



Reflections

The Quarterly Journal of the Northwest Airlines History Center



March 2020

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Your museum makes two TV appearances this quarter

A piece of NWA still lives on in Japan

Landing the Martin 202 as a taildragger

Our Mission:

To preserve and display the memory of Northwest Airlines' colorful history.

To tell the stories of carriers merged and allied with NWA, and the stations and regions they served.

To show how the legacy of NWA carries on into the future.



The Japanese sun sets on two iconic competitive 747-400s as they prepare for evening departures eastward across the Pacific in this image by Flickr user Hitachiota (CC 2.0 license). The 744's range, capabilities, and limitations made Narita the essential hub airport - and its replacements assured NRT's loss of dominance in Transpacific flying.

Wakare, Narita 別れ、成田空港

A fond farewell to Tokyo's Transpacific Gateway, as Delta moves "back" to Haneda Airport

--by Scott Norris

The irony is not lost: Northwest jump-started Japan's domestic airline business after World War II with technical assistance and loaned aircraft. NWA opened Tokyo's Haneda Airport up to the world, and by proving the viability of the market, encouraged so much intercontinental traffic there in the 1960s that the airfield could not handle the load. When the Japanese government mandated overseas traffic move to its new Narita Airport, Northwest again took the lead by timing its flights so that pan-Pacific connections could be made without overnight stays - creating East Asia's first true scissor hub. NWA's lower costs and competitive fares posed a constant challenge for the home carriers ANA and JAL - one that could only be overcome by superior connecting feed - and so the decision to not expand Haneda was overturned.

Sayonara: to page 6

Flight Plan



From Director Fay Kulenkamp

Our Northwest Airline History Center president, Bruce Kitt, usually authors this column. One subject he has not covered is how much time and effort he has given to our organization for so many years!

Where would we be without such commitment? He organizes artifacts and events, schedules volunteers, prepares reports for monthly board meetings and handles the daily business of operating our museum. He does everything from museum interviews by news media and other aviation organizations to vacuuming the museum floors! More less running a small business....but without the paycheck! (don't give him any ideas)

IN THE BEGINNING:

I retired in 2004 after a 36 yr Flight attendant career with Northwest Airlines. I also operated a small retail business which I incorporated in 1977 to present. I heard about a Northwest Airline History Center recently started by Pete Patzke (our retired Northwest Credit Union president) and a few good friends with the same interest. In 2002 the flight museum was just getting off the ground (no pun intended).

They approached me in 2004 requesting help with their retail sales and how to sell on Ebay their duplicate donated items unrelated to Northwest's history. The proceeds from both retail gift shop and Ebay would help support the museum along with NWA History Center memberships. After attending a couple meetings I was invited to be on the board of directors. I accepted their invitation and would volunteer my help in this area, for a short time, 'til they were set up...that was 16 years ago!

Shortly thereafter, Bruce Kitt came to the museum. He had a vast knowledge of aviation and very enthusiastic about the history center. He was a retired mechanic. We asked him to join the board and he agreed. (probably didn't know what he was getting into!)

At that time, we had at least 13 board members. Each had their own special talent but all the same objective of keeping the memory of Northwest Airlines alive. We had several mechanics, one pilot, two flight attendants, one director from NWA advertising dept and three directors from the credit union.



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THE NORTHWEST AIRLINES HISTORY CENTER, INC.

We are an independent, not-for-profit 501(c)(3) corporation registered in the State of Minnesota. Volunteer-staffed and volunteer-managed.

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Henry V. "Pete" Patzke (1925-2012)

Executive Director: Bruce Kitt

Museum Director: [open]

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Collection Manager: Bruce Kitt

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Bruce loved aviation and had good skills in archives and organization. He gave structure to our monthly board meetings by creating positions of president, vice presidents, secretary and treasurer. He recruited local college students and the Minnesota Historical Society to help with our many history center projects. Bruce also managed to acquire several grants for our museum.

AND THEN THERE WERE FIVE:

Sadly, over the years, many of our board members have passed away and some have had to resign due to health issues. I am among the 5 remaining board members and we are looking for more. Our current location in Crown Plaza Aire Hotel has opened a whole new world for us. We have many more visitors and opportunities with lots of events to cover.

WHERE TO GO FROM HERE:

We have been at Crown Plaza for 2 years where we have a 10 year lease. 10 years can go fast, especially when you are having fun volunteering with old co-workers (well, lets say EXPERIENCED co-workers) and museum projects. We still need a good plan to keep the memory of Northwest alive. We always appreciate any ideas you may have and are open to all suggestions. Please pass them on to us.

"Thank you" to Bruce for all you do!!!

Preflight Briefing



From the Editor

This is not the column I was planning on writing - as the COVID-19 epidemic washes across our planet, our brothers and sisters in the airline industry, in the museums and arts, in journalism, in education, and every other field are all struggling to stay safe and weather the winter that has stopped our economy, our liberty to travel, and our own bodily autonomy. The hard effort and sacrifice of generations to build the international system of safe, economical air transportation has been destroyed in weeks.

The grit, inventiveness, and clear thinking that built Northwest and its predecessor companies are the same skills that will help us inevitably rebuild the airline industry. The desire for connection with other people, understanding different cultures, and joy in seeing new things is what will help it again to thrive.

While we won't have the events this summer we'd hoped, we will still keep doing what we can here at the NWAHC to share our - your - stories as best we can. Thanks for your ongoing support, and please keep in touch. --Scott

Have items you'd be interested in donating to the NWAHC?

Please contact our collections manager, Bruce, at bruce.kitt@northwestairlineshistory.org with details of your items, photos if possible, and how we can reach you.

VISITING THE MUSEUM

Current schedule:

Wednesday - Saturday 11 am - 5 pm

Closed Sunday-Tuesday, and major holidays.

CORONAVIRUS PAUSE: Watch our Facebook account for updates - at press time, the museum location is closed.

Admission and parking are FREE

(Special events may incur a charge.)

Directions:

FROM MSP INTERNATIONAL AIRPORT:

Use the Metro Blue Line light rail from either Terminal 1 or Terminal 2. Take the southbound train (towards the Mall of America) and exit at the American Boulevard station, which is the stop immediately beyond Terminal 2. The Crowne Plaza Aire Hotel is immediately east, across the street from the station. Trains run every 10 minutes and fares are \$2.50 peak / \$2.00 off-peak. A ticket is good for 2.5 hours of unlimited travel, so depending on the length of your visit to the museum, a separate return ticket may not be necessary.

FROM THE TWIN CITIES METRO AREA:

Head toward MSP International Airport.
From I-494, exit at 34th Ave. S.
Go south on 34th for one block to American Blvd.
Turn left (east) onto American Blvd.
Crowne Plaza Aire Hotel is on your right. Free parking is available on the top two floors of the hotel's ramp.

The museum is on the third floor, across from the Fitness Center.

ANNUAL MEMBERSHIP

\$30 level - receives the REFLECTIONS digital edition early access via email

\$35 level - receives the REFLECTIONS print edition via U.S. Postal Service. (Be sure to give us your email address if you'd also like the early online access.)

Compass Readings

Flight 2501's mystery given a deep dive by "Expedition Unknown"

On February 12th, the world was given a walk-through of our Bloomington, Minnesota museum location on the Discovery Channel. Our screen time served as the kickoff segment of Expedition Unknown: Season 8, Episode 2. Josh Gates and his team also flew on one of the last airworthy DC4s in the episode, and for the back half of the hour, went on two dives in southeastern Lake Michigan with wreck researcher Valerie van Heist, author of the book *Fatal Crossing*. While the sensor sweeps and dives did recover a lost engine from a Kalitta Air 747 as well as an unlogged barge, the final resting place of Flight 2501 is still undiscovered.



Josh Gates discusses the capabilities and passenger experience of the Douglas DC4 with NWAHC's Bruce Kitt during filming on August 30, 2019.

A Wish Come True

Our museum location also had the pleasure of being the stage for an interview on Twin Cities' TV station FOX 9 to support Minnesota's Make-a-Wish Foundation's airline mileage fundraiser. Filming was on February 25 and the segment aired on the 26th.

As a 12-year old, Anthony Lickteig-Carter was in love with aviation and wanted to become a pilot, but suffered from a life-threatening digestive system disorder. The Make-a-Wish Foundation arranged for Anthony to go behind the scenes at Northwest and become a 'pilot for a day' - that was 20 years ago. Anthony did get the right therapies and did pursue his dream - today he is a Captain for SkyWest, flying Embraer 175s and is based in Minneapolis.

The segment, and an accompanying blog post by the Thrifty Traveler, can be found on the NWAHC's website under the "Videos & Press" heading.

Top right: Captain Anthony Lickteig-Carter, with a copy of Passages we presented him with from 2000 containing an article about his experience then.

Top left: Helen Ng from the Make-a-Wish Foundation, and the Thrifty Traveler, Kyle Potter

Bottom: FOX 9's Russ Weseman handling video and sound, with reporter Tim Blotz interviewing Capt. Lickteig-Carter



Minnesota Business Aviation Association: Winterfest 2020

On January 24, the Crowne Plaza AIRE Hotel hosted the annual winter ball for the Minnesota Business Aviation Association. Representatives from most of the state's contract and charter operators, ground services providers, and allied businesses were in attendance for the 1920s-themed dinner and festivities.

Of course, the hotel is also home to the NWAHC's Museum, so several of our volunteers kept the doors open for the evening to entertain dozens of visitors.



Twin Cities Fall Show date set (assuming COVID-19 has passed by then)

Again we invite aviation enthusiasts and the general public to the Best Western Plus on the second Saturday of October. With the past two years shows' participation and attendance success, we expect attendees and vendors to have a great time this year.

We are working on special attractions for the 2020 show, with one idea being a diorama exhibit - modelers and artists, here's a chance to show off your creativity! Watch our website and Facebook page for more details as we get closer to the event date.

Be prepared to haul great treasures home.



The 2020 Twin Cities Aviation Collectible Sale & Get-Together. Saturday, October 10, 9 am - 4 pm.

At the Best Western Plus Hotel in Bloomington, MN, across from the Mall of America.

Admission only \$5 (kids under 12 free); proceeds support the Northwest Airlines History Center. Free parking. Free shuttle from MSP Airport. Or use METRO Blue or Red lines to the MOA. Table space: (612) 386-5080 or bill@airlineposters.com Hotel reservations: (952) 854-8200

Feature Article

Japan's Transport Ministry started landfill work to expand Haneda in Tokyo Bay in 1983, opening a third runway on it in 1988, as well as today's Terminals 1 and 2. However, this only sated domestic flight demand - JAL and ANA had to wait until 2010 for a fourth runway and a proper International Terminal to come on-line. This completed the first step in Japan's industrial policy to dislodge the NWA hub and its fifth-freedom rights, secured by treaty with the USA after the war.

The second step was directed alliance-building to counter Northwest's same-metal feed: All Nippon (ANA) joined the Star Alliance and inked an immunized joint venture with United. JAL likewise joined oneworld and hooked up with American.

The third step was in selectively opening up slots at Haneda to US carriers in late 2010. Haneda's "downtown" location was more desirable for premium-heavy business travelers (but initial late night slots caused Delta and American heavy losses.) When daytime slots became available in 2016, United/ANA and American/JAL took the lion's share, with Delta only opening Los Angeles and Minneapolis.

The fourth step was to leverage evolving airframe capabilities (longer range with smaller capacity, such as the Boeing 787) which made it easier for JAL and ANA to profit by flying premium-heavy cabins and not have to discount to fill older-generation Boeing 747-400s. NWA intended to use the 787 to flood new routes into Tokyo from smaller, diverse markets such as Memphis and Ho Chi Minh City as a means of replacing the 744, but Boeing's extended production delays and Delta's decision to cancel the new, smaller-gauge aircraft locked DAL into depending on high-connecting volume city pairs to fill its bigger Boeing and Airbus jets.

The fifth step was to deny Delta any chance at gaining local feed at Haneda. When JAL declared bankruptcy in 2000, Delta put up a strong US\$1 billion investment offer which company officers and even parts of the government favored; however, a slightly richer counter-offer from AA and some ministry arm-twisting kept JAL in oneworld.

In 2015, the last large independent carrier in Japan, Skymark Airlines, declared bankruptcy. Delta again rushed in with an investment bid, initially supported by Skymark's main creditor Airbus, but "the fix was in" with a bid from ANA and a promise by them to buy A380s that flipped Airbus' support just before a final vote.

The final step was to open one last tranche of Haneda slots to US carriers, but only enough to allow Delta to move its US flights from Narita with no room for onward fifth-freedom service. DAL had no other choice but to play the cards before it in 2018 - and its last Narita service will be on March 28 (if not before due to the effects of the global coronavirus epidemic.)

It took forty years, but ultimately Japan's industrial policy achieved its objective - rooting out Northwest's hub once and for all.

Chicago-Tokyo nonstops: only on Northwest.

Fastest way between Tokyo and many U.S. cities in the East, South and Midwest.



Above: 1978 timetable advertisement - Narita's long runway made extended nonstops possible. Below: From opening day through 2006, NWA used the south side of Terminal 1.



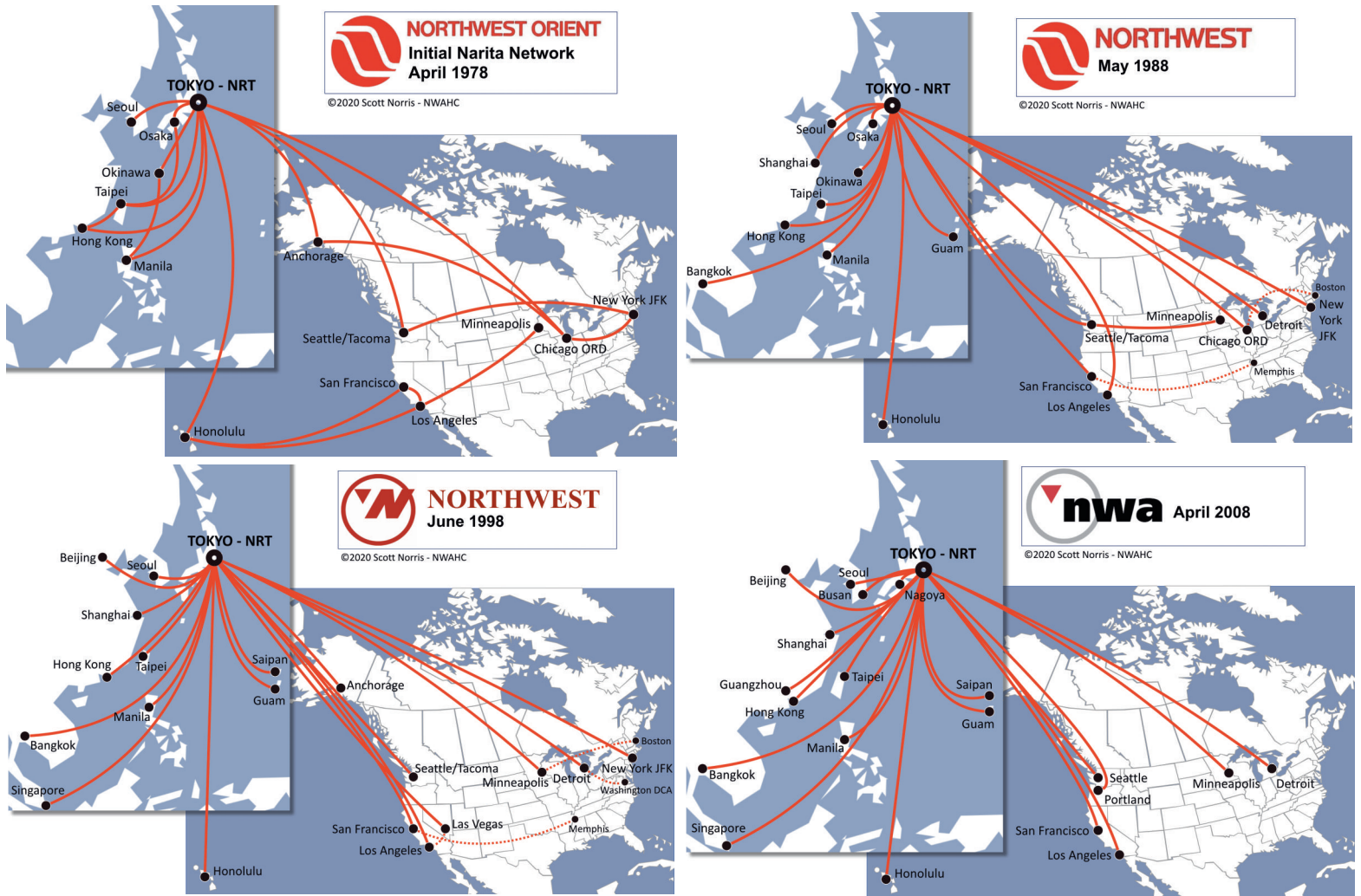
Remembering Narita:

*When NWA transferred its flight operations from HND to NRT the flight crews left The Ginza for Camp Narita (the name crew members gave our hotel and grounds near Narita City). Our layovers in the country were completely different (I missed Tokyo), but soon I adjusted to a new routine and in time the protests against the new airport lessened and there was a new reality: I was in a very pretty environment and I especially enjoyed my morning runs in the countryside. Narita City quickly became familiar and fun for me. Whether I was visiting a 10th century temple (Naritasan Shinshoji Temple) in Narita City, shopping or eating; all were highlights. The weddings held on the grounds of Camp Narita on weekends were always a beautiful sight to behold. I have wonderful memories of my time spent in Narita. I also have fond memories of the hustle and bustle of my layovers in Tokyo. Arigato gozaimasu, NWA.
Karen Schmit, FA*



The Narita International Hotel not only served as a crew rest base, but also contained the NWA flight kitchen for Tokyo catering. This property was sold off to Radisson help pay for the 1989 Wings Holdings takeover.

Maps showing every 5 years of NWA's service at Narita can be found in an entry in the "Blog" section of our website:



Recalling "FUGU", the exquisitely tuned daily flight schedule in and out of Narita. All flights landed and departed within a 4 hour time period. I remember being jammed with hundreds of passengers, both arriving and departing, in that small terminal. NRT operations did a fabulous job managing those flights, ensuring FUGU success! -- Caron Portham

I always liked seeing those huge and beautiful orchid arrangements they had in the club after being in a plane for several hours. Something fresh and not plastic. The staff was always amazing as well. --Brian Abrams

The temple in Narita town often gave me a sense of calm and peace after walking (and sometimes getting lost in!) the grounds. --Leah Galvante-Sevilla

Photo by Kentaro Iemoto via Wikimedia Commons, CC 2.0 license.



Credit: NWA Public Relations

Losing Face: the shame game

Every incident was magnified at Narita

As the Japanese government continued to chafe under the terms of its bilateral air services treaty with the United States, where Northwest and United had full fifth-freedom rights to carry passengers and cargo from Japan to any other country welcoming US flights, every mishap or mistake made by NWA or JAL was hyped up by local officials to the international media and became another talking point at the negotiating table.

In March 1997, the Transport Ministry formally censured NWA, noting that Northwest had 21 out of 205 reported incidents at Narita such as engine trouble or tire punctures.

The government noted in 1996, JAL flew twice as many departures yet only reported 6 incidents. "Under U.S. FAA rules, any time a U.S. airline takes a precautionary step, like shutting down an engine or diverting a flight, it must declare an emergency. Japan classifies it as an incident," said NWA spokesman Doug Killian. "It may be the case where Japanese airlines don't always follow the same procedure."

Yet there were serious incidents, such as the March 1, 1994 engine loss as Flight 18 arrived from Hong Kong (photo above). A retaining pin had been removed during night maintenance in HKG but not replaced, and the engine gave way when its thrust reverser was retracted. The cowling ground away and caught on fire - all 245 aboard evacuated safely.

A less-fortunate incident happened Sept. 30, 1991, when Flight 18, having just departed NRT for New York, reported a breakdown in its #2 engine oil system and returned for an emergency landing. The engine flared up twice on touchdown, and shut down the runway for 22 minutes as fire engines put out the blaze and passengers evacuated by chutes. 45 people were injured in that incident, and 9 needed hospitalization.

Investigation by the Transport Ministry found a computer-monitoring fault - and the JAL pilot union used the embarrassment of the Northwest incident to get the JAL and ANA 747-400 fleets pulled for emergency engine inspections and software updates.

On Jan. 27, 1997, Flight 20 departing to Minneapolis blew an engine and aborted its takeoff. NWAHC volunteer Nancy Rasmussen was serving aboard: "airport staff arrived so quickly and covered the entire area with tarpaulins so completely that even we cabin crew couldn't tell what was going on as we helped the passengers deplane."

Incidents such as these were pointed to by the Transport Ministry to drag out treaty talks with the US over "Open Skies" liberalization of North Pacific flying rights - with the Japanese side accusing US carriers of operating unsafely and demanding the removal of fifth-freedom operations. The US side wanted complete removal of barriers such as had been achieved with the Netherlands. In the end, full Open Skies were agreed to in phases, but Japan still got what it wanted with Haneda slot restrictions.



Kind of hard to ignore this one. (NTSB)

One memory I have not seen mentioned but who can forget? Being stuck there during 9-11. The emotions were deep and raw but we were there together as a family and grateful for that. The Radisson did its very best to support us as did the company. They set up a computer and internet for us to contact our families since this was before cell phones and before very many people carried laptops, and of course there wasn't free internet then either. Activities were scheduled to keep us busy; we had daily briefings on operations from the pilots. And of course we were glued to CNN. There was a bar-b-cue by the pool for us one night (the pilots paid for the booze). The hotel sent away most of the guests so that we would be safe and private to deal with what had happened to our country. We were there for 3 days before airports in the US reopened and we were able to go home. To our home that would never be the same again. --Linda Tiboni

My fondest memories of NRT, I was a teenager traveling on NWA, from LAX to NRT to HKG. During summer months, there would always be an unforeseen stop in ANC to refuel, that made us miss our connection to HKG. We would always get put up at the Radisson. I remember the voucher for dinner: choice between chicken curry or spaghetti. That was always the highlight of my travels. Then 10 years later I became a NWA FA, which brought me back to "Camp Narita" every month for first 15 years of my career. So I can truly say I was brought up in NRT. -- Win Yih

Photo by author.



We adopted our daughter from China, and like so many other families, we took Flight 10 from Guangzhou to Narita to connect to our leg back to the United States. That 757 might as well have been a stork for all the babies and toddlers it was carrying; the cabin crew knew it and was wonderful to all of us. It was such a relief to be on a US flag carrier. For the week and a half we'd been together in-country, our little girl was almost constantly and exclusively clinging to me - we were told this was normal, but my wife was anxious that our peanut didn't like being held by her. Yet at Narita, I had to make the supply run to the bookshop and get some McDonald's teriyaki burgers. I finished the shopping and hurried back to find the two of them snuggled together. NRT is where the mama -daughter bonding happened and our family was truly together. --Scott Norris

A piece of Northwest still lives at Narita: the Museum of Aeronautical Sciences

Aviation enthusiasts know that Japan takes their hobby seriously and respectfully, and has some of the finest planespotting accommodations on the planet. At Narita, the Terminal 1 observation deck is legendary, as is the aviation merchandise shop just inside. There are also two sanctioned runway-view areas along the western perimeter road at either end of the runway.

Since 1989, at the far southern end of the west runway, the Museum of Aeronautical Sciences (admission just 500 yen; open Tuesday-Sunday 10:00-17:00) has collected and displayed not just models and components of civil aircraft important to Japan's history, but also full 747-400 and DC8 simulators and actual aircraft, including the popular Mitsubishi MU-2, the Fuji/Rockwell Commander 700, and an NAMC YS-11 mainliner turboprop which is fully outfitted and open to be walked through.

The museum offers a third-floor outdoor observation deck as well as a fifth-floor indoor observation lounge and a restaurant on the fourth floor. Despite the museum's exhibits and audio being Japanese-language only, readers of this publication could no doubt easily spend an afternoon quite cheerfully here without the draw of a Northwest Airlines connection!

And that connection comes via retired 747-212B, N642NW, msn 21942, originally flown by Singapore Airlines, then Garuda, and finally by NWA from November 1996 through August 2004, when it flew west to the Marana Boneyard to be scrapped. Its forward section was acquired by the museum and transported to Japan, where it was restored for tours (a cross-section of it also sits in the 747 exhibit room.) Careful observers may also spot some pieces of NWA ground equipment there, too.

From Terminal 1, there are five Airport Museum shuttle buses each day; also JR buses leave every 1-2 hours.



Above: the nose of N642NW. Photo by Alec Wilson via Flickr, CC 2.0 license.

Below: museum-supplied photos via JapanVisitor.com



"Disquieting silence": Martin 202 emergency landing!

-- by Capt. Bill Atkins (*courtesy of the Atkins Family*)

It is a clear day on July 1, 1948. Captain Dick O'Neil and I, along with F/A Donna Hall, are on Northwest Flight 102 cruising westbound over Miles City, Montana at 250 knots. It is a light load - 26 passengers for 42 seats. The airplane is the new Martin 202, NWA #554. I have recently checked out in the 202, with 25 hours, 32 minutes of flying plus two days of ground school prior to this Minneapolis - Fargo - Bismarck - Billings run.

All is well until we begin experiencing light turbulence. I flick on the seat belt sign. When the chop becomes moderate as well, we take action by retarding the throttles and lowering the landing gear. At the exact moment I put the gear handle down, we hit a severe upwards jolt. There is a "scrunch"; we both look out our respective side windows at the wings and then at each other, and then at the wings again. Nothing is amiss. The joke about Martin using Reynolds Wrap aluminum may have passed through our minds. We continue on for several minutes; the air smoothes out. Blithely we pull up the gear and continue the 40 minutes to Billings.

We are on-time at 3:00 pm. As we approach, the Billings tower gives us clearance to land. We put down the landing gear and start to run the landing checklist. No green gear light! It was down and green when we deployed it over Miles City. The nose gear is not down! A red light is on! We pull up and go around - we have a problem! We try the emergency free-fall for extending the landing gear, but the light remains red.

The standard operating procedure is to pull up the main gear, and belly the plane in. We are obviously reluctant to belly in at 100 miles per hour in this new, untried and untested flying machine. The potential for fire and explosion is always high.

I recall from 202 ground school asking the instructor, Herb Morphew, about a third method of nose gear extension and being told, "there isn't a third method; the free-fall will ALWAYS work if you don't have any hydraulic pressure."

My next question is, "how much weight do we have to shift aft to change the Martin 202 from a tricycle airplane to a taildragger airplane?" The answer: "IMPOSSIBLE." That came from Martin's sales and marketing department, not their engineering department. Anyone knows you can balance a beam or teeter-totter by moving weight; and I had an experience on a B-29 bomber moving 1500 pounds aft in just such a situation. I ask Herb Morphew to find out for me.

I call Northwest in Minneapolis on the company's frequency and ask them to call the Martin factory in Baltimore with my "tail-dragger center of gravity" question. The answer is swift - it is after 5 pm in Baltimore and the plant is closed for the day: call again tomorrow!

Next we try diving and zooming with no effect. Besides, one of the passengers has just been discharged from a hospital and Donna says we are hurting his back. We try to pry the nose gear loose with a baggage pole through the trap door, also to no avail.



One of the M-202 fleet at the time of this story. N93048 taking off, airport unknown. From the James Borden Photo Collection at the NWAHC.

The nose gear door was designed to open and close behind the gear extension with a mechanical sequence. The gear strut opened the door and then closed it on the last portion of the strut's movement. This was to lower the air drag when the gear was down. With the rapid extension during the updraft, the design limits had been exceeded and the door hinges were half-torn off, jamming the strut in the up position on the next gear retraction.

I check the cabin. There are 16 vacant seats. I pick the 4 heaviest men and put them in the back row of seats, and so on until I have the lightest ladies sitting with 16 empty seats in front of them. We have 960 pounds of cabin baggage I put in the rear galley in the tailcone by the rear air-stair door.

We plan to land uphill on Runway 27 to the west. We'll first make a trial pass, touch-and-go, on the runway to test our aircraft's center of gravity.

By this time we have been holding over Billings long enough for them to get most of the fire trucks and ambulances set up - and to let the local schools out to watch the big show.

We make our first pass, not intending to stop, but to test the balance with main gear down and nose gear up. We touch down on the uphill runway, and I find with the tail about 2 feet above the runway it is tail-heavy. We have used up a good portion of the runway so we pull up and go around as planned.

While on the downwind leg, Northwest HQ calls on our radio and advises, "DO NOT LAND WITH THE MAIN GEAR DOWN." We shut off the master high-frequency radio switch without acknowledgement. We did not need that kind of help to answer to tomorrow.

We are well aware of what will happen on landing if the nose goes down with its gear retracted. It will cartwheel down the runway into a ball of flame.

This airplane has never made a belly landing. We don't want to be the first to find out how well the 202 reacts in that situation. The props and engines would come apart, and all 39,900 pounds would grind away at the fuselage and wings. All our fuel is in the wings, and with lots of sparks, that is an unknown factor.

I did know we could tell which end of our teeter-totter was the heaviest. We have the feel of the controls with the elevator pressure on an actual roll on the runway. We are landing on a long, uphill runway and wheel braking will not be necessary if we start at the beginning threshold.

Our approach is nice and slow. We touch down on the main gear, nose high, on the first 500 feet of Runway 27, just above stalling speed. With our tail 2 or 3 feet above the runway we are tail-heavy and we require forward pressure on the yoke to keep it from touching the pavement. We pull back on the yoke and feel our tail scrunch. We push forward again to bring it up, commit to the landing, and pull our firewall shut-off levers out and swing them through their shut-off arc. All flammable fluids, gas, oil, and hydraulic fluid are shut off. The electric generators are disconnected, and the carbon dioxide fire extinguisher is armed and ready for discharge.

The engines have stopped turning and it is strangely quiet except for some distant aluminum metal scraping along behind us. The silence is disquieting on a moving airplane when the engines are not running. I have felt this sensation before on a dead stick forced landing.

We roll to a smooth stop in the center and about halfway up the length of the runway. We slide open our cockpit windows and direct emergency crews aft - eleven firemen jump on top of the horizontal tailplane to hold our tail down.

The firemen want us to evacuate our passengers through the emergency exits. We veto that idea quickly because those passengers are what is keeping the Martin 202 from falling onto its nose. Also, any evacuation from the emergency exits over the wing at this 30-degree nose-high pitch-up attitude would be dangerous to them. Our cockpit is about fifteen feet up in the air.

A nose for trouble

While the NWAHC Archive does not have photos of the 7/1/48 Billings incident, we do have images of several other Martin 202 incidents as part of our James Borden Photo Collection. Captain Borden was hired in 1953 and was a friend and collaborator with Captain Atkins in various aviation projects. Borden was intensely interested in the history of Northwest Airlines, and after his death in 2016, his family donated his extensive collection to the NWAHC. Our



We instruct the emergency crews to get a fire truck ladder and climb up to our nose gear, then take a crowbar and pry the gear door out of the way so the gear can extend with the ship's hydraulic pressure. They do just that and the nose gear extends normally, but is up ten feet in the air.

The eleven firefighters still on our tailplane slowly get off and move underneath it. Still, they cannot lift our airplane up and onto its reluctant nose gear. We begin moving some of the heavier passengers forward. The tail comes up slowly and settles into our intended tricycle position. We lower the rear airstair tail passenger door and everyone deplanes normally. No fireworks.

The company ferried the Martin 202 back to Minneapolis the next day with its landing gear down. There they repaired the minor aluminum skin damage and replaced the hinges on the nose gear doors.

They modified the Northwest fleet of Martins with a 6 foot long, 1" x 1" aluminum bar to act as a tailskid just in case this type of incident would ever happen again. They also issued a procedure for shifting weight to change tricycle gear airplanes into taildraggers. The procedure was published six months later in "Aviation Weekly." Northwest's engineering department had worked the whole thing out. Neat idea! They were such fast learners.

And no one ever said, "thank you," but also I did not get my pay docked for the aluminum skin repair, either. They certainly would have had a substantial repair bill if we had made a gear up belly landing per their last instructions. If there had been anything left to repair.

volunteers and college work-study students have sorted and cataloged the collection at our Flying Cloud archive, and now the work begins of scanning the photos - some two file cabinets' worth!

At left, NC93037 in Wenatchee, Washington, likely 1948, having run off the taxiway into soft ground. This aircraft would later crash due to an inflight thrust reversal during a training flight on Oct. 3, 1950, killing six. Below, NC93038 at Kalispell, Montana, probably winter 1949, again looking like an unplanned exit from taxiway. We can see in both images how Atkins' concerns about passenger safety during evacuation and explosive risk from damaged engines / propellers were well-founded.





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Do you have talents in any of these areas - and time to share?

- Photography
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- Exhibit & display building
- Social media
- E-commerce
- Event planning & outreach
- Grant applications
- "People skills" and the gift of conversation?

As our collection and membership grows, so do our opportunities to help communicate the Northwest Family history - from greeting visitors at our Bloomington, MN museum, to digitizing our archives, building community links, and strengthening our base of funding.

Now boarding!

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