat of showers was limited to the Cook Inlet-Susitna Valley area with excellent VFR promised northward. By 7 p.m. our 7 planes were airborne.

The 2½ to 3 hours beginning our odyssey took us over terrain familiar to most. Passing over Talkeetna, I reminded my friend and co-pilot, Jeanine Delgman, that if we were turned back by adverse weather all was not lost. The annual Moose Dropping Festival was scheduled for Saturday in this sleepy little town of homesteaders nestled at the confluence of 3 rivers and in the shadow of North America's tallest peak.

Mt. McKinley was obscured as we passed, but visible were the terminal moraines and portions of Ruth and Eldridge Glaciers which flow down its eastern slopes.

Roughly paralleling the Alaska Railroad through Broad and Windy Passes we continued past the entrance to Mt. McKinley National Park and into an area of active coal mining. The Usabelli Coal Mine offers in a microcosm what many Alaskans envision for our state as a whole with industry and nature combining a compatible existence. The state's largest coal mine extracts 650,000 tons annually. Within sight of the mining operations lives a healthy herd of Dall Sheep. A successful reclamation project begun in 1971 has drawn nearly 100 sheep to graze on the growth from hardy seeds planted to cover evidence of strip mining.

At the confluence of the Nenana and Tanana Rivers we were greeted by 5000 feet of asphalt, runway 3 at Nenana Municipal Airport. The town of 475 is best known for its gigantic Ice Pool (legal for residents of Alaska only), the biggest in the world. A tripod set on the spring ice tumbles with the surging waters on a day (or night) in April (or May) and stops the official clock. At \$2.00 a guess many Alaskans test their luck at guessing the exact time and claiming a share of the \$100,000+ purse.



The mighty Alaskan pipeline near Chandalar

For the 99s landing in Nenana this particular summer evening we were satisfied with the more predictable — self-serve gas and a lovely lady who had stayed overtime to provide us with fuel, skies now nearly cloudless and a midnight sun to light the next leg of our trip.

By 10 p.m. our group was departing Nenana and heading into country which was new to some. The 309° heading put the sun directly in the pilot's eyes so that the navigators were even more watchful for landmarks and traffic. Traffic was easy. There was none unless you had a fellow 99 in sight. Landmarks too were easy. We crossed the twisting braids of the Tanana River, the lowland lakes surrounding the Indian village of Minto and a gravel road connecting the mining settlement of Livengood with Manley Hot Springs. Keeping an altitude of 5,000 feet we traversed two ranges of low mountains between which flows the Yukon River. Now within range of the Bettles VOR we crossed a broad plain of muskeg and hundreds of small lakes traversing the Arctic Circle.

The 5200 feet of superbly maintained gravel was a welcome sight as our group arrived between 10:30 p.m. and 12:30 a.m. Boasting a population of 52, Bettles is an air service center for many outlying bush settlements and mines. We were warmly received at the Flight Service Station and pitched our tents on the freshly mowed field behind the FSS. The Bettles Lodge was our gathering place to sip coffee, rehash the



evening's flight and discuss Saturday's leg northward.

Snuggling into my down bag at 2 a.m. I heard someone say, "Oh, look at the beautiful sunrise!"

By 8 a.m. our temporary camp was abustle with breakfast, refueling and gear stowing. It was an absolutely perfect day and everyone was excited about the prospect of seeing Bering Sea ice by lunchtime. Anita Benson had planned this fly-in, beginning months earlier. The weather was made to order, a fitting celebration of the end of her two years chairing the Alaska 99s.

Our departures were completed between 9:30 and 10:30 with Margie Foster and her Cessna 172 passengers Barbara

Cont Pg 13

Bowerman and Carol Farnsworth choosing the route through Anaktuvik Pass. Located in the northern edge of the Brooks Range this was a traditional gathering place of two cultures, the Indian and Eskimo. Much archaeological work has been done in the area, unearthing evidence of these peoples' early habitation.

Once through the pass Margie and her crew headed east along the north side of the Brooks Range until they intersected the oil pipeline near Galbraith Lake.

The remaining 14 of our group chose to follow the pipeline through the Brooks Range. Paralleling the Koyukuk River from Bettles, we intersected the North Slope haul road and pipeline which provided a clear navigation aid for the remainder of our flight.

Trails of dust marked the progress of tractor trailer trucks ferrying supplies and equipment to the oil fields. Tourist traffic was nonexistent as the haul road, or Hickel Highway, is not open to the public. A controversy rages currently as to who will be responsible for the maintenance of the road, the State of Alaska or the companies who use it.

But controversies and politicking were far from our minds as we flew between the 7,000-8,000 foot peaks of the Brooks Range and over the places known to most Americans only through their newspapers and the TV news.

I had thought back in Anchorage that it might be nice to fly low over the terrain at Atigun Pass and have a closer look at the remaining evidence of the well publicized break in the pipeline. That was before I saw Atigun Pass. In a word — magnificent, but with little more than 100 hours of experience I was not ready for low level sorties where the landscape rose and fell so abruptly.

Climbing to 6,000 feet, I negotiated a narrow S turn between stark gray peaks. At the tail of the S the landscape dropped dramatically, thousands of feet. From a lofty vantage we could see some oil containment equipment still in place, mute testimony to the fallibility of people in their attempts to subdue the wiles of the Arctic.

As we passed on to the vast lake dotted tundra plain of the North Slope we could soon see the smoke from a gas flare at one of the well heads, and in the distance, the ice pack of the Arctic Ocean.

Small planes seldom land at the Deadhorse Airport, but we were efficiently received. The *Alaska Supplement* notes, "Caribou occasionally on rwy." None appeared for our official greeting, but the State of Alaska sent a man in a truck to direct us to our parking area and keep us out of range of the Wien jets taxiing on the adjacent ramp. As we gassed up with 100 octane (no 80/87 is available) at \$2.05 per gallon plus tax I found myself wondering how far that av-gas had travelled from production field to refinery to Deadhorse.

While we explored the Wien air terminal and took care of the planes, Anita Benson

and Nita Wood were busy doing some fast talking to secure us an evening's lodging. Anita, formerly an employee of NANA Corp., secured several rooms at their camp. Workers who were off duty and not in Deadhorse had vacant rooms. We were to use our sleeping bags on floors or spread tops, but not use the linens and EVERYTHING had to be left EXACTLY as it was found. The alternative was \$70 per night per person at the Happy Horse Hotel. No one argued!

Anita came through again as a current employee of Arctic Alaska Drilling. A bus was provided for a 30 minute drive across the tundra to A.A.D.'s rig. There we were treated to an assortment of pastries, cookies, coffee and cold drinks while we had an introduction to drilling for oil on the North Slope. Donning hard hats we then toured a rig. Weighing 200,000,000 pounds, the rig can be moved on an ingenious system of rollers to place it over a selected drilling site. Six wells will be drilled in the area where the rig sat. We witnessed work on the 3rd of the 6, seeing the mud mixing tanks and addition of drilling pipe sections as the roughnecks efficiently fastened the pieces together. It was fascinating to watch the teamwork of the three men, each synchronizing his movements to the others and the machines.

Later Saturday evening, refreshed with showers and one of those famous North Slope steak and mushroom dinners, we were ready for a new adventure. Loading up in trucks courtesy of Alascom and a Liz Gilbert connection, we drove to an exciting new opportunity. A friend of Liz's, a North Slope worker, has a hot air balloon that he had flown only once before on the Slope. With 17 eager ground crew members he prepared for the World's Second Hot Air Balloon Trip on the North Slope! Liz and her friend Becky Gottschalk joined him in the gondola for a short flight. The limited number of roads and the prospects of landing in wet tundra where you could easily sink to your knees are deterrents to long flights.



Alaska 99s inspect the rig

The late evening found some members of our group warmly snuggled on the NANA floors seeking a well earned night of sleep. Others night owled in the game room (Was that Lou Fenn who said she "watched" the men play poker?) or crammed 3 deep into a small room where a party was in progress. The sign on the door to the party room read, "Have teepee, need squaw!" (Was that Anita Benson being chased down the hall by the man with the feather in his hair?) Some

Cont. Pg. 14



The pipeline adventurers-(l-r) Betsy Nobmann, Carol Farnsworth, Margy Foster, Barbara Bowerman, Jill Parsons, Nita Wood, Lou Fenn, Anita Benson, Joy Craig, Verna Craig, Ruby Pappas, Sandra Dexter, Jeanie Delgman, Betsy Gottshaw and Liz Gilbert (kneeling).

among us became totally confused by the hubbub we created. (Carol Farnsworth, we told you the ladies showers are in D wing!)

Sunday brought more sun, blue skies and unusual summer heat. Our only regret was that we had all brought extra hats, jackets, gloves, etc. We should have packed bathing suits for a final group pose with the Arctic Ocean ice for a backdrop. We settled for a short flight over the ice as we made our departure. 35 miles from the coast the solid mass of the Arctic pack ice began. The open water between was liberally peppered with bergs of all sizes in July. It will be August before supply barges can make their way into Prudhoe Bay. They must also leave in August before the winter freeze begins.

Choosing an alternate route again, Margie and her passengers flew from Deadhorse to Fort Yukon which they described as a conglomeration of log cabins of every description. Their pilotage skills were put to the test as the Fort Yukon VOR was out of service. Also, anyone who needs advice on techniques for freeing Cessna 172 tires from soft gravel should give them a call.

Liz and Becky took their Cessna 150 to Fairbanks, leaving Deadhorse early to catch an air show in Alaska's second largest city. The 5 remaining planes retraced their route along the pipeline and into Bettles where we sunned in 83° temperatures. While waiting for a DC-3 load of 80/87 fuel, we also enjoyed lunch from the only hot dog stand north of the Arctic Circle. At least that's the claim made by the 13 and 14 year old girls who own and operate their thriving business.

Jeanine and I fired up our rented Cessna 172 at 2:30 pm arriving in Nenana an hour and half later to discover NO FUEL! We learned later that the proprietors of the gas service had also decided to take in the air show. After awaiting the passage of a rain shower, we made a 30 minute hop to Fairbanks for fuel. Things happened quickly then as can be the case when summer weather is involved. While on the ground in Fairbanks, Sigmets were issued and thunderstorms rolled in. With evening flying now out of the question, we formed a contingency plan. FSS personnel relayed messages to the 4 planes enroute to Nenana. They over-nighted there and gassed the following morning. Liz and Becky found housing with a friend. Barbara Bowerman called upon a friend of hers who graciously put the remaining 5 of us up for a memorable night's sleep on a real bed.

The 10 of our party who overnighted in Nenana took a walking tour of the town and combined resources for a Sunday night freeze-dry smorgasbord. Frequent weather checks on Monday kept us abreast of the IFR conditions in Anchorage and Windy Pass. Time was passed in conversation or by games of Whist and stickball in Nenana. At 2:30 pm conditions brightened and we took to the air. Frequent transmissions on 122.9 kept everyone aware of positions, ceilings, clouds. Windy Pass, a major concern, was



Rig No. 1 owned by Petrolane NANA Joint Venture and operated by Arctic Alaska Drilling Company. Anita Benson's employer, were the gracious hosts of the 99s while at Prudhoe.



Lou Fenn and Sandra Dexter try to figure out how this whole thing works.



The pipeline made a great landmark to follow. beautifully open. Dropping to 2,000 feet to accommodate the clouds in Broad Pass and dodging a few along the Chulitna River were the only minor concessions needed. With Anchorage in sight an expanse of blue sky appeared, the first seen there in several days.

Bringing up the rear on Tuesday morning were Liz and Becky. Spending Monday working at Alascom in Fairbanks, Liz had been turned back by the evening's Broad Pass cloud cover.

In retrospect I suppose all that remains to top a perfect fly-in is to have it play a major role in changing one's life. Perhaps that happened for the youngest member of our group, a ninth grader. Verna Craig was visiting her father and stepmother, Vern and Joy Craig, and was bound for the North Slope within hours after deplaning from her Seattle flight. She made friends quickly and seemed to have a fine time. A week later I saw Verna at a party and asked, "Do you think you'll ever learn to fly?" Her answer, "Oh, yes. Everyone always said I probably would someday. But after this trip, I *know* I will!"

** Does anyone know if any other hot air balloons have been flown north of the Arctic Circle elsewhere?*



Lou Fenn prepares to depart in her Piper Cherokee.



Jill Parsons rolls out

"If enough of us keep trying,
we'll get someplace."

—Amelia Earhart

It certainly gives me great pride to salute the women of the 99s, Inc. and to hail the great accomplishments of women pilots throughout the world during the last half century. It is entirely fitting and appropriate that all of us interested in the future of aerospace take time out on November 2nd to mark the important and lasting contributions which women pilots have made to this vital field since that time in 1929 when some of the first women pilots in the U.S. met and organized for future endeavors. "It is impossible for me to overestimate what women flyers have meant to the development of aerospace pursuits in the years past. And it is hard to imagine what heights they will help the industry achieve in the future."

Barry Goldwater
U.S. Senator
Sept. 28, 1979

A Salute to 99s & Women in Aerospace

November 2, 1979 will mark the 50th anniversary of the founding of The Ninety-Nines (international organization of licensed women pilots) at Curtiss Field, Valley Stream, Long Island, NY. The 99s will place a bronze plaque at the site (now a shopping mall). Charter Member Fay Gillis Wells from Washington, D.C., will be on hand to deliver the luncheon address. The Smithsonian Institution will issue a commemorative cover to be cancelled at Valley Stream.

Of the then 117 women pilots in the country, 99 responded to the letter

suggesting they meet and organize—hence the name. Amelia Earhart was elected the first president.

These early women pilots proved their abilities as balloon, airplane and later helicopter pilots. From the beginning, they established professionalism and safety standards for women pilots. They pioneered the careers for women in aerospace.

In this half century, women in aerospace have made not one but several Giant Steps.

In more recent years:

- The WASPs (The World War II Women's Airforce Service Pilots)

gained veteran status for their war time service.

- Women pilots took their places in the cockpits of the nation's airlines.
- Women were selected as astronaut candidates.
- Except in the Marine Corps, the military services opened their ranks to women pilots.
- Women in aerospace now hold key positions as engineers, scientists, lawyers, marketing/sales pilots and at the corporate level, as vice presidents of research/development, external affairs and advertising.

Cont. Pg. 16

WASPs

During World War II, 1,074 women completed air cadet training and as civilian pilots flew 60 million miles on ferry, tow target and test flight missions to release men pilots for overseas combat duty.

Culminating a 33 year effort, with Congressional support from Senator Barry Goldwater, Representatives Lindy Boggs and Margaret Heckler, Assistant Secretary of Defense, Antonia Handler Chayes, and Colonel Bruce Arnold, the Congress passed and on November 23, 1977, President Carter signed the bill authorizing veteran status for the remaining 800 eligible WASPs.

Airlines

In the 1930's Helen Richey was the first woman airline pilot. Today, of the 45,000 American pilots in the airline industry, 110 are women. Not an impressive total—but on a scale of 1 to 10—"one small step for woman"—A giant step for the industry. Today, most of the major airlines have women pilots. United Airlines leads with 26, Federal Express, a scheduled cargo airline, has 10 women pilots flying their Boeing 727s and 737s, and Western just signed on its 13th—22 year old Kim Goodman—the industry's youngest pilot.

Cont Pg 17



Frontier Airlines Captains Emily Warner (l) and Cindy Morgan (r). In 1973, Captain Warner as Frontier's first woman pilot made the jet-age airline breakthrough for U.S. women.



Cabin to Cockpit — These two have a lot in common. Julie Ames started as a stewardess and recently became Hughes Airwest's second female pilot. Likewise, Hughes Airwest's Capt. Jack Furrer, discussing the routing of a flight with Julie, started as a flight attendant. He was a steward in 1948 for one of the airline's predecessor companies and became a pilot in 1955. She married a Hughes Airwest pilot and her late father was also a pilot for the airline. She and her husband, Rick, are based in San Francisco.



Diana "Ace" Abramson is Flying Tiger Airlines first woman mechanic.



Gloria Hovde is an A&P with United Airlines. She is based in San Francisco where she works in the sheet metal shop.




With 23 years of service with United Airlines in their Flight Operations Department, Jean Ferrell is a DC-10 Flight Operations Instructor.



Adriana (Ann) Boylan is American Airlines' Director of Advertising. "I enjoy the competitive spirit of the airline business," she says.



Mrs. Edwina Gilbert is Vice-President of In-Flight Services for Eastern Airlines. She is responsible for the coordination of recruitment of the airline's 5,700 flight attendants.



On March 6, 1979, Hawaiian Airlines' Sharyn Emminger and First Officer Karen Squyers became the scheduled airline's first all-female flight crew



First Officer Rebecca Lynn Rose is one of the six women pilots flying for Piedmont Airlines.

Braniff International's first woman pilot is Sandra Simmons. First woman graduate of American Airlines Flight Academy and Braniff's Engineer School — First woman officer on a pure jet airliner.



Flight instructor, test pilot, Kansas 99 Susan Horstman is now National Airlines' first woman co-pilot flying Boeing 727s.



Justin Michael Rinehart poses for his first picture with his airline pilot parents, 2nd Officer Bob Rinehart of United Airlines and 2nd Officer Terry London Rinehart of Western Airlines. Grandson of WASP Barbara London, future pilot Rinehart arrived July 23, 1979, weighing in a 9 lbs. 4 oz.



99 Claudia Jones, a co-pilot with Continental Airlines, is a past president of The Whirly-Girls and Founder/President of ISA 21 (International Society Affiliation of Women Airline Pilots and the 21 Charter Members). Their husbands organized too — HALP (Husbands of Airline Pilots).



Western Airlines 13th woman pilot is 22 year old Kim Goodman. She began flying at age 15, soloed on her 16th birthday, obtained her private pilot license on her 17th, her commercial license on her 18th and her helicopter rating at 19. Kim is now a second officer flying Boeing 737-200s.

Cont Pg 19

Pilot/surgeon Dr. Rhea Seddon is one of the six women astronaut mission specialists at NASA now eligible for assignment on future space shuttle crews. Dr. Seddon received her degree in Physiology from the University of California, Berkeley, and her Doctorate of Medicine from the University of Tennessee College of Medicine. A private pilot, she is a member of the 99s.

THE FIRST SIX WOMEN ASTRONAUT/MISSION SPECIALISTS

- ‡ **Dr. Anna L. Fisher**
Physician/ Emergency Medicine
- ‡ **Dr. Shannon W. Lucid**
Pilot/ Biochemist
- ‡ **Dr. Judith A. Rosnick**
Pilot/ Electrical Engineer
- ‡ **Dr. Sally A. Ride**
Physicist
- ‡ **Dr. Margaret Rhea Seddon**
Pilot/ Surgeon
- ‡ **Dr. Kathryn D. Sullivan**
Geologist

Astronauts

Of the 35 astronaut candidates selected in January, 1978, 15 were pilots and 20 mission specialists. Six of the latter are the first women to become astronauts in the U.S. Space Program. On August 31, 1979 all completed their initial training and are now eligible for selection to Space Shuttle flight crews.

As mission specialist astronauts, the women selected will have the overall responsibility for the coordination, with the commander and pilot, of Space Shuttle operations in the area of crew activity planning, consumables usage, and other Space Shuttle activities affecting experiment operations. They may participate in extravehicular activities—space walk. However, no woman pilot has yet been interviewed for astronaut pilot. Cont Pg 20





U.S. Army Photo

Captain Linda Horan, the Army's 2nd woman aviator and the first to check out in the armed Cobra Helicopter.



U.S. Coast Guard Photo

U.S. Coast Guard aviators left to right: Lt. JG Colleen Annee Cain pilots the HH52 (Sikorsky Seaguard Helicopter) and Lt. Vivien Suzanne Crea pilots the C-130 (Lockheed Hercules) at Hawaii's Barbers Point Air Station.



U.S. Navy Photo

Lt. Joellen Drag Oslund, a SAR helicopter crew member (search & rescue) at the Navy's Point Mugu Air Station, was among those cited for awards by the Boeing Vertol Company for their rescue operations. Lt. Oslund was the Navy's first woman officer helicopter pilot in 1974.



U.S. Navy Photo

Lt. JG Judith Ann Nueffer, 2nd woman naval aviator and first to pilot an aircraft through the eye of a hurricane.



U.S. Air Force Photo

Captains Susan D. Rogers, Connie J. Angel and Mary E. Donahue among the first of the second generation U.S. Air Force Pilots.

Cont. Pg 21



Lt. Ana Marie Fuqua, USA at the controls of a Navy SH-3A Sea King Helicopter.

In 1974, 2nd Lt. Sally Murphy received her wings as the first woman aviator in the Army.

After a tour in Germany, now its Captain Murphy. She's stationed at Ft. Riley, Kansas with her Captain husband Dan. In between flights, she's written her autobiography "Sally Murphy—Army Aviator" for future aviators in the 9 to 12 age group.



U.S. Army Photo



U.S. Navy Photo

Lt. Rosemary Bryant Conatser became one of the first female Naval Aviators in 1973. In 1975, she became the first woman to fly a tactical jet aircraft as a designated military aviator, the A-4 Skyhawk. She and Jo Ellen Drag Osmund (above center) were the only military aviators to fly a Powder Puff Derby.

Military

The WASPs pioneered as civilian pilots for the military; today all but the Marine Corps have women pilots flying jet transports, fighters and helicopters. The Navy in 1973 was the first service to open aviation training to women. There are 27 women officers designated as naval aviators. The Army followed and now has 40 women aviators—all rotary aircraft rated. Of these 40, twenty are Warrant Officers. Of the U.S. Coast Guard's three women aviators, two are helicopter pilots flying search and rescue, pollution and fish patrols to logistics flights. The third is a Hercules C-130 pilot based in Hawaii.

There are now 22 women officer pilots in the U.S. Air Force and 6 female navigators. Women are also serving as Crew Chiefs and Weapons Controllers.

Cont Pg 22



U.S. Air Force Photo

1st Lt. Mary M. Livingston preflights T-38 during pilot training. She is one of the first women to enter an Undergraduate Pilot Training Program.



U.S. Army Photo

From Civil Air Patrol Cadet to Army Warrant Officer to 1st Lt — now Captain — Mary Reid is an Instructor Pilot at the Army Aviation School, Fort Rucker, Alabama.

Jeni Arton in her second home, the instructor's seat of a 172 for the Cape Town, South Africa, Aero Club.



Lorraine Jencik flies a Learjet for the Xerox Corporation.



In industry, Communications is an expanding field for women. Aerojet Liquid Rocket Company's Director of Communications is Rita Marie Lavelle. She is responsible for external/internal communications and public relations for the company's rockets, energy conversion and marine propulsion systems divisions.

Corporate

At the corporate level, at Rockwell International Space Systems Group, Patti Mancini is Vice President, External Affairs and Communications. Recognized throughout the aerospace community as one of the most innovative and dynamic proponents of the space program, she is now focusing her activities on the introduction, education, usage and progress of the Space Shuttle—the economic solution for routine space exploration.

At Hughes Aircraft Company, the corporate advertising manager is Cynthia L. Baker, the first woman to become advertising manager of a major aerospace firm. She is responsible for the Hughes institutional and recruitment advertising campaigns and coordinates ads for the company's products.

The Corporate Vice President, Research at the AVCO Corporation is Dr. Dorothy M. Simon. Dr. Simon has oversight responsibility for the research and development functions of the nine technology-based divisions of the Corporation. These include the Lycoming reciprocating and turbine engines, wings for jet liners, farm machinery, fire protection materials, boron fibers and composites. In addition, two divisions carry out longer term applied R&D programs in the areas of high power gas lasers, magnetohydrodynamic energy conversion, remote sensing materials, and reentry physics and chemistry. Over 100 million dollars is in the AVCO R&D effort.

Cont Pg 23



Mary Anglin, a former A.E. Scholarship winner, is now flying as First Officer on a Learjet for the Budd Company in Michigan.



Deborah Ethridge is an aviation attorney for Braniff International.

At Hughes Aircraft Company, Cynthia L. Baker, the first woman to become advertising manager of a major aerospace firm.



Private pilot Ruth Naber is a graduate Aeronautical and Astronomical Engineer. Now Group Engineer of Actuation System in the Advanced Technology Group at the Sunstrand Corporation, she finds her knowledge of airplanes an asset in working with aircraft actuation systems.



Val Johnson flies her helicopter commercially for a contractor, but also as a very good neighbor for her community, flying fire patrol, search & rescue, tracking down criminals and finding lost children as needed. She flies her Bonanza when longer range is needed.



In Philadelphia, the traffic pilot/reporters for the Shadow Traffic Network are husband and wife, David Kocher and Nadine Fetsko. Nadine usually pilots the AM flights and then goes to her full-time job as a special accountant at the Franklin Mint. In her part-time traffic reporting, she's flying over 60 hours a month!



Fran Bera, seven times Powder Puff Derby winner, FAA Pilot Examiner for 25 years now aircraft salesman, is the only women to win the Beech Aircraft Million Dollar Sales Award.



Patti Mancini is Vice President, External Affairs and Communications for Rockwell International's Space Systems Group.

Cont. Pg. 24

From Flight Instructor to Sales Manager, Margaret A. Mead is a District Sales Manager for Gates Learjet.



B-29, glider and helicopter pilot, Dr. Dora Dougherty Strother is Chief of the Human Factors Division and cockpit arrangement group at Bell Helicopter Textron. Dr. Strother is the newly named Permanent Trustee of the Amelia Earhart Memorial Scholarship and President of The Whirly-Girls, Inc., international women helicopter pilots.



Doris Renniger is General Manager of a most prestigious aviation club in New York City, The Wings Club, Inc. It was founded in 1942 for airmen, but today the world-wide membership of over 1,400 also includes air women. Doris' aviation background makes her a natural for her position. Whirly-Girl #59, a Ninety-Nine, and married to a WW II pilot, Warren H. Renniger, one of the five founders of Seaboard World Airlines. She is pictured here with Wings Club's Presidents; Outgoing President C.E. Meyer, Jr., President of Trans World Airlines, and In-coming President, William T. Seawell, Chairman of the Board, Pan American World Airways.



At the Vought Corporation in Dallas, Texas, Charley Evans Black as lead flight test engineer has monitored eight out of the last thirteen launches of the Scout Launch Vehicle.



Barnstorming to Space—Members of a unique "Women in Aviation" forum—representing 50 years of aerospace and general and commercial aviation—examine a vintage aircraft at Northrop University's American Hall of Aviation History in Los Angeles, site of the recent panel. They are (from left) Margaret "Rhea" Seddon, M.D., a U.S. astronaut candidate for a space shuttle crew member; Julie Ames, a pilot for Hughes Airwest; Mary Wallace "Wally" Funk, the first woman investigator for the National Transportation Safety Board (NTSB); Velda Mapelli, Director of the Hughes Airwest Air Race Classic, and Bobbi Trout, a contestant, with Amelia Earhart, in the country's first women's air derby, that started in Santa Monica in 1929. The forum also announced the contestants in the June 16-19 Hughes Airwest Air Race Classic that was flagged off by Ms. Trout in Santa Monica again this year.

Cont Pg 25

The aerospace careers are not new, but the increase in women in these specialized, high technology positions is new.

For example, at Vought Corporation in Texas, Charly Evans Black as lead flight test engineer, has monitored eight out of the last thirteen launches of the Scout launch vehicle.

In Rockford, Illinois, Sundstrand Corporation's Group Engineer of Actuation Systems in the Advanced Technology Group is Mrs. Ruth Naber. A University of Illinois graduate in Aeronautical and Astronomical Engineering, mother of one son and private pilot, Mrs. Naber has found her knowledge of airplanes an asset in her work.

Industry

From flight instructor to sales manager, Margaret A. Mead is the District Sales Manager of four Western states for Gates Learjet Corporation. After soloing in 1961, Ms. Mead went on to get her flight instructor and airline transport ratings. With more than 8,000 flight hours, her flying career has taken her through 46 states and seven foreign countries. As District Sales manager, she has been responsible for the sale of 50 new Learjets. Like many women pilots, her hobby became her career.

World War II B-29 pilot, with commercial airplane, glider and helicopter ratings, with graduate degrees in psychology and aviation education from Northwestern, Illinois and New York Universities, at Bell Helicopter Textron, Dr. Dora Strother is Chief of the Human Factors Division and Cockpit Arrangement Group. She is responsible for research, development design and testing of cockpit displays and controls to improve the pilot's safety and effectiveness. A Fellow in the Human Factors Society and Associate Fellow of the American Institute of Aeronautics and Astronautics, Dr. Strother is International President of The Whirly-Girls, Inc., international organization of women helicopter pilots.

Cont. Pg 26



Former WASP, then proud owner of a P-40 she later gave to the Smithsonian Institution, Betty Pfister was a member of the 1973 and 1978 U.S. women helicopter teams at the World Helicopter Championships in England and the U.S.S.R. Now she's ballooning. In 1977, she organized the first hot air balloon race in Snow Mass, Colorado. It's become an annual event with more than 30 balloons from all over the country competing. Betty is also part owner of a helium balloon — the Columbine (named for Colorado's state flower).



99/Whirly-Girl Nelda Kay Lee is a structural and mechanical design engineer with the McDonnell Douglas Corporation. In 1978, for her contribution to the design of graphite/epoxy wing skins for the F-18 fighter, she received the American Institute of Aeronautics and Astronautics "young professional award".



99 and Whirly-Girl, June Bonesteel is chief pilot of the Air Transport School and Director of Maintenance at Taylor Aviation, Inc. in Phoenix, Arizona. Here she accepts the 1978 Arizona Flight Instructor of the year award.



In St. Louis, Station KMOX-CBS traffic pilot/reporter Sue Matheis says the best part of her job is that she not only tells men where to go, they listen and she gets paid for it! With Sue is her partner Don Miller.



At Rockwell International Corporations, Electronic Systems group, Winifred Martin is an associate program manager for advanced weapons systems. She is a private pilot.

High Technology Positions for Women

Mrs. Carolyn Griner, a flight systems engineer, is one of four women specialists to take part in a simulated five-day space mission at the Marshall Space Flight Center. This mother of three has had scuba diver training and worked underwater in a pressurized space suit.



NASA Photo

Engineer Sally A. Little, experiences near-weightlessness during apparatus tests of a Spacelab 1 tribology experiment.



NASA Photo

Dr. Mary Helen Johnston, a specialist in metallurgical science at Marshall Space Flight Center, designs and conducts experiments on materials processing in space. She checked out in the smallest pressure suit available to get an idea of what kinds of things can be done in the bulky suits under weightless conditions.

NASA Engineer Mrs. Ann Montgomery is site manager for the Orbiter Processing Facility at the John F. Kennedy Space Center, Florida.



NASA Photo



NASA Photo

Barbara S. Askins, a chemist at NASA's Marshall Space Flight Center was named the 1978 National Inventor of the Year by the Association for the Advancement of Inventions and Innovations (AII).

At NASA, systems engineer Judith A. Anderson is one of the few women working in the space shuttle firing room, a room equipped with a highly automated system designed for shuttle checkout and launch. With degrees in Mathematics and Electrical Engineering, she's now working toward her PhD. Judith is a private pilot and owns her own Cherokee 140.



NASA Photo



NASA Photo

Housekeeping, space age style—could describe Engineer Ann Montgomery's work as Site Manager for the Orbital Processing Facility at the John F. Kennedy Space Center, Florida. There, Space Shuttle Orbiters are readied for Earth-Orbital missions. Mrs. Montgomery says its a new job—a new spaceship—new systems and new procedures. This young mother is responsible for everything that moves or is nailed down in the two bay facility, from security, janitorial service and vending machines up to managing and scheduling modifications for the support stands, cranes and systems that service the orbiter vehicles.

The first woman to receive a Von Karman fellowship for postmasters study at Belgium's Training Center for Experimental Aerodynamics (now Von Karman Institute), is Shirley Holmgren at the Boeing Company. With a BS and MA degrees in aeronautical engineering, she is now group supervisor for the 737 Aerodynamics Staff and for the 727 and 737 Product Development.

Cont. Pg 27

FAA & NTSB

In the Federal Aviation Administration, more than five percent of the Air Traffic Controllers are women, more than 1,500 of the 27,000 total. In lesser numbers, women in the FAA are also working as electronics technicians, engineers and flight standards maintenance field inspectors. There are 250 women in these categories. Still others are Accident Prevention Specialists. Among women executives of the FAA are Joan Barriage, Chief of the Flight Standards Division, Great Lakes Region; and Mary Jo Oliver Knoeff, Acting Chief of the FAA Aviation Education Program. On the National Transportation Safety Board, Audrey Schutte, a 99 and Whirly-Girl, has joined 99 Wally Funk as an Air Safety Investigator. Dr. Carol Roberts, an electronics engineer, has recently become Chief of the NTSB's Laboratory Services Division. This division includes the Cockpit Voice Recorder Lab, the Flight Data Recorder Lab (where Dr. Roberts worked prior to September), and Flight Performance Engineering.

Cont. Pg 28



Mary Jo Oliver Knoeff is Acting Chief of the FAA Aviation Education Program.



99 Audrey Schutte, commercial airplane/helicopter flight instructor, is the second woman Air Safety Investigator at the National Transportation Safety Board. 99 Wally Funk is the NTSB's first woman investigator.



Connie Huffman is an Air Traffic Controller in the control tower at Ohio State University



Marilyn Sidwell is the first woman general operations inspector instructor in the Flight Standards Training Branch at the FAA Academy. She's rated in balloons as well as single and multi-engine aircraft and hopes to instruct in turbo-props and light jets



Dr. Carol Roberts, an internationally recognized expert in aircraft digital flight recorder data retrieval, set up NTSB's Digital Flight Recorder Laboratory. She has worked on recorder data retrieval from the Chicago DC-10 crash last May, the Pan Am/KLM collision at Tenerife and was sent to Rome to recover data from the DC-9 crash near Palermo. She recently became Chief of the NTSB's Laboratory Services Division.



Carol Rayburn of the Salt Lake City Flight Standards District Office is the first woman inspector to be assigned as a principal operations inspector to a company operating large carrier-type aircraft—Key Airlines.

Federal Aviation Administration

	Total	Woman	Percentage
Air Traffic Controllers	27,191	1,521	5.5%
Electronic Engineers	8,986	158	1.7%
Engineers	3,209	59	1.8%
Flight Standards Inspectors	1,954	33	1.6%

Jan Mauritsen (right), Tulsa, Oklahoma, is a gold seal flight instructor with over 7,000 hours. As a Designated Examiner for FAA, she gives check rides for private, commercial, instrument and multi-engine certificates and ratings.



Pauline Glasson (below left), who soloed in 1934, owns an aerial photography business and flight school with her husband in Corpus Christi, Texas. Pauline says she is now teaching grandchildren of some of her former students how to fly.

Edna Gardner Whyte (below right), has been involved in commercial aviation for over 50 years. She owned and operated the New Orleans Air College with over 12 planes before WWII. In her seventies, she bought 82 acres north of Dallas-Ft. Worth and built an airport. Edna is still instructing students on a daily basis.



In the past, secretary has been the traditional route for women wanting a career. Now, in aerospace, non-traditional careers have opened for women. Women who majored in mathematics, science, engineering, medicine in college are now employed in all branches of industry and phases of the Space program. And today, flight instructor has become the first step or take-off toward becoming an airline pilot. Many of today's male airline pilots were trained by women instructors and women FAA Flight Examiners gave them their check rides.

Flight Schools

Several women operate airports and many own their own flight schools. Among these are Claire Walters Flight Academy, Santa Monica California; Mary Gaffaney Flying School, Miami, Florida; and Edna Gardner Whyte, Aero Valley Airport, Roanoke, Texas.

Evelyn Bryan Johnson, of Tennessee's Morristown Flying Service, has been named the FAA Flight Instructor of the Year for 1979. She has trained more than 3000 students in her 25-year aviation career. Among her men students have been 8 Eastern Airline pilots, 2 Delta pilots and several military and corporate pilots.

These and many, many more Ninety-Nines, in the tradition of Amelia Earhart, have given new flight instructors their first jobs and helped them on to an aviation career; and in the spirit of Amelia, they have made their hobbies their careers.

Cont Pg 29

Evelyn Bryan Johnson 1979 CFI of the Year

Evelyn Johnson of Morristown, Tennessee, has been selected Flight Instructor of the Year in a nationwide competition sponsored by more than 30 general aviation companies in cooperation with the Federal Aviation Administration.

Evelyn has taught more than 3,000 people to fly and has given more than 5,000 flight tests in over 30 years as a flight instructor. Her log book shows more than 25,000 hours of instructional flight.

The award was announced in a ceremony in FAA's Washington headquarters on October 23rd with FAA's Associate Administrator for Aviation Standards, Charles Foster, presenting the award plaque. The winner also received cash and merchandise certificates contributed by the sponsors.

A former school teacher with degrees from both Tennessee Wesleyan College and the University of Tennessee, Evelyn learned to fly in the early 1940s and became a full-time flight instructor in 1947. She now has more than 35,000 total flight hours and holds an airline transport pilot's license among her other certificates and ratings. She also was the 20th woman licensed to fly helicopters and only the fourth to receive a helicopter instructor's rating.

In all, she has trained more than 3,000 pilots, although she says she stopped counting her students several years ago. Among them are at least a dozen airline captains and a great many corporate and military fliers.



Aerospace Education

An area of leadership for the Ninety-Nines has been in Aerospace Education. First is the Amelia Earhart Scholarship program. It was begun in 1922 with one scholarship of \$150.00. In 1979, there were seven scholarships totalling \$10,200.00. Over the years there have been between 60 and 70 scholarships awarded for a total of over \$100,000.00.

Ninety-Nines are teaching aerospace from pre-primary to post graduate levels. Through the chapters, Ninety-Nines are working in their communities organizing airport field trips, pennies-a-pound flights, and distributing 99 coloring books to pilots. No other group has had such a national impact on air age education.

In April, 1979 at the first Aviation-Space Convention, Ninety-Nines were honored. Lorna Kringle received the Elementary Aerospace Educator-of-the-Year Award. Helen Frizzell, longtime friend and helpmate of the Ninety-Nines, was named Teacher-of-the-Year. Founding member of the Society of Aerospace Education, Helen is the U.S. representative to the International Council of Aerospace Education.

One-of-a-Kind-Careers

Many women have found imaginative ways to go from supporting aviation to making aviation support them. Still others have managed to combine aviation with other professional areas and in so doing have come up with a unique and interesting occupation for themselves.

To mention a few more:

At Wright-Patterson Air Force Base, in the Experimental Clothing Division, Vi Blowers has designed flight suits for astronauts, the Thunderbirds, U.S. Presidents and their families.

In Texas, aerobatic pilot Sandi Pierce Melvin is owner/producer/promoter for National Airshows.

In Kenya is Dr. Anne Spoerry of the East Africa Flying Doctor Service. Flying over deserts, mountains and shorelines, Dr. Spoerry holds clinics right on the airfield.

Overseas ferry pilot Ruth Stafford of Kansas City, as a volunteer delivers planes for Wings of Hope. She has delivered planes to France, Nairobi, Kenya and East Africa.

In Alaska, Claire Drenowatz has worked as a crop duster/fog seeder pilot keeping fogged-in airports open seeding clouds with dry ice. To aid melting of ice jams, she has spread sand on river ice.

In California, Jean Bowser owns and operates an aerial advertising business, "Adverskies".



Lorna Kringle, who has conducted numerous workshops on Aerospace Education for 99s and others and helped write the Teacher's Guide for our aviation coloring book, was the recipient of the 1979 Elementary Aerospace Educator-of-the-Year Award.

Hawaii-based Eleanor Sharpe, herself a victim of polio, is co-owner of Handiflyers, Inc., a flying school where she is teaching handicapped as well as others to fly.



Dr. Anne Spoerry, East Africa Flying Doctor Service, and natives wade with medical supplies from the landing site to a nearby boat. The boat will carry them to a nearby village where medical assistance is needed



Mary F. "Bunny" Foley was one of the first six certified Aerospace Physiologists in the United States. She is employed at the Cardio-Pulmonary Laboratory, Springs Mill, SC.

Aerobatic pilot Sandi Pierce Melvin with her baby, a Taylorcraft Experimental. Sandi is owner, producer and promoter for National Airshows.



Cont. Pg. 30

Tracy Pilurs, a commercial instrument pilot, instructor in helicopters and an A & E, says, "I've been in a man's world all my life and loved it."

In Utah, Megann Streeter is a slurry bomber pilot on forest fires for Trans-West Air Services, Inc.

In the far West, Vija Berry combines piloting and real estate into a Realty Air Photo business.

Aerobatic husband/wife team, Paul and Louise Pfoutz, restore World War II aircraft for their own museum. Their pet project is giving tours and first flights to school children

A Colonel in the USAF Reserve, one of the first six Certified Aerospace Physiologists in the country, Mary "Bunny" Foley, is Supervisor of Medical Monitoring at Cardio-Pulmonary Laboratory, Springs Mill, South Carolina.

After having polio, Eleanor Sharpe learned to fly an Ercoupe. She and her instructor then formed Handiflyers, Inc., and teach handicapped and others to fly.

The subject of aerospace careers for women has by no means been exhausted. Our purpose has been to focus your attention on the variety, depth and kinds of participation in aviation/aerospace spectrum enjoyed by women at the end of the 1970's.

The Future is CAVU

In commemoration of their Golden Jubilee, *The History of The Ninety-Nines, Inc.* has just been published. In the Foreword, Olive Ann Beech, co-founder of The Beech Aircraft Corporation, writes: "All of aviation owes its gratitude to the Ninety-Nines for their determination in promoting flying—its history, achievements and future in the space age."

Women in aerospace have come a long ways in half a century and they owe their current status to the pioneering efforts of the Ninety-Nines. In the next fifty years, many more women will find CAVU — not just Ceiling And Visibility Unlimited, but Careers And Vocations Unlimited in aerospace.

Fay Gillis Wells received her Private license on October 5, 1929 at Valley Stream, Long Island. Having signed the letter that invited the 117 licensed women pilots to organize back in 1929, it was fitting that fifty years later, she returned to Valley Stream to commemorate the first meeting place of the Ninety-Nines. Active throughout our organization's history, one of Fay's recent accomplishments has been the creation and development of the International Forest of Friendship in Atchison, Kansas, birthplace of Amelia Earhart.



Jerrie Cobb, who holds four World's Records and has achieved international aviation acclaim, is a missionary pilot in the Amazonas.

Page Shamburger's *Summon the Stars* was awarded the best non-fiction book of the year in 1971. Author of seven books and over 1500 articles, Page currently owns a travel agency.



A former NIFA trophy winner, a flight instructor, one of 13 women to participate in the Mercury Astronaut Program, Gene Nora Jessen now operates her own aviation insurance agency. Much of her time, talents and energies of late have been devoted to compiling the *History of the Ninety-Nines, Inc.* A monumental task but beautifully done just in time for our 50th birthday.



Ruth Stafford ferries light aircraft to Europe and Africa. She is pictured delivering an A-36 Bonanza to Rev. M.J. Sickler in Nairobi, Kenya, East Africa.



About the Author



Jean Ross Howard is Associate Director of Helicopter Programs and Publications for the Aerospace Industries Association of America, Inc., a national trade association of companies in the United States engaged in research, development and manufacturing of aerospace systems. Ms Howard edits various helicopter directories and writes speeches and articles. Her journalistic awards and associations are numerous.

In 1955, as one of 13 women helicopter pilots in the free world, Ms. Howard organized *The Whirly-Girls*. There are now over 250 members in 16 countries and the organization annually awards scholarships to assist women pilots attain their helicopter ratings.



We Couldn't Have Done It Without YOU!

Women astronauts, engineers and airline pilots are revered by all of us, for the encouragement and promotion of women in professional aviation has always been a goal of the Ninety-Nines. But we have other goals as well, and we should not let the spot light shining on the professionals shadow the

efforts and accomplishments of the many who contribute so much to the vibrant spirit of our organization.

From the beginning, the Ninety-Nines endeavored to bind together women who shared a fascination and love for flying. For many this is still the primary rationale for

our organization. Others find meaning in our growth purposes—as we learn together to become better and safer pilots and as we take our knowledge and love of aviation into the community at large.

As we are fulfilling these purposes, we have done many things in the name of the

Cont Pg 32



Children of all ages respond positively to the opportunity to learn about aviation. Above, Maryland members conduct a general aviation orientation for Brownies and Girl Scouts. Above right, Rene Birch briefs high school students before an orientation flight. Below, Gini Vogel helps youngsters check out on the ATC simulator.



LEARNING TOGETHER



We
Couldn't
Do It
Without
YOU!

CONVENTIONS



A successful convention demands a group commitment and a sharing of responsibilities and talents. Above, members go over planning details and finalize arrangements; a registration committee collects fees and passes out goodie bags; and talented heifers (oops, we mean hoofers) trip the light fandango to entertain their guests.

Who are the Ninety-Nines? Hoping to answer that question are (above right) Nelda Lee in a St. Louis shopping mall; and Esme Williams and Lois Feigenbaum at an AOPA Plantation Party.

Cont. Pg. 33



AEROSPACE EDUCATION - Explaining why the balloon rises is more appealing when accompanied by a "hands on" demonstration. Seminars to "teach the teachers" have been conducted at chapter, section and national levels of the 99s. Here, Jo Eddleman, Jean Pickering, Donna Powell and Betty Jo Ault practice launching a balloon at a Virginia shopping center during a Middle East Section Meeting.



EXHIBITS



Ninety-Nines. We have opened young minds to aviation through classroom, scouting and CAP programs. We have reached out to our fellow pilots through safety clinics, CFI refreshers, and airmarkings. We have polished our own skills in air races. Our personal warmth and our confidence in aviation has been used to eradicate the fear of flying in some; and has contributed to the enjoyment of aviation among others who fly as non-pilot companions. We have upgraded our knowledge through lectures and seminars on flying technique, weather, insurance and maintenance. We have expanded our horizons into the aviation disciplines of gliding, ballooning and aerobatics. We have enlightened our communities on the benefits of aviation. We have fought against airport closings, and we have argued for continued sharing of the airspace in a safe and sensible manner. We have worked to open doors in the aerospace world to women and we have sponsored scholarship to make them qualified to go through those doors.

And in the process we grew up as an organization and found that some of our energies and talents had to be devoted to administration, leadership, good communication and fund raising.

Not everyone is an airline pilot or a flight instructor. Not everyone is a leader. But the goals of our organization are not met by the professional attainments nor the leadership qualities of a few. Our goals are being accomplished in small bits and pieces through the combined and compounded efforts of individual members the world over.

Our individual talents are many and varied. We have leaders; we have followers. Some of us teach, some of us organize. Some of us write or dance or sing. Some of us fold, lick envelopes or make a good casserole. Some of us revel in the past; others look out toward the future.



FLYING EVENTS - Successful events require members to fulfill a variety of roles. Below and clockwise: Alaska 99s brief pilots flying in their airshow; San Gabriel Valley members collect money for 3¢-a-pound rides; the "timers" gather and direct traffic for a Pacific Air Race; an Ohio member greets arriving contestants in the Buckeye Air Rally



And all of us share the love of flying.

And by pooling our talents and efforts we accomplish much for women and for aviation. So whenever you compare yourself to an astronaut or an airline pilot and come up lacking, look over the list below and

count the many things you have done in the name of the Ninety-Nines and know that ...

We Couldn't Have Done It Without YOU!!!

Things 99s Have Done

- * put together a display board representing 99s
- * delivered a lecture for a Flying Companion Seminar
- * made cookies for the controllers in the Tower
- * weighed people going on pennies-a-pound flights
- * worked on an airplane quilt to raffle
- * engaged in hangar flying with other women pilots
- * helped Scouts with aviation badges
- * put together a chapter scrapbook
- * fried sausage for the pancake breakfast
- * flew blood for Lifeguard flights
- * took school children on tour of the airport
- * made hot dogs to sell at airshow
- * timed airplanes for an air race
- * licked envelopes for safety clinic mailing
- * worried over the details of a large project
- * painted plastic airplanes for decorations
- * rolled lumpy paint onto a rocky asphalt ramp or runway
- * spent day in booth at shopping mall telling about the 99s

Your
Help
Made
it
Happen



NIFA - The National Intercollegiate Flying Association encourages competition and aviation competency among collegiate aviators through local, regional and national events. Volunteers administer and judge these contests. Above, a 99 supervises the fueling of a plane before a proficiency contest, and right, Anita Hesson waits for someone to lane "in the box".



Cont Pg 34

- * submitted press releases to newspaper
- * wrote to Congressman
- * join the bunch for lunch at your favorite fly-in restaurant
- * made posters to take to FBO's
- * wrote a chapter newsletter
- * arranged for housing for guests on fly-in tours
- * flew DRF supplies to the next stop
- * folding and stamping mailing at GADO office
- * helped with fund-raising wine and cheese party
- * worked on committee to set up standards to award pilot-of-the-year awards
- * stuffed chicken-wire airplane for local float
- * painted room or building to become your chapter's headquarters
- * spoke to civic group on benefits of aviation to community
- * inspected airplanes before a race start
- * sat at registration table for convention or race
- * made up games for chapter party
- * wrote article or report for 99 NEWS
- * took pictures of 99 activities
- * made pancakes for fly-in breakfast
- * parked airplanes at fly-in
- * made arrangements at restaurant or motel for meeting
- * performed in chapter skit
- * cleaned up after an airmarking
- * taken people for demonstration rides
- * judged a spot landing
- * set up an aviation career window
- * hosted a chapter meeting
- * took 99 coloring books to local school
- * provided ground transportation for fly-in event
- * made coffee for safety clinic
- * judged navigation event for NIFA
- * screen scholarship applicants
- * fixed a dish to take to local meeting
- * choreographed number for 99s to perform at convention
- * interviewed longtime 99s for history
- * planned a chapter budget
- * stuffed goodie bags
- * hung decorations for hangar party
- * sold 99 visors at airshow
- * entered a snake or worm in local race to earn money for chapter treasure
- * work with Civil Air Patrol cadets
- * fly members to meetings in your airplane
- * offer a ride so others can get to meetings
- * spotted planes for a proficiency race
- * had flyers printed for chapter event
- * accepted reservations for clinic or section meeting at your house
- * helped get a slate together for next year's election
- * been on the phone committee
- * washed airplanes to raise money for chapter
- * painted the bathroom at the local airport
- * distributed barrels for trash as local airport cleanup project
- * had a balloon launch for local school children
- * given APT rides to fellow 99s
- * MC'd the dinner
- * smiled and said, "You can do it" to a reluctant flying companion
- * squeezed the hand in understanding of a fear of flying participant
- * helped a Flying Companion Seminar Student work the computer



FLYING COMPANIONS - Reluctant companions become willing co-pilots as they gain both enthusiasm and knowledge about aviation from women pilots. On the left, Lubbock members go through preflight activities and chart reading at a Sky Pals Seminar. Above, pilot proficiency testing keeps Maryland on their toes.



HOT DOG STANDS - Mt Diablo 99s provide welcome treats for spectators during airshows and airport open houses. Food stands prove to be a fun and easy to do project that is a service to the aviation community while earning revenue that can be applied to other projects such as scholarships and air age education.

AIRMARKING - Painting numbers on runways goes pretty fast as the Phoenix members demonstrate below, but the job is not done until clean-up tasks are completed as Jean Lewin, Indiana Dunes member illustrates.



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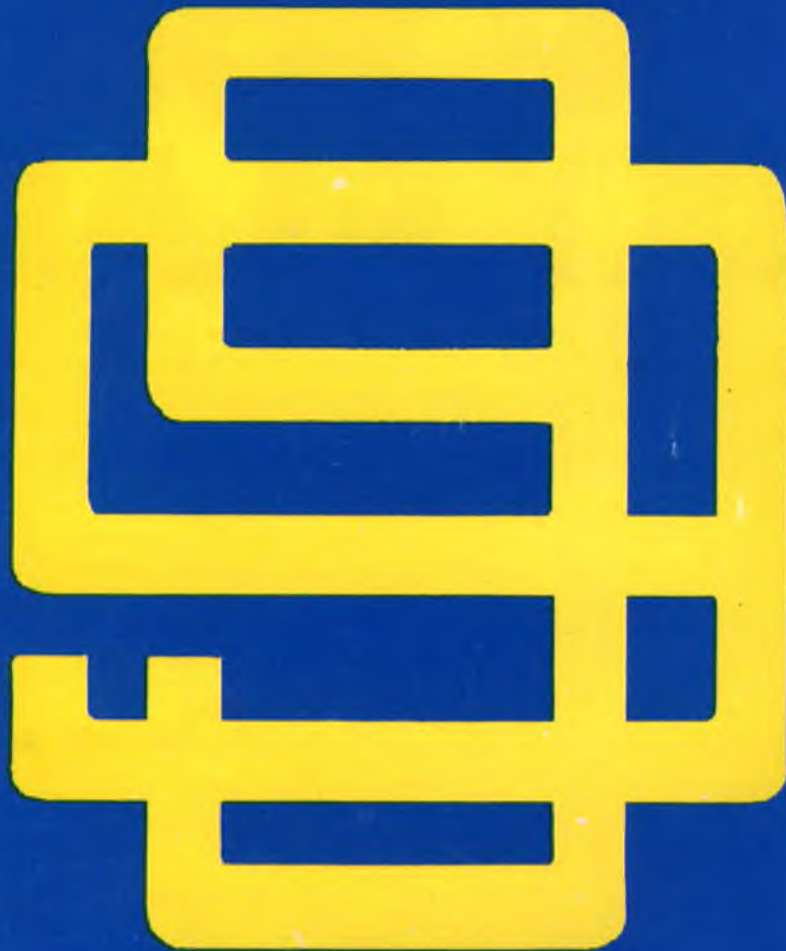


Cessna Finance Corporation

P.O. Box 308, Wichita, Kansas 67201, USA

1929 - 1979

The Ninety-Nines, Inc.



Two interlocking nines remain the symbol of
99 women pilots who joined together 50 years ago
this month to form a lasting association of

Women Pilots