FAM 14

Prepared by the SAN FRANCISCO AERONAUTICAL SOCIETY

President's Message **Summer 2008**

EXCITING PROJECT

November 2010 will mark the 75th anniversary of the famous *China Clipper* and the opening of the Pacific to the world's first regularly scheduled transoceanic commercial air service. To commemorate this historic event, the San Francisco Aeronautical Society, in conjunction with the Pan Am Historical Foundation, will be recreating that flight from San Francisco to Hong Kong.

In this edition of *FAM 14*, we've re-printed an article that was recently published in *Airport Journals*. This article describes the upcoming commemorative flight, but more importantly provides some fantastic anecdotes and insights into this period in aviation history.

The Board of Directors of the San Francisco Aeronautical Society enthusiastically welcomes its two newest members, Peter Volny and Catherine Mayer. Both have graciously accepted positions as Directors of the Society and will bring unique experiences and perspectives. Mr. Volny, coincidently, is the author of the article reprinted in this newsletter.

I hope you enjoy this Summer 2008 edition of *FAM 14.* We look forward to updating you on all the exciting happenings around the China Clipper 75th Anniversary Commemorative Flight.

Sincerely,

Louis A. Turpen
President

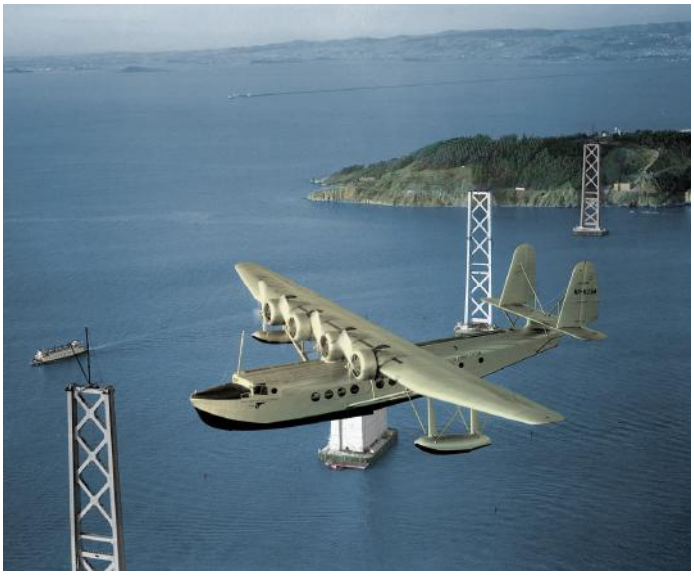
FAM 14 *is the abbreviation for the world's first transoceanic Foreign Air Mail route, which originated in San Francisco and linked the East and West by air. The* FAM 14 *masthead photograph was taken by Clyde Sunderland and shows Pan American Airways'* China Clipper *over the city of San Francisco on November 22, 1935, departing on the first transpacific commercial flight to Manila. Courtesy of Pacific Aerial Surveys.*

China Clipper -*The Original Dreamliner*

By Peter Volny

Reprinted with Permission from Airport Journals

The year is 1935. As Pan American Airways plans its historic attempt to conquer the Pacific, the world is in a deep economic depression. Franklin D. Roosevelt has just been elected president of the United States—and will remain so for an unprecedented four terms. Only 48 states are in the Union; Alaska and Hawaii will not be added for almost 25 years. Prohibition has been repealed, and thanks to Hollywood, New York's Empire State Building will forever have King Kong associated with it.



Clyde Sunderland/Courtesy Pacific Aerial Surveys

Departing on the first survey flight to Honolulu on April 16, 1935, the Sikorsky S-42 Pan American Clipper flies above the towers of the yet to be completed San Francisco - Oakland Bay Bridge.

The establishment of Pan Am's transpacific route, a mere 32 years after the Wright brothers' Kitty Hawk success, overcame the greatest technological, geographical and navigational challenges of the day. Its fleet of flying boats captured the world's imagination as it ushered in the age of global air travel. Today people cross oceans in airplanes without even a second thought, but in November 1935, that very first transoceanic commercial airliner flight was a mammoth undertaking that presaged modern international travel.

November 2010 will mark the 75th anniversary of that inaugural *China Clipper* flight, which opened the Pacific to the world's first regular transoceanic commercial air service. The San Francisco Aeronautical Society, a nonprofit volunteer organization dedicated to preserving the history of aviation, in conjunction with the Pan Am Historical Foundation, is organizing a unique event commemorating what is generally regarded as the greatest milestone in commercial aviation history.

The *China Clipper* 75th Anniversary Flight will depart from San Francisco to retrace the historic Pacific route that reached Hong Kong via Honolulu, Midway, Wake, Guam, and Manila—albeit with a modern aircraft outfitted entirely in first class format. Special events will be held at each port of call.

History

The British government blocked Pan Am's use of intermediate bases in Newfoundland and Bermuda until a British airline could be made ready for reciprocal Atlantic service—a desire that never materialized. So, Pan Am turned its attention to the Pacific. Survey flights to Asia had begun in 1931, when Col. Charles Lindbergh and his wife, Anne Morrow Lindbergh, made a flight along the Great Circle route from New York to Nanking, China, via the Arctic. Though successful, their epic journey exposed insurmountable challenges, both diplomatic and meteorological. Therefore, it was in the middle latitudes that Pan Am would create the first transpacific route.

Searching his globe for the steppingstones needed to link a route across the planet's greatest water gap, Juan Trippe, Pan Am's president, began plotting the route to Asia. Apparent were Hawaii and the Philippines, with the inevitable jump from there to China. Midpoints in the Hawaii-Philippines sector could be Guam and Midway Island. This still left a gap of more than 2,800 miles.

In studying 19th century clipper ship logs in the New York Public Library, he found a little-known coral atoll named Wake Island. With a series of island bases between San Francisco and Manila in the Philippines, the longest sector of the 8,210-mile airway would be the 2,410 miles from San Francisco to Honolulu.

After specifying and ordering aircraft capable of the route, and while conducting a series of survey flights, Pan Am constructed the facilities for air bases and overnight passenger accommodations at the mid-Pacific points. Two of them, Midway and Wake, were built from scratch. In early 1935, the 15,000-ton steamer *North Haven* was loaded at San Francisco's pier 22. It would carry prefabricated structures for two complete villages and five air bases, a quarter of a million gallons of fuel, 44 airline technicians, 74 construction workers and 32 ship's crewmen. Heavy equipment, such as motor launches, barges, tractors, refrigerators, diesel electric generators, windmills, water storage and gasoline tanks, radios and direction finding equipment and even a small-gauge train were also taken. A ton of dynamite was added in Honolulu to clear the lagoons for flying boat operations.

Clyde Sunderland/Courtesy Pacific Aerial Surveys

The sea wings, or sponsons, on the Martin M-130 provided improved stability on the water plus the added advantage of each carrying 950 gallons of fuel.

Pan Am's fabled *China Clipper*, a Martin M-130 flying Boat, left Alameda on San Francisco Bay on November 22, 1935. Under the command of Capt. Edwin C. Musick, the flight would reach Manila six days later via Honolulu, Midway, Wake and Guam. The inauguration of ocean airmail service and this first commercial air route across the Pacific were significant events for both the U.S. and the world.

San Francisco Airport Museums

Capt. Edwin Musick and R.O.D. Sullivan next to the China Clipper before leaving San Francisco Bay with the first transpacific airmail. On the ground, L to R: Postmaster Gen. James Farley, Assistant Postmaster Gen. Harllee Branch and Pan Am President Juan Trippe.

Trippe, the airline's visionary leader, suggested the use of "clipper" names for Pam Am's fleet of flying boats. He saw this new class of long-range aircraft as modern age versions of the swift 19th century clipper ships that plied the trade routes of the world. In reality, they did share many of the design challenges faced by marine architects, with respect to buoyancy, hull contours and general seaworthiness. Their flying capabilities made them true hybrids during this period of transition from surface to air transport.

The Pan Am "Flying Clippers" title became one of the most distinct and famous brand names in aviation history. The maritime references and advertising slogans, such as "aircruise," conjured up images of sailing through the skies to distant and exotic shores. The terminology and navy blue uniforms of the flight crews reinforced this aura. In many ways, operating procedures were actually based on naval standards. The highly skilled crews were cross-trained in navigation, both celestial and in the new radio direction finding technology. The rank of captain was given to the commanding officer, and a first officer, second officer, flight engineering officer, flight radio officer, purser and steward rounded out the crew. Pan Am certified qualifying pilots as "Masters of Ocean Flying Boats."

Pan Am pilots were among the most experienced aviators of their day, and the early flight crews and ground personnel set the standards in airline operation. Musick was an Army Air Corps flyer during World War I and one of the first pilots to accumulate 10,000 hours of flying time. He joined Pan Am in 1927 and soon became the chief pilot. He flew the first Pacific survey flights including the South Pacific route to New Zealand in the S-42, and the inaugural airmail and passenger flights from San Francisco to Manila in the M-130. Andre Priester, chief engineer and operations manager, developed the airline's strict standards and the concept of multiple flight crews, whereby all personnel were trained in navigation, radio operation and engineering.

Meterorology, radio and navigation

Pan Am developed the Pacific's first weather maps, known as "synoptic" charts, and developed systems for reporting and forecasting upper air conditions. The company then built weather-reporting stations at the Pacific bases. Matson Navigational Company's ocean liners provided additional information. Hugo C. Leuteritz, Pan Am's chief of communications, directed the development of radio technology for communications and direction finding. Government-licensed operators staffed aeronautical radio installations. Aircraft were fitted with state-of-the-art equipment. Direction finders were used for navigation, but early systems could give only single line positions. Celestial bubble sextants and octants were used, and an aircraft pelorus-type compass was developed for positioning and navigation.

Transpacific airmail

Foreign airmail routes, awarded by the U.S. government, were essential to Pan Am's development. A contract with the Postal Service allowed an airline to gain valuable operating experience over routes that would be used for income-generating passenger service. The first flight envelopes, or "covers," trace the milestones in establishing the Pacific routes; the crews signed some covers. Special stamp imprints, or "cachets," commemorate first flights. The survey flights, though not scheduled airmail runs, carried empty envelopes stamped with the earliest cachets designed by Pan Am personnel. The inaugural *China Clipper* flight from San Francisco Bay to Manila Bay carried 110,865 letters outbound and returned with 98,480 pieces of mail.

Passenger experience

Comfort was a priority from the earliest stages of Pan Am's passenger service. Aircraft interiors were designed to provide ample room and amenities for the long distance traveler. Passenger levels had spacious lounges with seats and sleepers, dressing rooms, a dining room and even a deluxe honeymoon suite—over 70 years before Airbus introduced private suites on its A380. In 1936, the 8,210-mile flight from San Francisco to Manila took six days, with a total flying time of about 60 hours. The round trip fare was $1,710, equivalent in today's dollars to about $25,000. At each island base stopover was a Pan American Airways Inn with port stewards, chefs and attendants, to maintain a high standard of service for the overnight guests.

San Francisco Airport Museums

Dining service aboard a Pan American Airways Boeing 314 in 1939 set standards in comfort and luxury that may even be equaled today.

Juan Terry Trippe

Juan Trippe was Pan Am's founding president and the driving force behind the development of international air travel. He built the company from an airline with a 90-mile route between Key West, Fla., and Havana in 1927 to an organization with an 80,000-mile route system linking the U.S. with 85 countries on six continents at the time of his retirement in 1968. Recognition of his achievements includes 26 decorations from 19 foreign nations; the U.S. Medal for Merit, the government's highest civilian award; all 10 major aviation awards, among them the Wright Brothers Memorial Trophy, the Collier Trophy and the Harmon Trophy; and 29 other awards for his contributions in the fields of business, trade, education and social service. Under his leadership, Pan American inaugurated the first regularly scheduled commercial airservice across the Pacific and the Atlantic and the first scheduled flight around the world. He pioneered the development of new and advanced transport aircraft, established a global air system, introduced economy fares, and set the operating standards of the commercial aviation industry.

Aircraft

The Glenn L. Martin Company of Middle River, Md., produced three model M-130 flying boats, the first successful transoceanic intercontinental airliners. They were designed to Pan Am's specifications for long haul, over-water service, with payload capacity and cabins outfitted for passenger comfort.

As Pan Am's Sikorsky S-42 flying boats had proved so effective in the Caribbean and in surveying the Pacific route, the Martins proved their worthiness in opening the Pacific to scheduled service. Only three of the M-130 models were made, all for Pan Am, each costing $417,000. They served admirably, yet each met a fateful

end. The *Hawaii Clipper* disappeared without a trace on a scheduled flight between Guam and Manila in 1936. The *Philippine Clipper* was lost in a mountainous crash on a military flight during WWII; it overshot the California coastline in zero visibility conditions. The *China Clipper*, affectionately dubbed "*Sweet 16*" by its crewmembers for the last two numbers of its registry, flew numerous scheduled flights as well as military missions in both the Pacific and the Atlantic, including a shipment of uranium ore from Africa for the Manhattan Project. At the close of WWII, it sank at Port of Spain, Trinidad, after more than three million miles of service.

The need for increased capacity followed the success in Pan Am's pioneering of over-ocean air transport. The Boeing Company of Seattle secured a contract with Pan Am to produce a flying boat of unprecedented size and luxury. At an initial cost of $550,000 each, Boeing would produce twelve B-314 models, the largest commercial aircraft of its day. Pan Am ordered all of them. However, three of the giant ships the press called "flying hotels" were sold to the British before delivery, to satisfy their transatlantic needs. Upon delivery of the first of these to Pan Am in 1939, the B-314 went into service on the Pacific and opened the North Atlantic route the same year. The spacious cabins, which included a bridal suite in the tail, set the new standard in the quality of the passenger experience.

The B-314 used the wings and engine nacelles of the giant Boeing XB-15 bomber. New Wright 1,500-hp Double Cyclone engines eliminated the lack of power that handicapped the XB-15. With a nose similar to that of the modern 747, the Clipper was the "jumbo" airplane of its time. The B-314 also took up the wartime role of what would now be considered Air Force One. President Franklin D. Roosevelt, the first commander-in-chief to fly while in office, traveled aboard the *Dixie Clipper* with additional staff trailing in the *Atlantic Clipper,* on a top secret flight to confer with British Prime Minister Winston Churchill in Casablanca, Morocco. Churchill, also a frequent B-314 passenger and an enthusiastic fan of the giant flying boat, even took a turn at the controls.

The aeronautical design genius Igor Sikorsky, who had fled his native Russia in 1917, had long envisioned large, multi-engine aircraft. In partnering with Trippe and Lindbergh, now the airline's technical consultant, Sikorsky's dreams were fulfilled. His earlier S-38 had been hugely successful in early establishment of Pan Am's routes throughout the Caribbean and Central and South America. The launching of the much larger, four-engine S-40 model in 1931 led to immediate planning among the three for a flying boat capable of spanning the oceans. The Sikorsky Aircraft Corporation of Stratford, Conn. answered with the S-42 model. Considered a true airliner, it was put into service on the Miami to Rio de Janeiro route and gave Pan Am superiority over all competitors. When it came time to prepare the Pacific route, the S-42 was chosen and modified for the rigorous survey flights. It became a workhorse of the Pacific and Atlantic for both survey and regularly scheduled duty.

San Francisco Aeronautical Society
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VOLUNTEERS MAKING A DIFFERENCE

Aviation Library and Museum Volunteers Add a Valuable Dimension to the Library and Museum Experience

Volunteers celebrated at the recognition ceremony in honor of their dedicated service to the San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum.

The annual volunteer recognition ceremony is always one of the highlights of the year at the Louis A. Turpen Aviation Museum. Over 60 volunteers log over 3,300 hours in service to more than 24,000 visitors and library patrons. Their professional work and personal touch go a long way in contributing to the Museum experience.

In 2006, the Volunteer of the Year honor was awarded to Dede Dewey. Dede has been a volunteer at the San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum since 2004. In 2006, Dede provided more than 139 hours of exemplary service. Part of the Sunday regulars, she resides in Berkeley, CA and is also a volunteer at the Chabot Space & Science Center in Oakland, CA.

Volunteer of the Year 2007 was awarded to John E. Cleary. John has also been volunteering since 2004. In 2007, John logged an amazing 283 hours of service which included working on special projects with the Library staff. This is John's second time as Volunteer of the Year.

OUR MISSION AND GOALS

The mission of the San Francisco Aeronautical Society is to support the San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum by:

- Seeking donations to the collection
- Raising funds for acquisitions to the collection
- Promoting scholarly research within the collection
- Producing educational publications, lectures, and seminars
- Identifying subjects for oral histories
- Sponsoring special exhibitions

The goals of the San Francisco Aeronautical Society are to:

- Create a volunteer group of aviation professionals and enthusiasts to provide broad-based support for the promotion of the San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum
- Establish a San Francisco Aeronautical Society general membership

San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum 2007 Volunteers

David A. Abercrombie*
Anna Mie Allendorfer
Roma M. Auerback*
Kenneth J. Austin*
Patricia C. Austin
William A. Austin
Edward A. Badt*
Janice J. Boelke*
Shirley A. Caselle
Colman Chan*
John E. Cleary
James O. Clifford*
David G. Coen*
Eva G. Condy*
Carol V. Crown*
Teresa C. Damgaard*
Evelyn R. David*
Dede Dewey
Thomas G. Dragges*
Howard T. East, Jr.*
Francis J. Egan
Ann S. Gazenbeek
Pauline S. Glen*
Dorene T. Goad*
Robert S. Harmon*
Fred R. Hoffman*
Mary Jo Hunt
Emma Jekabsons
Arleen Johnson*
Edward Johnson*
Theodore C. Johnson*
Denise A. Joseph*
Ululani M. Jung*
Hildur E. Kirchdoerfer
Katherine K. Kriken
David Laudenat*
Patricia A. Lionberger
Reuben O. Martinez*
Diana L. Mason
Robert P. McCrory*
Camille K. Modersbach
Frank Norick*
Thomas A. Northrop*
Aaron A. Ortega*
Samuel A. Owens*
Paul M. Pineda*
Gerald J. Pipinich*
Herb E. Pohlman*
Wasson Quan*
Willie Robinson*
John W. Ross
Sally S. Sampson
Barbara F. Sharfstein*
Luz L. Sobejana*
David H. Stringer*
Peter S. Tannen
Pamela B. Taylor
Benjamin Thomas
Madelyn Van Meerbeek
Julianne Ward-Northrop*

* Five ore more years of service

Photo: Gabriel Branbury

Exhibition Highlight: Louis A. Turpen Aviation Museum

Aerial Aesthetics by Herb Lingl
April 2008 - September 2008

Photographer Herb Lingl has specialized in aerial work for more than twenty years. The success of his picture-taking career and his role as founding director of Aerial Archives, based in Petaluma, California, has made him a leading figure in the field. For Lingl, this spans the professional demands of client-based assignment work to the freedom of self-directed artistic expression through his chosen medium. This convergence of disciplines and the appeal of his work are evident in his list of international clientele, his published work in books and magazines, and his résumé of exhibitions at venues as varied as the Federal Aviation Administration, San Francisco's Palace of Fine Arts, and the Oakland Museum of California.

As a frequent presenter and organizer of aerial photography conferences and related educational programs, Lingl has been able to share his experience with peer professionals and newcomers alike. Such programs have also provided him with opportunities to demonstrate how aerial photography can serve the needs of environmental management and conservation, an area of personal interest. His professional recognitions include being named Epson Aerial Photographer of the Year in 2007.

Lingl is a member of the American Society of Picture Professionals, the Bay Area Automated Mapping Association, the National Press Photographers Association, Inc., the Professional Aerial Photographers Association, and a member and past chapter board member of the American Society of Media Photographers.

Cathay Pacific Airways: Six Decades of Service
April 2008 - September 2008

Cathay Pacific Airways Limited is a world-recognized, award-winning leader in passenger service and airfreight. It operates one of the airline industry's largest all wide-body jet fleets to 120 destinations worldwide. This exhibition celebrates Cathay Pacific's achievements and traces its history through six decades of growth from a small regional airline to one of the most successful international carriers in air transportation.

Beginning in 1946, Roy Farrell, an American pilot who had flown for the China National Aviation Corporation (CNAC) during World War II, saw a business opportunity in bringing much-needed goods to post-war China. He formed the Roy Farrell Import-Export Company in Shanghai with two surplus C-47 transport airplanes—a U.S. military version of the Douglas DC-3—named Betsy and Nikki. Fellow CNAC pilot Sydney de Kantzow, an Australian, soon joined him. Their operation proved profitable, and they were soon flying cargo throughout Southeast Asia and to Sydney, Australia. That summer they relocated to Hong Kong's Kai Tak Airport and formed a new company to provide passenger and freight service throughout the region. They named it Cathay Pacific Airways Limited, combining an early name for China and the neighboring ocean they hoped the airline would one day cross.

The airline's rapid success in Hong Kong led to a restructuring partnership in 1948 with Butterfield & Swire—a London-based shipping and passenger liner company with historic ties to the British colony—and Australian National Airways. In the following decades, Cathay Pacific's growth included a merger with Hong Kong Airways in 1959 and route expansion into Europe, the Middle East, and North America. Earning a reputation for superior service, comfort, and unique style, the airline continues to attract a large and loyal customer base as it operates across three oceans and four continents.

The San Francisco Airport Commission Aviation Library and Louis A. Turpen Aviation Museum is located at San Francisco International Airport, International Terminal, Level 3. It is open Sunday through Friday from 10:00 a.m. to 4:30 p.m. The telephone number is (650) 821-9900. For additional information and to learn about volunteer opportunities, please contact the San Francisco Airport Museums at (650) 821-6700, or email curator@sfoarts.org.

CONTACT! *For Society general membership and other programs, please use the following contact information:*

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