

The Aero Historian



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October 2001

Club Meeting Location Has Moved!!!

By Tom Norrbohm

With the recent events, the Minnesota Air Guard Museum is closed to the public. With that, our meeting place has moved to the Oxboro Public Library in Bloomington. Here are the directions.

DIRECTIONS TO NEW MEETING PLACE:

Where: Oxboro Public Library, 8801 Portland Ave. So. in East Bloomington.

Time: 12:30PM. DO NOT SHOW UP BEFORE THEN!!! We must vacate room by 3PM!

If you are heading east on 494 from 35W, take the Portland Avenue exit and turn right onto Portland. If you are

heading west on 494 from Eagan/St. Paul, take the 12th Avenue/Portland Avenue exit. 12th Ave. is at top of ramp at light, continue straight ahead on frontage road to the next stop light at Portland Avenue, turn left onto Portland. Hwy 494 is approx. 78th St. and the Library is at 88th. Heading south on Portland you will pass a stop light at 86th St. You will pass a trailer park on your left, and take the next left at Bischoff Lane. The Library is on the southern boundary of the trailer park at 8801 Portland Ave. So. We are in the meeting room on the left when you enter the Library. Any questions on getting to the Library give Tom Norrbohm a call at 952-881-5763.

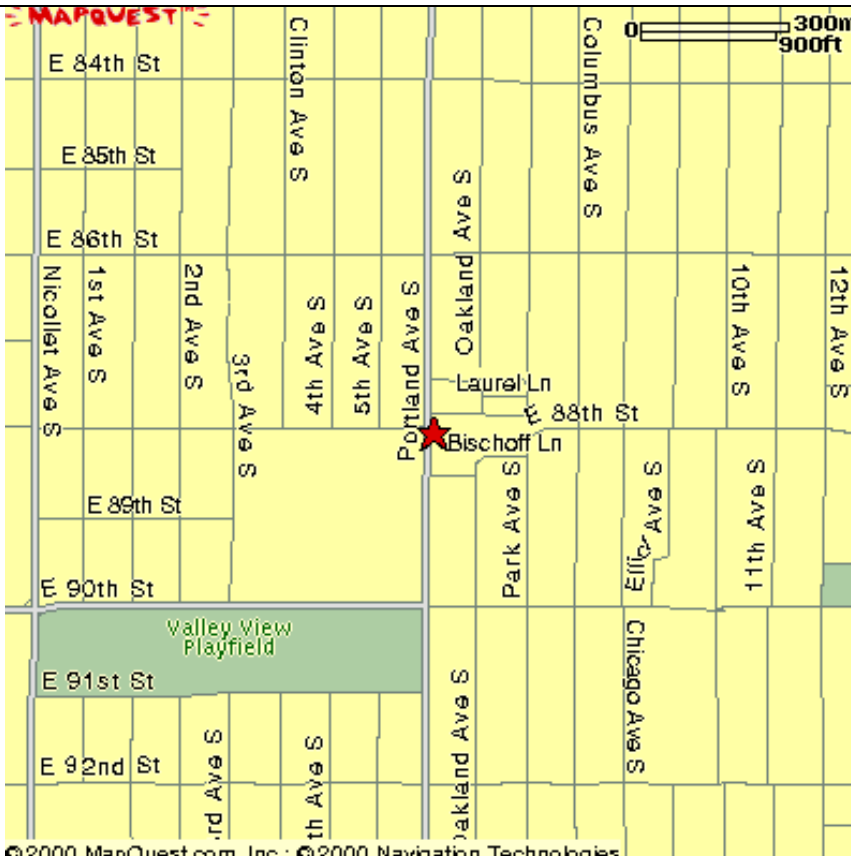
Supplements to this newsletter can be found at: <http://www.aerohistorian.com/newsletter>
Information about the Air Guard Museum can be found at: <http://www.mnangmuseum.org/>
Information about the American Wings Museum can be found at: <http://www.americanwings.org/>

President's Column

By Steve Erickson

Our world changed forever on September 11th and nothing seems quite the same. From the Gotha to the Stealth Bomber the airplane has been used as a weapon of destruction, but always in a declared war and with the purpose of speeding a end to hostilities and saving lives on the battlefield. This seems so useless that we have a hard time to accept it. We in America now know how cities from London to Toyko felt. Our little club is even affected. As you may have heard by now the Minnesota Air Guard base and Museum are closed to civilians indefinitely. This means holding our meetings at a temporary location.

We have reserved the meeting room at the Hennepin County library the Oxboro branch at 8801 Portland Ave So. for October and November, it is also available for December if necessary. This room is about the same size as our meeting area now. We have to setup and take down the tables and chairs ourselves and make sure the room is clean when we leave. Its a nice place but we cannot meet there forever. So we also need to investigate a more permanent home in case the Museum does not reopen anytime soon. So I will need 23 volunteers for a search committee to check new sites. As of 9-24 Fort Snelling is out. Possibilities are American Wings and Flying Cloud. Any suggestions? we will also need a volunteer for a October business meeting and a November one as well. This may all blow over soon but lets prepare for a long campaign. On a better note I thought Nordic-Con was great thanks to Steve and all his little helpers. Remember we need volunteers for officers in November. Lets step up! November is also auction time so clean out the closets. So don't go to the museum on 10-13-01 go to 8801 Portland for the meeting.



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Join the TCAH Mailing List!!

We've setup a e-mail list for members of TCAH to keep up to date on the current club events and news. You can join by going to the TCAH website www.aerohistorian.com/newsletter and entering your e-mail address.



TCAH Calendar & Events of Interest

October 13—TCAH Meeting. WWI Aircraft. Bring your Stringbags.

October 19 or 20—TCAH Business meeting. Site and time to be determined.

November 10—TCAH Meeting. Club Auction. No theme. Club Elections, recounts, re-recounts. Tentatively set for Oxboro Public Library

December 8—TCAH Meeting. Early Jets. Heinkle, Whittle, Bell, Yak, prototypes or production.

Do you have something to include on the club calendar? Please let us know at newsletter@aerohistorian.com!

World War II Roundtable

The Roundtable Meets the 2nd Thursday of each month at 7:00pm in the auditorium of the Ft Snelling History Center.

Point-of-Contact is Don Patton 952-392-3611 Ext 4017

2001
October 11 "3rd Army Advance Across France & Relief at Bastogne"

November 8 "Cold War Successes & Failures of World War II"

December 13 "60th Anniversary of Pearl Harbor"

2002
January 10 "Devil Boats - PT Boats"

February 14 "Fighting Norwegians 99th Inf. Battalion"

March 14 "Down Behind Enemy Lines-Escape & Evasion"

April 11 "The 60th Anniversary of the Doolittle Raid"

May 9 "D-Day on Utah Beach"

Contest Calendar

- 10-20-2001 IPMS/Glue Crew
Wausau Guard Armory
contact: Joe Drew
jdrew@powercom.net
715-842-0173
- 10-28-2001 8th Annual Husker
IPMS/NAIM
Millard Social Hall
10508 S 144th St
Omaha
naim@qwest.net
- 11-10-2001 IPMS/Butch O'Hare
19th Annual Contest
Lakeview Junior High
Darien, IL
John Wendt:
jwendt001@hotmail.com
Leo Buche: 773-286-4389
- 2-16-02 IPMS/Zumbro Valley
"Rochester Contest 02
Dept of Public Safety
Rochester, MN
Contact: Barry Brown
507-281-3843
castawyaales@altavista.com
- 3-2-2002 IPMS/Ft. Crook
American Legion Hall
Millard, NE
Contact: mcavel@tconl.com
- 3-23-2002 IPMS Great Plains
KC CON 2002
Holiday Inn Express
Overland Park, KS
Ed Bjes Bjes@umkc.edu
- 4-13-2002 IPMS/Plastic Surgeons
Contact: Greg Metge
817 Grand Avenue
West Des Moines, IA
50265
GMGHA@aol.com
- 5-3-2002 thru
5-4-2002 IPMS R5CON
Hosted by IPMS/Gateway
May Community Center
DePaul Hospital
Bridgeton, MO.
Mike George
Ontrak33@aol.com

Secretary and Treasurers Report

There were no reports submitted by the Treasurer or Secretary this month..



Mike Bedard's Rufe from Nordicon

TCAH Memories

by Tom Norrbohm

OCTOBER 1975. George Minarik reported on the October Club Contest. 44 models entered by 10 members. 3 time Best in Show winner got a trophy as decided in past Business Meeting. Discussed incentive for more building of models and participation by members. We may have one big contest around March or April with prizes, etc. Will give the contest a big PR effort. Surprise award for aircraft with most appeal by popular vote.

Different levels of contest classes discussed, with contest themes to Jack Mugan and Ken Johnson. George Minarik will make up a contest questionnaire.

Banquet is to close to Mini-Air Expo as far as dates are concerned. Need a program, slide show or display for same. Banquet to be held in May. Jack Mugan heads up Banquet Program Committee. Club may have a picnic in July instead of regular meeting. Mention is made to look into getting a sales tax exemption for the club. Len Peterson will look into this. R5 Con book is in the works. Dave Sandsness is heading up the TCAH club display for next month's Expo.

Membership is \$5.00. Officers: President- Dave Galbraith; V.P.- Bob Nelson; Secretary- Dave Sandsness; Treasurer- Ken Johnson; Editor- Len Peterson.

Russian SIGNALS

By George Mellinger

What was the highlight of the Moscow Air show, or MAKS as we insiders call it? Hard to say because MAKS '01 (Moskovskii Aviatsionno-Kosmicheskii Salon = Moscow Aerospace Salon) was probably the best one yet. It seemed as if everything that could fly, except for a newly tossed empty vodka bottle, was there. And judging by the grass in the public areas, a few of them as well. Though I am uncertain of attendance figures, and completely distrust official releases, it is clear that the six days had well over a million visits, of which I personally contributed three. Supposedly the last day on Sunday, the grand public day, drew either 400,000 or 800,000, depending on which "fish story" you heard. I don't really know; the crowds were far too large for me to count, even had I not been too busy trying to infiltrate through to get a decent photo of a Sukhoi on the static line, or trying to get up to the edge of the runway for the flight demos. And the general mood was ebullient.

Vendors were selling, and others were wearing all manner of silly head ornaments and silly hats. Shirts and souvenirs. And the refreshment stands selling food, soft drinks, Baltika Beer, and canned carbonated "Russian screwdriver" were getting rich. Older Russians frequently sported the old,

traditional hats made from folded newspaper. Everywhere people, particularly the kids, were carrying small Russian red, blue, and white flags. The loudspeaker announcer emotionally describing, or rather proclaiming, the program and the details of each flight, in a particularly florid patriotic patter: "And now, the Russian Knights, glorious Russian Knights, defenders of the Motherland, protectors of Russia's skies, approach from the northwest. Heroic Russian Knights now climb to perform 'tulip', Russian Knights, the greatest, how great and wonderful..." Jingoism, not threatening or belligerent, but joyful. And for philosophers such as me, who believe that "Every man should be a patriot for his own country", there was a certain charm to this simple, and old-fashioned style. When the announcer was not proclaiming, there was music, not rock or punk, or certainly not rap. Modern but melodic, a bit dated, but definitely Russian and slightly, deliciously exotic, and some light classical music. It went well with the aerobatics. The quintessential memory of MAKS, is a blue sky with a warm sun beaming down, and so high above the engines are silent, a tiny, silvery jet performs turns, and Nesterov loops, a *Kolokol*-bell, tail slides, while the loudspeakers play *Für Elise*, the music seemingly coordinated with each maneuver. Though I later attended the ballet in Peterburg, **this** is the ultimate in dance! Then another *Kolokol*, and a swoop down almost to ground level. For a moment the roar downs out the music as the Sukhoi does a *bochka*-barrel roll along the runway, and then it shoots back into the upper sky.

Some commentators have described this as a new national self-assurance. I am not sure. It may be a desperate attempt to find customers for an aviation industry which has not yet succeeded in competing in the larger world market, in mastering the art of competition, or the art of selling weapons in the absence of a Global confrontation. Some companies, particularly the new MiG-Kamov-Tupolev conglomerate must feel particularly hard-pressed, and the MiG people must be feeling humiliated that what sales dynamism does exist in the firm is owed first to the helicopter branch, and sec-

Jack Mugan receiving his lifetime membership plaque and print from Steve Erickson and Mark Copeland



Jack Mugan was presented with a lifetime membership to TCAH as he and Sharon start a new life in Gainesville, Florida. Jack has been active with the club since 1967. Jack was president four times, served as editor of the *Aerohistorian*, Chair for the Airexpo contests and was Chair of the first R5 TCAH hosted in 1975. Photo by Ken Sallman

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ondarily to Tupolev airliners. What a comedown for MiG who used to churn out fighters faster than they could be shot down, or crashed by their third world "pilots". Still, I hope they will prosper a bit more. I don't want them to succeed as well as the United States - but certainly better than the French.

But what was new and interesting? Well, at the top of the list was the forward-swept Sukhoi S-37 *Berkut* (Golden Eagle -not 'bearcat' dammit!). It never sat on the static line but flew frequently and impressively. First impression - it was **big!** Not really much bigger than the Su-27 family, but the conjuncture of wings, tail, fuselage and engines gave it a massive look. But that didn't inhibit its maneuverability, at least on a par with the Su-27 family, at least those without directed thrust. As for the Su-27 family, in addition to the classic Su-27s of the Russian Knights, and the naval version the Su-33, there were also examples of the Su-34 "duckbill", the Su-27KUB side-by-side carrier trainer, and Su-35. There were also striking examples of the two-seat Su-30M and Su-30MKI two-seat multirole fighters, both in distinctive, but slightly different three tone finishes of blue-gray, light gray, and gray-white. Also a Su-30MK in the distinctive dark gray camouflage which establishes that it is part of the latest Chinese order, and is certain to have been shipped within days of the conclusion of MAKs. There were also numerous new versions of the MiG-29, including the MiG-29M2 MRCA (for multirole combat aircraft), two-seat strike aircraft, with retractable refueling probe and "advanced avionics" (?), and the MiG-29 OVT, with vector thrust tail nozzles, giving it some of the capabilities of the Sukhoi Su-37. Also still around is the MiG-33 (AKA MiG-29K), still trying to find a naval buyer, and sporting a full weapons load including the AS-20 Kayak ASM, and the R-77 "Amraam-ski" AAM. It is interesting to observe that the new MiG I-42 advanced concept fighter was strictly invisible, and not due to any stealth technology. Evidently it is still as buggy as a Packard-Bell 386 computer.

Other attractive offerings

were the Yak-130 and MiG-AT advanced combat trainers, which are locked in a death match for an upcoming Russian contract - assuming the VVS finds the money. The oddly shaped Yak was in camouflage, and the MiG-AT, showing distinctive Italian influence had both original red-blue-white and camouflaged aircraft present.

Also significant was the absence of the Ka-50 helicopter aerobatics team, only a single example showing up for a short display. All the other few Ka-50s (Werewolf or Black Shark) are deployed to Chechnya where they are gaining practical experience. Nor was the Ka-52 Alligator present - probably also "occupied elsewhere".

This Air show also saw the return of "heavy metal". The Antonov An-225 Mryia was dug out of mothballs, and put through its paces. This humongous aircraft with six engine pods, the world's largest, was originally designed to carry the Buran space shuttle, piggy-back style, and when Buran was abandoned, the single An-225 was retired. But now, with the success of the Antonov Condor as a heavy lifter, the Russians see possibilities. Both in the air and on the ground it was awesome.

Also dusted off was MiG's reply to the Israeli "MiG-21 Lancer" upgrade, the MiG-21-93, which comes with the latest Russian engine, avionics and AAMs. So far, it has not had any notable takers, for some reason discerning customers preferring to buy Israeli. But it was really neat to see and **hear** a MiG-21 in the sky. An interesting comparison was a Mirage F-1, which flew several aerobatics performances and also sat on the static line. It turned out to be South African, and when I encountered the pilot, a Captain Joubert, on the ground and chatted him up, I learned that the South Africans have done a deal to upgrade their Mirages with Russian avionics and AAMs. Why, I can't really figure. Unless perhaps President Mbeki has suddenly become a bit wealthier?

But, saving the best for last, the Russians took this "grave-robbing" to a truly wonderful extreme. They had their Shavrov Sh-2 "flying canoe", three-man amphibian of the 1930s flying at the show. And then an old Polikarpov Po-2 (U-2) biplane did several demonstration flights. This was

the biplane, manufactured in about 35,000 examples, which taught several generations of Russians to fly, served as a liaison aircraft and light night bomber in WWII - and then as bed-check Charlie in Korea. But pleasure had just begun. There was a wonderfully restored Polikarpov I15bis fighter biplane on the static line. This aircraft, which saw combat over Spain, China, Mongolia, Finland, and in World War II until at least 1943 is one of the Russian classics. Just to see it restored and on the static line could almost have justified my trip. But then they flew it! Took it up, and in the skies over Zhukovskii, the old girl showed she remembered her routines. No tail slides or "cobras", but Nesterov loops, stalls, turns, Cuban eights or whatever the Russians call them, hammerheads, bochkas, kolokols. For a moment, the world was back in 1938. Da zdrastuyet Russkie avialyubitelei!! (Long live the Russian Aviation hobbyists)!!

Corsair Contest

By Johannes Allert

I have to say that at first, I was going to cancel the F4U-Corsair Contest scheduled for the December meeting.

First, there were the overwhelming events that occurred in New York City and Washington DC, and then there was the looming concern that TCAH would lose its meeting place. However, it has been a growing experience for me in that I have learned two things.

Lesson One - I had attended Nordic Con, and realized how important it is to reconnect with friends, and that it's important to get on with activities however "trivial" they may appear to be. Lesson Two - TCAH is made up of people, not buildings. Our club has had to shift from meeting place to meeting place over the years. We can be grateful to the MN Air Guard Museum for over well over 10 years of hospitality.

Perhaps someday, we can go back there.

This article is to serve as a reminder to all those interested that TCAH will be holding a F4U Corsair Contest. It will be held at the December Meeting.

The rules? There are none, except it must be an F4U variant and that it must be built this year. Any scale. After market accessories and decals may

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be used.

To give you an idea of the kits out there, Dave Pluth and Ken Hornby have provided me with the following:

1/48 Scale Kits:

Hobby Craft has 3 variants F4U-1, F4U-1A, F4U-1D

Hasagawa has 3 variants F4U-4, F4U-5N, F4U-7

Otaki has 1 F4U-1D

Tamiya has 2 F4U-1A, F4U-1D

Academy/Minicraft has 2 F4U-4B and F4U-5N

Heller has 2 F4U-7 and AU-1

1/32 Scale

Revell F4U-1D (also released as a F4U-1A)

1/72 Scale

Airfix has 1 F4U-1D (why bother)

Academy has 1 F4U-1D

Hasagawa has 2 F4U-1A and F4U-1D this also includes

early night fighter variants on the F4U-1

Italeri has 4 F4U-4B, F4U-5N, F4U-7 and an AU-1

Smer/Heller has 1 F4U-1D

Tamiya has 1 F4U-1D

Depending on your preferences, you can build any of the Corsairs ranging from early WW II to early sixties. The Navy and Marine units of France, Great Britain, the US as well as many Latin American countries flew this war-bird. In terms of aftermarket products and decals, the list is endless. For the 1/48 scale bunch "Danger Boy Hobbies" has just released an awesome wing fold set. There are resin, and brass aftermarket sets in both 1/48 & 1/72 to choose from.

There will be a First, Second and Third Place award as well as a "Peoples Choice" award. I look forward to seeing all the "bent wing birds" in December... now I have to get off MY can and start building one!

"The Fourth of July onboard the USS Constitution - 2001"

By BobSteinbrunn

On the Fourth of July 2001 my wife Barbara and I were privileged to experience a "sail" of a lifetime. This was an incredible opportunity and one most ship modelers dream about: being on board the 1797 frigate USS Constitution while underway in Boston Harbor during the ship's annual "Turnaround Cruise".

The invitation to be on board as the guests of the U.S. Navy came about as

part of winning the "United States Navy" award at the Mariners' Museum "Ship Model Competition and Exhibition 2000" with my model of the Fletcher class destroyer USS Kidd (DD 661).

In early August 2000 I received a letter from Michael J. Crawford, Head of the Early History Branch, Naval Historical Center, Washington Navy Yard, Washington, D.C., advising me that I had won a two-volume set of books, "The Naval War of 1812: A Documentary History", and also that I would be invited to Boston for the 04 July 2001 cruise of the Constitution. In late August 2000 I received a letter from William F. Foster, JR., Commander, United States Navy, 66th in Command, USS Constitution, inviting me (and a guest) to Boston. The formal invitation came in May 2001 from Commander Foster and it was with a great deal of excitement that I opened it and read:

The Commanding Officer
USS CONSTITUTION
requests the pleasure of your company
for the Independence Day
Turnaround Cruise
on Wednesday, the fourth day of July
two thousand one
at eleven o'clock
on board USS CONSTITUTION
Pier One, Boston National Historical
Park
Charlestown, Massachusetts

Taking advantage of the opportunity, Barb and I flew from Minneapolis to Boston two days early and spent that time rediscovering Gloucester, Massachusetts, and its museums, fishing schooners, historical sites, and waterfront. A convenient 45-minute drive north from Boston's Logan Field airport, Gloucester and Essex were not to be missed since my latest model ship project is a fishing schooner from this incredible historical area.

On Wednesday morning, 04 July 2001, we drove down to Boston and arrived at the gate of the Charlestown Navy Yard at 0930. The guard scrutinized our invitation, checked our names on his list, and waved us through with a smile. We were directed to parking by Park Rangers of the National Park Service (which has operating jurisdiction over the navy yard) and found, to our surprise, that our parking

spot was within 100 yards of the frigate. I felt we were receiving VIP treatment, indeed.

We, and about 100 other guests, had our invitations checked again against a list, and were then escorted up the gangway to the open spar deck. Coming aboard, we were all issued a packet containing foam earplugs, the necessity for which later became painfully obvious. We had the run of the upper three decks (spar, main gun, and berthing decks) and found rest facilities, soft drinks, and water were thoughtfully provided. During the boarding process the Boston City Police Gaelic Fife, Drum, and Bagpipe Marching Unit provided stirring music and were in Scottish Highland uniforms with kilts (and weapons).

At 1045 the bosun's pipes signaled the arrival of the official party. They were piped aboard in formal military style in order of rank and this process was accompanied by music and the announcement of their titles. This was especially interesting for Barb and it made her aware of what a signal honor we were being accorded by being able to be there. Starting with "Secretary of the Navy, arriving", we watched the arrivals with rapt faces as we heard "Her Majesty's Consul, arriving"; "Constitution, arriving" (the Captain coming aboard); "U.S. District Court Judge, arriving"; and so on, down through previous captains of the Constitution and lesser dignitaries.

At 1055 the ship's handling party took in lines after a tug had secured itself to our port side, and at 1100 we departed. Drawn aft to clear the pier, we were immediately surrounded by hundreds of spectator boats, yachts, and other assorted watercraft. These were kept at a respectful distance by Police launches, Coast Guard craft, and State Police boats throughout the two-hour cruise.

As we got under weigh, the public address system (1MC) read the Pledge of Allegiance, an invocation, the Police Gaelic band played the National Anthem, we were given a safety briefing, and the band struck up "Anchors Aweigh". During the cruise the band played "O Beautiful for Spacious Skies" and "My Country 'tis of Thee". From my observation there weren't many dry eyes on deck during this most patriotic

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and memorable of moments.

The District Court Judge and the U.S. Immigration and Naturalization Service then conducted a public ceremony swearing in 17 immigrants from around the world as U. S. citizens. What an occasion! Imagine becoming an American Citizen on board the USS Constitution in Boston Harbor on the Fourth of July!

The weather was warm, the sky was a delicious blue, and over a quarter million Bostonians thronged the harbor and shoreline as we proceeded south past the downtown buildings. As we drew abeam of the U.S. Naval Annex pier we were treated to the awesome sight of an amphibious assault ship, the USS Wasp (LHD-1) moored to the pier and with hundreds of sailors lining the flight deck at a precise interval, all saluting Constitution as she sailed by.

As we came abreast of Dorchester Point in South Boston, the site of the old stone and earthen ramparts Fort Independence, the ship came to, faced the enormous crowd on shore, and then proceeded to fire a 21-gun salute. The noise, reverberation, and shock wave of the two bow guns below us on the main gun deck were overwhelming and we were all grateful to have been warned by the 1MC several minutes in advance to don our earplugs. Commander Foster, in period 1812 uniform (complete with epaulets), stood on the seat of the bowsprit and doffed his captain's hat in honor and courtesy as the guns continued their booming. When the salute had been completed, a roar went up from the crowd on shore. Then several field pieces on the ramparts of the fort returned a 21-gun salute to the Constitution. All in all, an unforgettable and moving experience.

At this point the ship was turned north and we headed back to the navy yard, accompanied by all sorts of spectator watercraft and news helicopters. Upon arrival, our docking sequence was the reverse of getting under weigh. The line handling parties secured the ship, the gangway or brow was brought to the starboard side of the spar deck by mobile crane, and the dignitaries were piped overboard. "Secretary of the Navy, departing"; "Her Majesty's Consul, departing"; "Constitution, departing". And so on, down the list. After about 20 minutes we departed our-

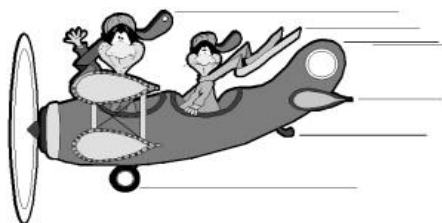
selves and upon landing were presented with a Certificate of Participation by the shore honor party of the ship's crew.

After touring the very excellent Constitution Museum adjacent to the pier (<http://www.ussconstitutionmuseum.org>), conducting a self-guided tour of the Fletcher class destroyer USS Cassin Young (DD 793), also under the jurisdiction of the National Park Service, we drove back to Logan Field for our return flight to Minneapolis.

Later, as I peered out of the window of our Aerospatiale A-320 during takeoff, I saw the Constitution moored to the pier well below me in the distance. I was struck with the enormous difference in technology represented by the two vehicles I had ridden that day. I was aware of the tremendous march of time between the launching of the frigate and the final assembly and test flight of my passenger jet airliner.

I had no difficulty ascertaining which was the more thrilling for me.

(The author is very grateful to all those who made it possible for him to have this memorable experience: Dana T. Wegner, Curator of Ship Models, U.S. Navy Sea Systems Command; Rob Napier, Nautical Research Guild; Joseph R. McCleary, Captain, USN, (Ret.), (these gentlemen were the three judges of the competition); William B. Cogar, Vice President and Chief Curator, The Mariners' Museum; Patty Andresen, Collections Coordinator, The Mariners' Museum; Jeanne Willoz-Egnor, Collections Manager, The Mariners' Museum; William F. Foster, JR., Commander, USN: Captain, USS Constitution; the United States Navy; and finally, Barbara S. Steinbrunn, wife, who displayed great tolerance of her husband's hobby and who graced the deck of Constitution. One of the sailors, acting as part of the "side boy" honor guard as we boarded, with strict military courtesy and stern countenance said: "Nice hat, Ma'am".)



The Campini Jets

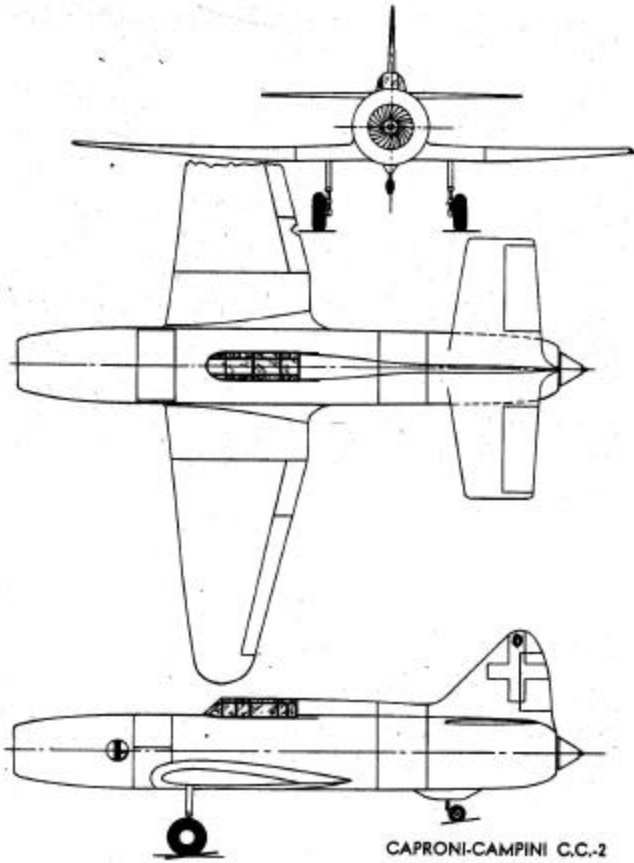
by Don Stauffer

Ing. Secondo Campini, an engineer born in Bologna, developed a concept for jet engines during the 1930s. His efforts were overtaken by the work of the Germans and British in the years leading up to World War Two, but this should not detract from his work. His engine designs were true jet engines, not merely ducted fans in today's use of the term *ducted fan*. Campini foresaw subsystems that were eventually adapted many decades later. If it were not for the crash war efforts of Britain and Germany, he would have received credit for the first practical jet aircraft.

Henri Coanda was a Rumanian engineer who attended college in Berlin, then moved to Paris to perfect his ideas of jet propulsion. He patented a scheme for jet propulsion in 1908. His scheme is basically the same that Campini would use. It is still unclear what motivated Coanda. The limitation of the speed limit with propellers was not yet known. But whatever his motivation, Coanda built his jet aircraft in 1910. He unwisely tried to fly it himself and crashed shortly after takeoff, destroying his machine but emerging unhurt. Still, the financial loss of the destruction of his aircraft caused his development work to cease.

By 1930 the limitations of propeller speed were well known. The only practical substitute at that time appeared to be the rocket engine. While a few designers worked in rocket aircraft, especially in Germany, most engineers realized that the rocket plane was doomed to a very short range and flight time.

Campini was apparently motivated more by the desire to reach extreme altitudes than top speed per se. But the thinner air at higher altitudes requires the plane to fly faster and faster. At the same time the cooler temperatures at higher altitudes meant that the speed of sound would be lower. Campini recognized that jet propulsion would be as important to reaching very high altitudes as it would be for high speed. He had already invented the jet boat- that is, the system where water is taken in, run through a water pump, and expelled at high speed to provide thrust for the boat. This was the forerunner of today's shallow draft jet boats



CAPRONI-CAMPINI C.C.-2

The term 'ducted fan' as used today merely means a shrouded propeller or fan. All the energy imparted to the thrust stream comes from the aerodynamic forces induced by the propeller. This was not the case with the Campini engine. The energy at the nozzle was as much due to the heat from combustion as by the pressurization in the compressor.

The Campini system was very inefficient, however, and had been bypassed by the work of the Germans and British. However, since the Campini work was not a secret project, the flight of the CC-2 in August of 1940 was the first most of the world knew of a jet airplane.

The Campini system suffered from two inefficiencies- fuel consumption and specific weight. The

Prior Lake Public Library shows off TCAH Models

by Steve Jantscher



Earlier this year I contacted the head librarian at my local public library to inquire about the possibility of using their display cabinet to show off some models from TCAH members. Many of you will recall my request of TCAH members for some representative models for a display I was planning.

Well, the display was a rousing success, as such things are measured. We had almost fifty models on display during August of everything from dinosaurs, movie monsters, cars, tanks, ships, planes and helicopters. All scales (except 1/32) were present, along with a Nordic Con flyer and a sheet describing the club. The librarian even submitted for publication in the local newspaper a reprint of my club information and a notice about the models being open for viewing.

I'd like to take this opportunity to thank the club members by name who made this display possible by the generous loan of their model kits. Bernie Kugel, John Bernier, myself, Skip Nelson, Dennis Strand, Dave Kitchel, Bob Ferreira, Steve Erickson, Tom Norrbohm, Dave Heffernan, Dave Pluth, Joe Grimme, Ken Hornby, John Roll, Merrill Anderson, John Higgins, Steve Hustad, Pat Butler, Rick Ruble and Jim Kaltenhauser.

I would also take this opportunity to ask other members to check around, at their local library or city hall, etc. to find such places where we can display our models and generate some interest in new membership, and in model building and history at the same time. Especially you members with young children. Ask your librarian next time you take the kids to the library.

and jet skis.

Campini prepared and submitted a proposal for a high altitude reconnaissance plane to the Italian government. This project would have required very large resources. Rather than fund this project, which Campini called the CC-1 (Campini had teamed up with the Italian firm Caproni to provide the aeronautical engineering and production skills, hence Campini-Caproni-1), the Italian Ministry requested a simpler project. They would fund a scaled-down research project to merely make a flyable airplane using his propulsion and engine ideas. If that project (the CC-2) were successful, then maybe they would proceed to fund the CC-1.

The Campini-Caproni CC-2 was a low wing monoplane. The propulsion system took up much of the fuselage. A 900 horsepower Isotta Fraschini engine (an air-cooled radial) drove a three stage axial flow compressor. The output of the compressor dumped into a diffuser and combustion chamber where fuel was sprayed and ignited. There was then a nozzle in which the hot, high pressure gases were expanded to provide a thrust of 1540 pounds.

Campini axial flow compressor was not efficient enough, so the IF engine had to burn copious amounts of fuel just to run the compressor. Second, one of the main reasons for development of the gas turbine engine was to provide a powerplant with a higher ratio of horsepower per pound of weight than current piston engines. Much of the increase in horsepower in aircraft engines in the twenties and thirties came from increasing displacement, which increased weight almost in the same proportion.

Under the wartime impetus the German and British work increased the efficiencies of the component parts (the turbine and compressor, especially) so that the Campini system was obsolete by the time it flew. Still, Secondo Campini did invent or foresee important advances in jet propulsion. The CC-2 included an adjustable nozzle to maintain efficiency during a wider range of flight regimes. His CC-1 design, intended for supersonic flight, also had an adjustable inlet to maintain the proper position of the shock wave relative to the intake. After the war he emigrated to the US, where he received funding to develop jet engine technology. He worked in the YB-49 engine system.

On the Table
"Theme - Record Breakers"

By Johannes Allert

John Brenier
Tamiya 1/48 Bell X-1

Merrill Anderson
Eduard 1/48 Albatross D III
DML 1/48 Fokker D-VIII

Frank Cuden
Airfix 1/144 Boeing 737-200
Minicraft 1/144 Boeing 737-300

Ellis Nelson
Fujimi 1/72 Sikorski Sea King
Fujimi 1/72 Kaman Sea Sprite

John Roll
Hasagawa 1/72 Fw-190

Don Stauffer
Photo of Ship Model/Great Lakes

Tom Norrbohm
Hasegawa 1/48 Me-109T
Hasegawa 1/48 Me-109T w/Hawkeye

**Official IPMS Policy on Nude
Figures at Contests**

By Chuck Davenport

Recently, there has been a noticeable increase in commentary both from the membership and from guests to our numerous contests (local, regional and national) concerning the presence of models featuring nudity and other explicit adult themes.

In response, the Society is inaugurating an official policy that will allow us to preserve the family orientation and principles on which it was founded while, at the same time, provide a degree of freedom for creative expression. I would like to thank fellow Society member, Mark S. Gustavson, Attorney at Law, who is responsible for drafting the policy and providing legal counsel for the E Board through the process of preparing and enacting this policy. Though Mark has plenty to do with his family, professional practice, organizing the bi-annual GSL International Model Car Championship, the National Model Car Builders' Museum, and writing the Autophile column for the *Journal* magazine, he still found time to lend his legal expertise for the

benefit of the Society.

As we make our way through the new millennium, we are committed to balancing the competing needs of a changing society with the basic beliefs and principles of IPMS/USA. We have worked for months to fashion a policy that we believes strikes a fair balance between applicable law while preserving legitimate free expression. We believe that this policy will generate discussion both pro and con.

As with all such matters, we expect and depend upon the personal discipline and good judgment on of all IPMS members. If we govern ourselves, then we'll comply with the law while providing a limited venue for those with differing modeling interests. Thank you for your shared vision and commitment to common goals. The IPMS/USA leads the way!

**"How Columbus must
have felt"**

By Bob Steinbrunn

During these tragic and trying days all civil aircraft have been grounded with the exception of those providing Emergency Medical Services. This usually means helicopters, and this means me.

I fly an Agusta A-109 high-speed, twin-turbine, retractable landing gear, fully-instrumented, autopilot and flight director-equipped, filled-with-more-computers-than-I-know-what-to-do-with medical helicopter.

This is one of four Agustas my hospital in Minneapolis (North Memorial Medical Center) provides to those in need over a five-state area.

During this no-fly period, we are allowed to continue to fly but need a special authorization from Minneapolis Air Route Traffic Control Center, the long-range radar facility. We have to provide detailed information on routes, times, altitudes, aircraft call sign, transponder code, crew names and Social Security numbers, and several other items. We are required to remain in radio and radar contact for the entire time of flight.

I had an emergency flight Tuesday night at midnight, and after phoning in and receiving my authorization, we

launched into clear night skies. The Minneapolis downtown is very striking and beautiful at night: tall glass buildings, a mixture of modern and period architecture, and a veritable sea of lights everywhere. Everywhere, that is, except in the sky. Normally I spend most of my time scanning for other air traffic in this busy terminal area, and under normal circumstances there are two parallel lines of landing lights, sometimes 20 miles long, lining up for the parallel runways 30 Left and 30 Right at Minneapolis International Airport.

Not so Tuesday night. The sky was absolutely empty. In 35 years of flying I have *never* seen such an empty sky, not even over the Central Highlands of Vietnam. It was both spooky and eerie, and very disconcerting. Upon examining my feelings I realized with a start that I was in my "combat pilot" mindset, something I haven't found necessary for the last 30 years. I was somewhat saddened by this realization, but knew it was a realistic appraisal of where we *all* are now that life for all of us has changed forever.

The sky was totally empty, devoid of another discernable aircraft, and I wondered if this was how Columbus felt in the middle of the Atlantic in 1492.

Alone. All alone.

Then I realized we were not alone: an F-16 "Fighting Falcon" from the Duluth Air National Guard had intercepted us for a visual identification. This fighter had been tracking us on his "look-down, shoot-down" weapons systems and now was ascertaining that we were, indeed, who we electronically said we were.

He was "flying dark": carrying no position lights or strobe lights, and was calmly doing his job at 0030 hours while the rest of Minneapolis slept.

Attributed to Admiral Isoroku Yamamoto (but perhaps more in the line of folklore) immediately after the Japanese strike at Pearl Harbor is the following quote: "I fear that we have awakened a sleeping giant and filled him with a terrible resolve".

To the extremists who are responsible for this hideous carnage I would say this: Take care, all of you: America is pissed.

Images from NodicCon

Photos by Ken Sallman



Registration with Skip and Lucinda Nelson



The vendor room.



Steve Erickson showing off his models



Mark Krumrey & Frank Cuden doing presentations.



Jim Kaltenhauser & Jodi Severson at the raffle table



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The group is open to aviation enthusiasts from teenagers on up who are interested in aviation modeling, photography, collecting, art and writing. For more information contact Steve Erickson at (763) 521-9948

The Twin Cities Aero Historians (TCAH) meet the second Saturday of every month at 1:30pm.

Meetings are held at the Minnesota Air National Guard Museum, a half mile south of Hwys. 55 and 62 on Minnehaha Avenue. Phone (612) 713-2523.

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