

# The Aero Historian



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P-38 "Marge" Photographed by Jack Mugan at the American Wings Museum before the last meeting.



F9F Panther by Mark Krumrey.  
The winner of the Bob Nelson Memorial Award for best Korean Era Aircraft.

## TCAH This Month

May 12—TCAH meeting. Theme: Amphibious Aircraft, if it took off from the water, build it.

May 19-20—MN Air Guard Museum—Open Cockpit Weekend

May 19-20—Discover Aviation Days at Anoka County Airport, Blaine, MN

## Do you know if any US WWII fighter had swept wings?

By Wally Forman



A production Bell P-39 with conventional wings.



The experimental version, L-39, which explored swept wings and the air flow over them. Research paid off later in the development of the F-86A for Korea.

## 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 (see below).

## Looking to Send Stuff to the newsletter?

It's really easy!

You can reach us at [newsletter@aerohistorian.com](mailto:newsletter@aerohistorian.com).

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/>



Off we go!!

<p><b>TCAH Officers</b>  <b>President</b>, Steve Erickson  763-521-9948  Serickson@mbcgroup.net  <b>Vice-President</b>, Bob Ferreira  952-941-3431  <b>Secretary</b>, Dave Kitchel  952-423-2065  <b>Treasurer</b>, Pat Butler  612-866-8963  <b>Historian</b>, Tom Norrbohm  952-881-5763  <b>IPMS Contact</b>, Jack Mugan</p>	<p><b>July 14—TCAH Meeting.</b> Theme: Nightfighters, early onboard radar fighter interceptors.</p> <p><b>July 28-29—MN Air Guard Museum—Open Cockpit Weekend/ Military Expo</b>  ***</p> <p><b>August 11—TCAH Meeting.</b> French stuff. We do have to include them occasionally.</p> <p><b>August 25-26—MN Air Guard Museum—Open Cockpit Weekend</b>  ***</p>	<p>seen it before restoration. Ace maker that the P-38 was its never been high on my list for modeling or one of my favorite airplanes for that matter. Seeing this one gave me the sense of awe a 22 year old fresh from flight school would have felt walking but on the ramp 58 years ago, that feeling you could take on the world with this machine. I've felt that when I've heard a P-51's Merlin engine whine on take off, or standing next to a Jug, Now I feel it for P-38' s.</p> <p>Thanks to John Higgins for running our annual TCAH model contest. It went very well, with 50 models entered, a good turnout for a Easter weekend. I was impressed by the high caliber of the competition. A lot of new members entered, even some old ones. John Eian actually brought TWO, I repeat TWO aircraft that he finished. I can't even remember the last time John entered, Of course he's a slow builder, I sold him his F-11 Tiger when I was working at Custom Model Hobby in 1976 or 77? Tom Norrbohm should have the awards done for the May meeting.</p> <p>The business meeting for May was to be held at Ken Sallman's but due to the rising price of gas its been canceled as he lives even farther north than Johan. Actually we have no pressing business, so unless someone calls me before the meeting we'll take a summer break from business meetings as usual. Also my thanks to Johan for having a great business meeting complete with hamburgers and hot-dogs. Unfortunately for a modeler his map drawing leaves something to be desired-a scale-. I didn't realize he lived so far out and underestimated travel. If I realized he had such a big yard I would have brought camping gear and stayed in the barn. It was a great time ,just like a small Banzai bash. See you at the meeting.</p>
<p><b>Newsletter Info</b>  <i>Article Submission Deadline: 22nd of each month.</i></p> <p><b>Editors</b>  <b>Dave Pluth</b> (dpluth@j-aircraft.com)  112368 Eitel Circle  Chaska, MN 55318  H:952-448-4795  Fax: 952-448-9510</p> <p><b>Johannes Allert</b> (norway_331@yahoo.com)  19380 Swallow St. NW  Oak Grove, MN 55011  H:763-213-0370</p> <p><b>Distribution Editor</b>  <b>Jim Kaltenhauser</b>  (Kaltenhauser@yahoo.com)  8219 Emerson Ave. S.  Bloomington, MN 55420  H:952-346-8460</p> <p><b>Send articles to:</b>  Via E-mail: newsletter@aerohistorian.com  Via Snail-mail:  Dave Pluth  Atten: TCAH Newsletter  112368 Eitel Circle  Chaska, MN 55318  Fax: 952-448-4795</p>	<p><b>September 8— TCAH Meeting.</b> Record breaking aircraft, height, speed, distance, payload, etc.  <b>September 8—Wheels and Wings</b> (tentative), Zenith Book Sale!!  <b>September 15—Nordicon III</b> at the Thunderbird Hotel  ***</p> <p><b>October 13—TCAH Meeting.</b> WWI Aircraft. Bring your Stringbags.  ***</p> <p><b>November 10—TCAH Meeting.</b> Club Auction. No theme. Club Elections, recounts, re-recounts.  ***</p> <p><b>December 8—TCAH Meeting.</b> Early Jets. Heinkle, Whittle, Bell, Yak, prototypes or production.</p> <p>Do you have something to include on the club calendar? Please let us know at newsletter@aerohistorian.com!</p>	
<p><b>TCAH Calendar &amp; Events of Interest</b></p> <p><i>See front page for May Events</i></p> <p>***</p> <p><b>June 9—TCAH Meeting.</b> Theme: Black Cross/Red Star, Aircraft of the Eastern Front WWII.</p> <p><b>June 16-17—MN Air Guard Museum—Open Cockpit Weekend</b>  ***</p> <p><b>July 4—IPMS Nationals, Chicago Illi-</b>  nois</p>	<p><b>From the President</b>  <i>By Steve Erickson</i></p> <p>First off thanks to the American Wings Museum for hosting our April meeting and model contest. It was a very nice time and a beautiful day for our club field trip. They have a very impressive facility well worth the trip on its own. My personal highlight was the Poplar P-38. This is the aircraft that sat on a pylon for years in Dick Bong's home town. It's been nicely restored, while it can no longer fly it looks like it could. I had seen it several times when Grouse hunting in northern Wisconsin, and it made a nice memorial for Bong it was a sad end for a great airplane. Now it looks operational, like it was in its prime. I was awed, of all the airplanes I seen over the years I've never seen a P-38 in good condition, this one was all the more special since I had</p>	 <p><b>Pearl Harbor Opens in May!</b></p>

## Meeting Minutes

*By Dave Kitchel*

Club President Steve Erickson called the meeting to order during the annual club modeling contest at 1335 hours at the American Wings Museum, Anoka.

### Announcements:

The next business meeting will be held at Johannes Allert's house at 1300 hours, Saturday 4/28. Those planning to attend should notify him in advance. His telephone: 763-213-0370. His address; 19830 Swallow Street, NW, Oak Grove, MN 55011

IPMS dues are being raised from \$19 to \$21.

The annual banquet lost \$362. Attendees dissatisfied with the banquet can contact an Pat Butler, Treasurer, concerning possible refunds.

Club coffers now stand at \$5900.

John Roll said he is acquainted with a World War II P-51 ace whose aircraft markings are now available from SuperScale Decals. Tom Norbomm is building the P-51 for this pilot, John said.

A club guest (Alexi) visiting from the Ukraine is seeking a 1/32 Mig 29. His phone number is 410-336-1751. Later that day, Dave Kitchel called Alexi with an ebay URL where the model was for sale. Alexi's e-mail address is afsm16@earthlink.com

The Des Moines, Iowa contest is slated for April 28. Pat Butler inquired whether a group from our club might attend that show on a one-day trip. It would be a good reciprocal gesture because their club often attends our Nordic-Con contests.

Dave Pluth needs short articles for the newsletter.

April 21 and 22 will be open cockpit weekend at the Minnesota Air National Guard Museum.

Fifty models were entered in the club contest.

and were calling on members for help and ideas on where to hold it this year. TCAH Annual editor John Stanaway indicated that he was receiving material with promises for more articles for same. The new magazine 'Aerophile' is introduced this month. The EAA Museum replica of the Spirit of St. Louis is to be in the Twin Cities as part of the re-creation of Lindbergh's tour of the U. S. after his epic flight in 1927. Two movies were shown, both from McDonnell-Douglas: F-15 Eagle, Design to Delivery, and F-18, Better by Design. Business meetings to be held on Thursdays through the summer. 36 models on display by nine members. Bob Nelson gave a report on IPMS Midwestcon '77 Region V convention in St. Louis. Club Officers: President Len Peterson; V.P.- Dave Sandsness; Secretary- Ken Ring; Treasurer- Dave Galbraith.

MAY 1970: The program for the May meeting has requests for the membership to bring WWII models for the ongoing club display at the Science Museum. Presentation of the Vietnam Contest awards. Slide presentation by George Minarik on PBYS. President Chuck Mayer Thanked those who participated in the Vietnam Contest/Display. He also thanked the WWII model builders who took time to set up a mini-display at the Brooklyn Center Library. Talks continue about suspension of club meetings during the summer. The first Northwest 747 lands at Wold Chamberlain on May 24. This is a big event here and draws large crowds. NEW KIT RELEASES: AURO-RAC-141 Starlifter and Blue Angels F4 in 1/48th & a DC-10. LINDBERG- Helldiver, Avenger in 1/72nd. REV-ELL- 1/32nd P-38 and F4U. Also the HH-3 Jolly Green and OH-6 Cayuse helicopters. HASEGAWA- A-4F Skyhawk and F-106 and Harrier. Also the 4 engine Mavis flying boat that will sell for \$7.00. Monogram/Mattel bids farwell. Club Officers: President- Chuck Mayer; V.P.- Noel Allard; Secretary & Treasurer Kent Olmsted.

## Business Meeting Minutes

*By Dave Kitchel*

Present: Steve Erickson, Tom Norbomm, Dave Pluth, Johannes Allert, Pat Butler, Dave Kitchel, Ken Sallman, Jim Kaltenhauser, John Bernier.

Internet fees Ken Sallman announced the club's \$217 web fee is nearly exhausted. Ken said he will pay the new fee and ask reimbursement from the club. The monthly fee is \$17.95 per month for 200 megabytes. National IPMS Competition Ken Sallman said IPMS venue selection is based largely on: the organization soliciting the national organization, the venue, budget, the program and location (hotel facilities, etc.) Sallman said we should advertise in foreign publications (Scale Aviation Modeler International, for example).

Sallman said TCAH needs a theme for the national competition. Example: The theme in Chicago is "Modeler's Odyssey." If the national IPMS competition is held here in 2003, one obvious theme could be based on the 100th anniversary of aviation: "Aviation In

The Next 100 Years." Possible locations include the Northwest maintenance facility, American Wings Museum with tours around the state.

Group consensus agreed we (TCAH) need to incorporate before we can commit to the national competition or get insurance.

Our next business meeting should be in May or June, so Ken Sallman can practice his Chicago IPMS presentation. He will do this at the June meeting so the membership can see it. It will be called the "Nationals meeting."

If we book 350 rooms at the Radisson South, we will have seven complementary rooms, a suite with a bar for a hospitality suite and access to 17 conference rooms. A hospitality suite is not in the budget of \$82,000 to \$84,000.

Revenue projections for the IPMS nationals: \$85,700 Expenses (with \$17,000 reserve)\$81,800 Projected net: \$4,000

Funds Management Pat Butler, Treasurer, recommends placing a second account in an alternative bank to preclude any possible confusion by the bank of two separate TCAH accounts.

Banquet Refunds Two refunds have been requested from the banquet expenses.

Meeting Raffle Prizes Butler requested a volunteer of the meeting attendees to get raffle prizes for the monthly meetings. Kitchel volunteered to contact Dave Huffmeyer at the Little Canada Hub store. We also need to cultivate an alternative contact at this store.

## TCAH Memories

*by Tom Norbomm TCAH Historian*

MAY 1977: President Len Peterson brought up the subject of the upcoming Charles Lindbergh 50th Anniversary Banquet to be held on May 21st at the Registry Hotel. He Hoped that the club would get involved in what would be considered the major aviation Event of the year. Len and Nick Waters were in charge of the TCAH Banquet

## Two Holers

By Merrill Anderson

Although in the game "Red Baron" single seat fighters predominate (and fighter pilots of every era would agree) it was the two seaters which did the work in W.W.I aviation. The basic activity of the airplane from the start of the war was observation, reconnaissance in depth of enemy forces. The value of the airplane was demonstrated in 1914, when the French, warned of German maneuver, were able to stop the German sweep toward Paris at the first battle of the Marne. The work of observation and recon were usually done by two seat aircraft, (especially after 1915, when single seat planes became dedicated to air to air combat). Photography also required two persons; flying the vast majority of early aircraft was a full time job, and the pilot could not operate the plane and a camera at the same time (it was done, but the results were not very good). In fact, early pilots for all the nations were considered chauffeurs, (and not generally commissioned), the observers were in command of the aircraft, and outranked the pilot.

As the war progressed, both sides developed specialized aircraft for different missions, but at first, many two seaters had to do whatever needed doing; the Sopwith 1 1/2 Strutter and the Roland C II, for instance, served as fighters and bombers, as well as a recon machines during their initial service. Although some two seaters would act as escorts for their brothers throughout the war, several two seaters, (designed, perhaps, with that mission in mind) became serious air to air fighters, the British Bristol Fighter (F2B) and the German Hannover CL series, as examples. A number of two seat crews, on both sides, made ace scores; a few crews made "ace" in a single (thoroughly hair-raising) mission!

Reconnaissance and artillery spotting were basic missions throughout the war, but as it progressed, specialized missions emerged. Bombing, as a logical extension of artillery bombardment, was attempted as early as 1914. Bombing, and dedicated bomber aircraft, developed throughout the war. There were two basic bomber types, day and night bombers. Gener-

ally the day bombers were light, relatively fast two seaters (although by 1916 almost all two seaters had provision for carrying at least a light load of bombs). The typical types were the British DH-4 and DH-9, and the French Salmson 2A2 and Bruguet 14. The Germans did not use the light day bomber as a specific type, relying on Rumpler and LVG recon machines when small targets were available, usually preferring the AEG G IV twin engine for tactical bombing. The large multi engine bombers were by 1917 too vulnerable to interception, and generally moved to night missions; the later Allied heavy bombers were *designed* as night bombers. The allied day bombing effort continued despite fairly high losses, especially when the British used the underpowered DH-9. The Germans, unable to sustain high losses, went to night bombing almost exclusively.

The second specialized mission was infantry contact where friendly aircraft would communicate, by various signals, with advanced ground units, who, due to ground action, were often cut off from contact with higher headquarters. The contact patrollers would often drop supplies and instructions to such units, as well as marking such units for friendly artillery, (like the man said, "Friendly fire *isn't*"). Although such low and slow work was dangerous, it was vital.

The next mission was ground attack, or trench strafing. The allies generally used fighters (especially the Sopwith Camel) for this mission, but the Germans developed several specialized two seaters, (especially the armored 'J' types), for this work, and several CL types were designed primarily as ground attackers, and assigned to special units, (the Halberstadt CL II & IV being the principal types).

The final type of mission was high altitude photo reconnaissance. The Germans used variants of two seaters to do this, in 1916 and 1917, using the Albatros CV, eventually using specially equipped aircraft to fly higher and generally faster at high altitudes, than enemy fighters could manage. Late versions of the Rumpler C IV could reach 25,000 feet, and could at that altitude not only out pace, but out maneuver Allied fighters sent to intercept them. (And remember, most Allied fighters

did not have heat or Oxygen equipment, while the Rumplers did).

## Oddities

The Curtis O-52 Owl

By Jim Kaltenhauser

In the late 1930's the Army notified Curtis-Wright of its requirements for a 2-seater observation plane. The Curtis-Wright Company answered with the Model 85. This design was a high wing monoplane with great low speed maneuverability, due to its full-span automatic leading-edge slots interconnected with wide-span trailing-edge flaps. So when the slots were extended the flaps were lowered automatically. The planes power plant consisted of a 600-hp Pratt and Whitney R1340-51. This provided the aircraft with a maximum speed of 220 MPH and a cruising speed of 192 MPH.

There were a total of 203 planes built. None of the USAAF planes saw front line action, but 19 aircraft were delivered to Russia. So one would wonder is there going to ever be a 1/2 injected kit of this aircraft? Sure there will. Pavla has announced (and released in Australia) a very nice little kit which will include USAAF marking along with Russian Markings. This Kits number is PAV72031 and will be available in about 2 weeks. If your interested give Mr. Roll a call and he can set you up with one!

## In Future Issues...

### From Dave Pluth

Part IV of the Series on Ebay. Selling on Ebay.

Bombers and Bummers. A brief history of bomber failures.

### From Don Stauffer

Early GE jet engines. A two part series.

### From Terry Love

The first two chapters of his upcoming book!!!

### From Dick Phillips

A new article about the Corsair.

### From Merrill Anderson

A series of articles about WWI aircraft.

## Mustang Alphabet Soup

By Dick Phillips

With the fact that Mustangs were built over a period of almost 10 years and they underwent continuous change and improvement along the way, is it any wonder that they came in a multitude of versions and marks? It all began with the now famous story of the 120 day wonder that NAA actually rolled out in 117 days. The airplane was finished and ready for flight except for the fact that the Allison V-1710 was not delivered on schedule.

NA-73X NXIS598 was the NAA prototype that was produced within the promised 120 days. It made four highly successful test flights and surpassed any and all expectations. However the fifth flight was a different story. Only 12 minutes into the flight, the engine coughed and quit at low altitude over Mines Field, (now LA International Airport). A runway landing was out of the question, and a plowed field was the only choice. The landing gear caught in the rough ground and the plane nosed over onto its back. After examining the wrecked airplane, it was determined that the fuel selector switch was on an empty tank. That assured NAA that it was simply a case of pilot error and nothing to do with the construction of the aircraft. There are conflicting stories as to whether it was ever repaired. I have personally talked to some of the old NAA people and with Bob Hoover, and even they are at odds on its eventual fate. In any event, on the basis of the first four test flights they were already at work building the 320 NA-73's that the Royal Air Force had ordered as **Mustang 1's**. In order to finish the flight test program started by the prototype, NAA pulled the 4th and 10th of the production Mustang 1's and serialized them as 41-038 and 41-039, designating them as XP-51's. The first of these, 41-038 is on display at the EAA Museum in Oshkosh.

A follow-up order by the RAF for an additional 300 Mustang 1's, brought about a slight model change by NAA and these were known as NA-83's. One more NA-73 was retained for some testing program and 617 were shipped to the British. Ten of that group were rerouted to Russia by the British and twenty were lost at sea on a

transport sunk by a German U-Boat.

NA-91 was the first production model ordered by the USAAF as simply the P-51-1-NA and 150 of these were ordered. Only a handful of these were kept in the USA as most of them were also shipped to England. The US Navy showed some interest and one of these, USAAF serial 41-3 742 1 was bailed to the USN as Bu.# 57987 for testing at Patuxant River.

A-36A. At this time, there was no money left in the budget for any additional Air Corps fighters, as they were already buying P-38s, P-39s and P-40s. Where there is a will, there is a way and it was found that there was a lot of money left in the budget for dive bombers, so NAA mounted some bomb shackles under the wings and installed upper and lower dive brakes in the wings, called it a model NA-97 and sold 500 of them to the Air Corps as the A-36A-1NA. One of these went to the RAF for evaluation. Since the British already had hundreds of these NAA fighters that they had named **MUSTANG**, the USAAF chose to name the A-36 the **INVADER**. The name was used for a while, but as more and more P-51s entered into service, the **MUSTANG** name was favored and became the name of choice.

Now we actually start the letters game. When more money was budgeted for fighters NAA was building the NA-99 which became the;

P-51A. 310 of these were built and again 50 of these went to the RAF as Mustang II's. Up to this time, all the planes produced had the Allison V-1710. The NA-73 and NA-83 used the V-1710-39, the A-36 used a V-1710-87 and the P-51A used the V-1710-81. During this time, the RAF had taken two of their NA-91 and fitted them with Merlin engines. They were very impressed and the USAAF technicians working with the RAF obtained some Merlins which were shipped to NAA for testing. At the same time, the USAAF converted 55 P-51A's to a Photo Recon variant which became the F-6A and was named the **APACHE**. Again the name never took hold and they also were commonly called Mustangs

P-51B. The Merlin tests were a huge success and the improvements in performance of the Merlin powered Mustang over the Allison ones prompted

the B model. There were 400 P-51B-1NA, 800 P-51B-SNA, 398 P-51B-10NA and 390 P-51B-15NA's for a total of 1988 B models. Seventy one of the P-51B-10NA's were modified into Photo Recon as F-6C-IONA. The British obtained 308 P-51B's thru Lend-Lease and unit reassignments and called them **Mustang III's**. The call for the vastly improved B model was so great that the NAA Inglewood California plant could not keep up with demand, and an additional plant in Dallas was set up. The Dallas production of the B model was known as the C model, or NA-103.

P-51C. They built 350 P-51C-1NT, 450 P-51C-5NT and 550 P-51C-10NT's. A slight production change became the NA-111 and an additional 400 built as P-51C-1NT. A total of 1750 C models were built in Dallas and again 636 of these went to the RAF as Mustang III's. Twenty of the P-51C-10NT became Photo Recon F-6C-10NT's. The Merlin engine that powered both the B and C models, was a license built version of the Merlin 61 by the Packard Motor Car Co., and became known as Packard Merlins. Up to this point, all the Mustangs built had the older style "Greenhouse" type canopy. Tests had been made with a one piece bubble canopy, after seeing the success that the RAF had with the bubble sided Malcolm Hood they had installed on many of their B and C models. The Malcolm Hood vastly improved side and downward vision, but still left the rear view a virtual blind spot. With the addition of the new bubble canopy and several updates to armament and other systems, the Inglewood began production of the;

P-51D. As the NA-106 there were two early D models built, but that quickly became the NA-109. There were 800 P-51D-SNA, 800 P-51D-10NA and 900 P-51D-15NA's. As the NA-110, there were 100 P-51D-1NA's produced, but these were shipped unassembled to the Commonwealth Aircraft Corp. in Australia. More on these later. As requirements for updated and better aircraft came in, the NA-122 was the next factory model and these were 1600 P-51D-20NA, 1600 P-51D-25NA and 800 P-51D-30NA's. The RAF got 282 of the D models which they called **Mustang IV's**. A total of 6502 D models were built in the



California plant. Another 1 600 D models were built at the Dallas plant as NA-111's, these being 200 P-51D-SNT and 400 P-51D-20NT's. More changes brought about the NA-124 which were 800 P-5113-25NT and 200 P-51D-30NT's. That made a total of 1600 of the D models built in Dallas. Of this Dallas D model production, 136 of them were converted to Photo Recon F-6D-25/30NT sub-types and 10 TP-51D dual control trainers. Much later, in 1951, Temco took 15 of the 1051D-25NT aircraft and converted them into TF-51 D's

In addition to the D models produced in Dallas, they also built the K model. It was physically identical to the D except for the installation of an Aeroproducts Propeller instead of the Hamilton Standard used in the B, C and D models.

P-51K Under the NA-111 factory type, Dallas built 200 P-51K-1NT, 400 P-51K-SNT, 600 P-51K-10NT and 300 P-51K-15NT's. From the 1500 total K's built, 163 of them were built as Photo Recon F-6K's, 600 of them were provided to the RAF as Mustang IVA's and 314 were shipped to Australia.

While the two main production plants at Inglewood and Dallas were building the B, C, D and K models, the design engineers were still hard at work experimenting with various engines, and ways to improve the performance to the max. It was thought that if they could make the airframe substantially lighter and maintain the same power, they ought to go faster. This was the basis for what was known as the Light-Weight Mustang program.

XP-51F was the factory model NA-105 It used a Merlin V-1650-3 and a three bladed Aeroproducts prop, which along with all the other weight saving changes, made the empty airplane nearly 2000 pounds lighter than the D model. Three of the F's were made and one of them was sent to the RAF as the Mustang V. In return, the British sent some experimental Merlin engines and some light weight Rotol props to NAA.

XP-51G was next one which was model NA-105A. The G used the Merlin 14 S. M. engine the RAF had sent, and the 5 bladed Rotol prop. The G has the distinction of being the fastest of all the Mustang types, doing a respectable 495 mph at 22,800 feet. Two of the G's were built, one going back to

England. The first G was serialled 43-43335 and survived the testing it was put through in the last two years of the war. It was disassembled after the war, and somehow, the fuselage center section was saved and used as a cockpit trainer by an aviation tech school in the L.A. area. When it was no longer needed, it was sold as scrap to a junk dealer. While rolling down a freeway on a trailer to the junk yard, it was spotted by a warbird fan named John Morgan. He at first thought it was just a D fuselage, but after stopping the truck driver, to ask where it was headed, saw that it was indeed the ultra rare G model. He reportedly paid the junk dealer on the spot and had it delivered to his garage. With a tremendous amount of new hand made parts, it could fly again.

XP-51J NA-105B was the last of the light weights. It was a final development of the F model design but used an Allison V-1710-119 engine and a 4 bladed Aeroproducts prop. In 1991, I was contacted by a fellow who told me that he had found one of the two J's that were built. I was very excited about that and we began to make plans for me to photograph the project, but nothing ever came of it and after talking to several big time players in the Mustang restoration game, it was the consensus of opinion that the fellow was a big phoney. I have been unable to contact him since that time. All the testing of the light-weights convinced NAA that there was indeed a future for such a plane, and the result was the H model.

P-51H This was the NA-126 factory model and went into production late in 1944. By the time they could be delivered, the war in Europe was over and it was thought they would be used as the fighter to sweep over the Japanese islands to finish that phase of the war. The light weight and construction methods used, made it assumed that it was almost a disposable type fighter, and they figured about a 120 day service life. However the Air Force didn't share all its plans with each and every Command, and before any H's left for Pacific service, we ended the war with just two B-29s. The H's were built in three batches. There were 20 P-51H-1NA, 280 P-51H-SNA and 255 P-51H-10NA's. The RAF received one of the -1NA for evaluation in March

1945. One of the things that made the H model a bit faster than the D's was the new Merlin V-1 650-9A engine.

Late in the D model production, it was decided to install the V-1 65 0-9A in all the remaining D models still on the production line. They were going to be the P-51D-3 5NT block, but since it was an entirely new engine, it was proper to give it a new designation.

P-51M They kept the NA-124 factory model for the M, but only one M model actually rolled out of the factory in Dallas. It was serialled 45-11743. There were 1629 M models cancelled, including one TP-S1M.

As mentioned earlier, NAA sent 1 00 P-51 D-1 NA's to the Commonwealth Aircraft Corp. in Australia. They were sent as crated components for the purpose of setting up the production line for the Commonwealth CA-17 model. Twenty of the sets of parts were used for set up and never actually were assembled, the other 80 became the; CA-17 Mk 20 These were the US built and Australian assembled aircraft, using the early V-165 0-3 Merlin. The RAAF serials ran from A68-1 to A68-80. With the expertise gained from this production, they went into the CA-18 Mk 2 1, which were 26 aircraft that used the newer V-1650-7 Merlin. Next came the Mk 22, 14 aircraft using the -7 Merlin and another 14 aircraft using some British supplied Merlin 66/70 engines. The final Aussie production was 66 aircraft given the Mk 23 designation, also using the Merlin 66/70. That made a total of 200 CAC built aircraft, some of which saw combat with an Australian Squadron in the Korean War.

P-51E. This letter was never used.

P-51I. The letter (I) is not used due to confusion with the number.

P-51L. These were to be a run of 1700 P-51H's with the Merlin V-1650-11, but the order was cancelled at the war's end.

Just before the war in the Pacific ended, NAA was planning a long range fighter escort to accompany the B-29s on their long missions to Japan. This project became the P-82 TWIN MUSTANG. This will be the subject of another story on another day.



## TCAH Contest Results

By John Higgins

The annual TCAH club members model contest for 2001 is now history. Thanks to all who entered models and those of you who showed up early to help especially Dave Pluth, Jim Kaltenhauser, Merrill Anderson and Denny Strand. The good folks at American Wings were gracious enough to have things set up for us so there was only a little left for us to do. I sure appreciate the thoughtfulness though.

The total number of entries was 50 models, a pretty good turnout. There were enough entries to fill out every category and it wasn't necessary to combine any categories. The level of skill continues to climb. So many of our members improve noticeably from contest to contest that judging is becoming a challenge in itself. Thanks to Mark Krumery, Wade Aho, Birney Kugle, John Fowler and Dave Pluth for rising to the occasion and judging this year. This year's winners are as follows.

Novice 1/72 scale:

1. Birney Kugle Me 1101
2. Birney Kugle FW Triflugel
3. Birney Kugle FWTA183

Novice 1/48 scale:

1. Denny Strand Yak 1
2. Denny Strand FW190a4
3. Denny Strand RP-63

General 1/72 scale:

1. Jim Kaltenhauser Hurricane Mk 1
2. Dave Pluth Spitfire Mk V
2. Mark Krumery NWA Stratocruiser
3. Jim Kaltenhauser P-51
3. Jim Kaltenhauser P40M

General 1/48 scale:

1. John Eian Mig-21
2. Dave Pluth A6m2 Zero
3. Dave Pluth F4F-4

Master 1/72 scale:

1. Skip Nelson Lagg 3 red 30
2. Johannes Allert F4U-4G
3. Skip Nelson Lagg 3 white 43

Master 1/48 scale:

1. Merrill Anderson Halberstad CL2
2. Steve Erickson F4F
3. John Eian F11F-1

Miscellaneous:

1. Bob Steinbrenn USS Kidd

2. Merrill Anderson German Officer Bust

3. Don Burgoyne M-10 Tank

### Judges Best in Show:

Small scale Pat Butler P-39N

Large scale Merrill Anderson Halberstad CL-2

Bob Nelson Memorial Award for the best Korean War Era Aircraft Mark Krumery F9F Panther Jet.

Thanks again to everyone who helped and entered. See you again next year.

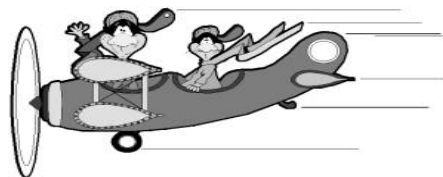
## Book Review

### LOCKHEED T-33, A Photo Chronicle

By Dick Phillips

LOCKHEED T-33, A Photo Chronicle by David R. McLaren Published by Schiffer Military/Aviation History, Atglen, PA First edition 1998 ISBN:0-7643-0646-4 124 pages glossy paper, soft cover, 215 b&w photos, 183 color photos size 8 1/2 x 11

For anybody that was in the military anywhere from 1948 to the early 1990's, one of the most common sights at most military airfields would have been a T-33, or TBird as they were lovingly known. It all started with the F-80 Shooting Star, single seat fighter. Several different models were built, with the U.S. Navy having theirs built quite differently than the Air Force model. The thirteen chapters deal with the development, construction and use by the Air Force, Navy and Marines, Foreign Air Forces, Air National Guard and civilian owners. The last chapter is a detailed production list of USAF and Navy serials and the Lockheed construction numbers. The outstanding feature of this book is the huge collection of photos showing the very wide variety of uses for the TBird. Almost half of the 398 photos are in color. Every military jet pilot from 1950 on, will find something of interest in here. Maybe even a photo or two of that TBird you soloed back in flight training.



## What's new?

By John Roll

Chief Plastic

(and resin and paper and...) Pusher What's new?

HOT off the e-mail is news (NOT for the faint of heart!) that Copper State Models 1/48 Resin Gotha G.III WW1 Bomber. If you gotta ask, you can't afford it. This kit should be available within 1 or 2 weeks. To go along with the Gotha kit, Eric of Copper State has released eight resin WW1 figures. From the photos I have seen these look VERY nice!

Interesting news from MPM in the Czech Republic is a not only their new kits but how they are making them. Their latest releases in 1/72 are a Fairey Albacore, Ki-21 Sally and DC-2. The most remarkable thing about these kits is that they have improved their molding technology. While not up to the standards of Eduard's P-39 series, they are leaps and bounds better than they used to be! In 1/48 they have released another Petlyakov PE-2. This time in the guise of a 2-seater as the PE-2UT.

The latest from Tamiya has just arrived. This is, of course, their 1/48 Gekko Type 11 Late (Irving). Now, where's that 1/72 Irving???

In the way of books, Osprey has just (finally!) released the Betty Bombers book in their Combat Aircraft series.

Another new one this month from Pavla is the Curtiss O-52 'Owl'.

Ginter has released a couple of books on the perennial favorite A-4 Skyhawk. It is divided into one book for the Naval versions and one for the Marines.

An unexpected but long overlooked release is the 1/48 Westland Lysander Mk. III from Gavia

There are another 8 new decal sheets this month from Superscale. The subjects are:

P-39 including 'Air-A-Cutie'

SBD-3/5 Dauntless

B of B BF 109 Aces parts 1, 2 and 3

F-14A/D Tomcats

2 sheets of A-4E Skyhawks

Dave told me to keep it short this month so T-t-t-t-that's All Folks!

Happy Modeling!

## Free Russian SIGnals

By George Mellinger

April is the cruelest month... No, that's not right. For Russia every month is the cruelest month. How about "April shekels buy May decals". Still not good poetry, but closer to the truth. Gaston has done it again .. new Spring flowers from Aeromaster!! This new sheet "Falcons of the Red Star Part II" features five more 1/48 scale decals, from the Stankov Yak book. And if Part I was good, this new looks even better. Two of the decals are for Yak-1b s of Pavel Karavai. The first is for his White 28, a green aircraft distinguished only by a red star on the white spinner. A second Yak-1b decal is Karavai's Red 12, camouflaged in winter white, with a red dedication marking reading "Zhirovskii kolkhoznik". Karavai graduated from flight school in 1942 and went to the front with the 897 IAP at Stalingrad in October. Officially he was credited with 16 individual and 7 group victories, and received the HSU in 1945, though unofficially he may have scored as many as 31 individual victories. There is actually something strange about Karavai's white Yak. It was donated by the members of the Zhirov Collective Farm in November 1944, at a time when production of the Yak-1 had ceased (July 1944). Further, by November 1944, winter camouflage was no longer used. This suggests that perhaps, the patriotic peasants of the Zhirov Kolkhoz had been scammed, and an old aircraft taken from a maintenance depot and marked as their new donation. Have the communists no shame?

The real treats are the two Yak-9s of Ivan Stepanenko, a twice HSU. Both his Yak-9 and his Yak-9T feature very interesting personal sideart. When Stepanenko was finishing flight school in June 1941, he was informed that "formal examinations will be given at the front", and was sent off to the 4 IAP. By 1945 he scored officially 33 individual and 8 group victories, almost all of them on various models of the Yak, though he personally claims 70 individual and 13 group victories. (Pokryshkin and Kozhedub also claim victories additional t their official credits.) The first of Stepanenko's Yak-9s is the colorful White 17, featuring a lit-

tle Goebbels with a microphone running from a springing tiger. While Aeromaster, and their Stankov reference, show this aircraft in the late war gray camouflage, this is the subject of some controversy. Another Russian source illustrates this same aircraft in the earlier green and black finish, also omitting the fuselage bands and the Order of the Red Banner badge from the nose. The photographic evidence is unclear. However, in view of both chronology and the nature of the different sources, I am inclined to believe that gray is much more likely correct. Perhaps, the aircraft was initially black and green, and repainted later in 1943. Whether it would have borne the caricature with both paint schemes is unlikely. As for the red bands on the rear of the fuselage, those would have been temporary markings, and you may feel free to omit them if you wish. The order badge on the nose may be used, but probably should be omitted. This badge would not have been painted until November 4, 1944, when it was awarded to the 4 IAP. By that date, Stepanenko was mainly flying his newer Yak-9T, keeping White 17 as a back-up and loaning it out to other pilots. Stepanenko's Yak-9T, with its diving eagle is the also included on this sheet. Choosing between them should be a real problem for you 148 Regiment guys. This is when its easier being a 172 Regiment kinda guy - I've got the space, so I'm gonna build 'em both! And if Aeromaster has neglected us, AML of Czechia has done both Stepanenos on their 1/72 sheets. Life is good - or at least modeling is.

Finally there is the Yak-9U flown by Boris Loginov of the 29 GIAP in 1945. One of the minor aces, he entered combat only in 1943 flying mainly over Karelia. he scored 12 individual and 6 group victories, and "gave away" four of his victories to his wingman. The markings for his Yak-9U, which he received only after having scored his last victory, feature the Cyrillic inscription "Vaktangovets" in red outlined in white. This was an aircraft donated by the Vakhtangov Ballet Company of Leningrad, second only to the Bolshoi in reputation, and still active today. It is a pity that there is yet no 1/48 kit of the Yak-9U. Doing a Yak-9 U from a Yak-9T might be possible, but it would mean not only relocating the chin a-

diator to beneath the wings, but also extending the belly radiator and sliding it aback, much more like the Yak-3, and then producing a new teardrop canopy. This should be practical for the serious plastic surgeon, but not the average SOB builder. Either Aeromaster is going to have to slow down and stop producing decals for kits that don't exist, or the plastic companies are going to have to "get with the program" and start producing those kits. You know which choice I favor.

Other news for the big scalars. MPM has released the Pe-2UT. This is the trainer version with a second cockpit in a hump on the fuselage top. An ugly trainer, so grotesque that it becomes interesting. Judging by the original MPM kit, this should be worth while for those who like such things - which would include me if only the scale were correct.

On the Amodel front, I've gotten a look at their latest Yak-28PM Firebar, the interceptor variant. While you can never be sure about parts till after you break sprue, it looks like quite a decent kit of an important Cold War interceptor, though one which never claimed a scalp, not even an airliner. And can be done only in metal color. Still, it's a neat aircraft, and seems to augur the bomber and reconnaissance variants of the Yak-28 family soon, which are even neater.

Finally, there are new reports of upcoming treasures from Linden Hill. Not content with importing all the East European stuff that escapes the grasp of Roll Models and Squadron, such as the highly recommended VES 1/72 Sukhoi Su-15TM, they've started producing their own decals. I think I've already mentioned their panjsher Tigers sheet of the Su-17, including numerous squadron markings, and their Russian Swingers sheet of the MiG-23. Their web site now has pre-announced the following subjects - "Celestial Hussars" - a sheet for the Su-25s of the Sky Hussars acrobatic team; a sheet of international markings for late model MiG-21 bis, SM, and UM (perhaps start hunting down some of those Fujimi kits), and Twenty-first Century Shturmoviks" a sheet of international Su-25 markings. I don't know what will be included, but the teaser drawing shows an Su-25 in Turkmen Air Force mark-

(Continued on page 9)



(Continued from page 8)

ings, and I can also presume Georgia and Ukraine are likely inclusions.

And a brief postscript for us armor builders. Yes, we belong in the "back of the bus", me too when in that mode. But there's good stuff for this vice also. Think "Skif". Their kits are a joy and they're doing a whole range of modern 1/35 Soviet armor. Their 2S1 122mm tracked howitzer is wonderful, and their MT-LB is a family variant. The BTR-152s look good, the BMP-3 looks spectacular, and they've just announced a SA-13, mounted on the MT-LB chassis. In all their kits, they give accurate and provocative patterns and details of the new army camouflage schemes. From what I've seen so far, I expect (HOPE!) they will do a Vietnam era PT-76 real soon, and a BTR-50. Yes, life is good - expensive, but good.

### Airline Chatter

By Terry Love

Impulse Airlines of Australia bought six Boeing 717s (Douglas DC-9s) for about \$35 million each. Korean Airlines is discussing with Boeing about developing a super jumbo 747X freighter. KAL wants 16 of them. Cost will be about \$200 million each. A bomb under the seat where the President of Thailand was going to sit, blew up about 30 minutes early. The Thai Airways Boeing 737-400 was destroyed. CIT Group, and international airline leasing corporation, ordered 20 Boeing 737-700s and five Boeing 757-300s for future leases to the airlines. The cost is \$1.3 Billion. Air 2000 has ordered eight Boeing 757-200s. Cost is \$600 million. Sun Country Airlines retired one of their three Douglas DC-10s in March and one April. They will retire their last DC-10 in May. Get your photographs now. The DC-10 retired in March had run out of flight time and was flown to Arizona and scrapped. Sun Country Airlines took delivery of their second Boeing 737-80 in March and their third one in April. The new color scheme in orange and Navy blue. Sun Country hired a new President on April 5. Delta Airlines will report a \$100 million loss for the first quarter of 2001.

Northwest Airlines lost \$123 million in the first quarter of 2001.

William Scott died March 10 at age 81. He was the NWA pilot of the Boeing 727 that was hijacked by D B Cooper in 1971. Boeing 747-400s cost about \$180 million each. They have always been Boeing's most expensive airliner in the last 35 years. Not now. Now the Boeing 777-300s are about \$20 million more expensive. Northwest Airlines will retire three Douglas DC-10-40s by this Fall, much earlier than expected, in order to cut costs. Boeing is going to move its headquarters out of the Seattle area. They are looking at Chicago, Denver, or Dallas. United Airlines flight UA821 is now the longest scheduled flight in the world. It flies New York to Hong Kong non-stop, and it has a scheduled flight time of 15 hours and 40 minutes.

Sabena Airlines of Belgium lost \$284 million in 2000. LTU French Airlines lost \$196 million in 2000. Swissair lost \$112 million in 2000. Alitalia lost \$224 million in 2000. United Airlines retired its last Douglas DC-10 on February 14 after more than 30 years of operations. United had a fleet of 59 Douglas DC-10s at one time. The American Airlines take over of TWA was approved and completed on April 9. TWA was the oldest original airline still in existence. The oldest now is Northwest Airlines. Northwest Airlines 75th anniversary is October 1, 2001. Look for special activities. American Airlines cancelled its huge aircraft order with Airbus. Cancelled are orders for 45 Airbus A-318 and A-319 aircraft. The reason is TWA's young fleet of aircraft, but mainly the Boeing 717 or the advanced version of the DC-9 that TWA has, is more economical. Look for further orders of the Boeing 717 (DC-9) from Boeing for American Airlines.

### We Need Your Help!

From the Editors

So do you like what you've seen so far in the newsletter? Getting a little spoiled with twelve pages of articles every month? Well, we need your help for it to continue.

To put it simply, WRITE SOMETHING! We need your articles for the newsletter to keep going!

If you're interested in helping out, drop us a line at [dpluth@j-aircraft.com](mailto:dpluth@j-aircraft.com).

### Ebay Part III—Selling

By Dave Pluth

Last month with finished the part of this series that deals with buying on Ebay. This month we begin talking about selling on Ebay. In this article, we'll cover some of the stuff you need to think about before you sell and in preparation to sell. Next month we'll talk about the actual listing process, auctions closing, follow-up letters, and some software you can use to manage your auctions and other aspects of selling.

Selling on Ebay breaks down into several distinct areas.

1) Research – YOU need to know your product. Open the kit box, make sure everything is there, make sure the decal sheets are ok for use, check the box for damage, check out the kit number. Collect all this info and then log on to Ebay to see what similar kits are being sold for.

2) Accurate descriptions. I will generally sit down with a word processor and type up the kit descriptions before ever thinking about listing them on Ebay. Things such as parts on the trees, bad decal sheets, damaged boxes etc are all important to the potential buyers. Try to describe things as accurately as possible. An example may be:

1/48<sup>th</sup> Hasegawa F6F-3 Hellcat. Box has been opened, but kit is complete and still in bags. Decals are slightly yellowed, but most look useable. Kit decals include a set for Minsii III and a target drone. Kit is the new Hasegawa mold of this kit and includes recessed panel lines.

The description doesn't have to be long, just give the pertinent information to a potential buyer. Now, this doesn't include any payment or shipping information as we'll cover that next.

3) Shipping considerations – Before you begin the auction, you also have to decide how to ship this kit safely to its new home. This is important information for the buyer in deciding if they want to bid. Here's some things to consider and some amounts you may want to include for shipping.

a. Will the item fit in a priority mail box? If it will, you can generally ship it for \$3.95-\$6.50 depending on weight. A 72<sup>nd</sup> scale kit in a smaller priority box will run you around \$4, a single engine

fighter in a bit larger box is \$4.50 and a B-17 in your own box will run you around \$6.50. The post office is the simplest way to ship things, but it is not the most cost effective anymore. Also, you can not ship priority mail out of the country, so the "free" boxes are unusable.

b. Will you need to find a box for it? This can be a hassle, especially with large items and ships. Odd shaped boxes are just not that easy to come by, at least for free. If you end up having to buy a box to pack and ship in, you're looking at a minimum \$1-\$4 additional expense.

c. Do you have access to sending things UPS? If you can ship things UPS, it is an excellent way to ship. Why? Mainly because of the ability to track packages and tell when something will arrive at its destination. Finding somewhere to ship via UPS however is not always an easy task.

d. Insurance, delivery confirmation etc. Some buyers want insurance or delivery confirmation for all shipped packages. This can run from \$.80 to \$4 for lower priced items. One note of interest about insurance. Just because you buy it, doesn't mean that the PO will actually pay you for the item if it is lost. I sold a kit to a fellow that was lost somewhere between here and California. The kit was insured for \$25 and the guy had bought it for \$8. Because I didn't have a receipt for the item showing the value, I could not be reimbursed.

e. Would you be willing to ship out of the country? This doesn't sound like a big deal, but it really is. The biggest factor in shipping to England or Canada for that matter is that you'll need to make two trips to the post office (btw, all post office scales do not give the same weights!). The first trip to estimate the cost of shipping, the second to actually ship. The other problem with shipping to a foreign country is that there is not insurance or delivery confirmation available so you have no way to prove something was delivered, nor can you recover anything if it wasn't. You will also need to fill out a customs declaration for the items that you are shipping. Basically, while foreign buyers generally bid higher, the hassle factor in getting stuff to them really makes it less than desirable to offer as an option.

f. Get to know your local postal worker. The folks at the PO can be of great help or great hindrances to you in shipping packages. Fill out your paperwork (for customs, insurance, delivery confirmation etc) before getting there. There is nothing that will tick off the folks behind the counter more than having to do your work for you.

4) Limits. You need to establish hard limits on your sales. Things such as "payment must be made within 10 days of the close of the auction", will make your life easier for you. There are many, many people out there that will drag their feet on paying you for over a month if given the opportunity. After 10 days I send out an e-mail that states, "you have three days to pay for this auction or the item will be re-listed". This allows you to have closure to your auctions within a reasonable timeframe. You will find about 1 in 10 auctions that you close will get to this point before you get paid.

5) Payment types. What payment types will you accept? Cash, checks, money orders, Paypal, Bidpay etc. It's always a good idea to list these things in your listing for an item. Paypal is very convenient, but they now have a \$100/month limit for transactions before you have to upgrade to their commercial account. Bidpay is a flat fee plus a percentage of the sales. Money orders are by far the best because they rarely bounce or have a problem. Cash may or may not make it to you in the post and checks, well, some of them bounce very high. In general I have always accepted checks up to \$50, at which point I require money orders.

If you choose to go the Paypal route, it is really slickest route. At one point when I was doing a lot of selling, almost 50% of the sales were paid for within 8 hours of me sending out a notification letter to the winning bidder. It was then just a matter of packing and shipping. Paypal has gotten weaker over the course of the last 8 months as they have begun to change their rules almost monthly with regards to fees and limits.

6) Photos. Take photos of the items that you are going to list. Photos will increase your average sale prices 20%-40%.

7) Starting price. This is really the biggie for a successful sale. First you

need to figure out what price you have to get out of the sale to make this worth your while to sell. I would strongly suggest not listing the items for less than this (keep in mind also that Ebay takes a listing fee and a selling fee out of this amount). There's no point in selling if you're going to get beaten up on price. The other thing to consider is the going rate for the item. If you need to get \$40 for a Fine Molds kit that you paid \$80 for and they have since reissued it for \$25, you're pretty much throwing away your listing fee. Another consideration is that the higher price you start an item at, the higher the listing fee for Ebay.

So, what would our ad look like with all this stuff included? Here it is:

1/48<sup>th</sup> Hasegawa F6F-3 Hellcat. Box has been opened, but kit is complete and still in bags. Decals are slightly yellowed, but most look useable. Kit decals include a set for Minsii III and a target drone. Kit is the new Hasegawa mold of this kits and includes recessed panel lines. Priority mail shipping \$4.50 (insurance/delivery confirmation extra and at the buyers request only). US Bidders only. Check, money order and Paypal accepted. Checks require 10 days to clear before shipping.

There are indeed a lot of things to think about before proceeding to your first sale, but it's not as hard as it seems, at least once you've done it a couple of times. The final installment of this series (part 5) will be a question and answer section, so send your questions to dave@j-aircraft.com. See you next month!

## The Zero

by Dave Pluth

There was a time in the U.S. where every Japanese plane was a Zero. Well, we all know that that isn't true. But, we also know that the Zero is called by many types, models names etc. Hopefully this article will go a ways in helping you to easily to identify each type of Zero.

Let's start off with a bit of history on the Zero. Development on the A6M1 "Reisen" began in 1937 with the issuance of the 12-Shi Carrier Fighter

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specification. This aircraft was to be a direct replacement for the A5M "Claude", Japan's frontline fighter in 1937. By early 1939, the Zero was ready to be tested in the air. Mitsubishi test pilot Katsuzo Shima took the Zero on it's first flight on April 1<sup>st</sup>, 1939. The flight was little more than lifting off the ground, but it proved that the design would work.

This aircraft was the A6M1. It is easily identifiable with it's two-bladed propeller (switched to a three-bladed prop later in the testing process), also there was a small carburetor air scoop located on the top (or possibly the bottom) of the cowl. This aircraft was powered by the Zuisei 13 engine which was greatly under-powered, but the only available engine at the time. The A6M1 failed its preliminary carrier trials in September of 1939 and the second prototype blew up in mid-air (March of 1939) killing its Navy test pilot.

In the third prototype, a Nakajima Sakae 12 engine was installed. The third prototype had redesigned wings and strengthened wing spars to go along with the Nakajima Sakae 12 engine. It was accepted into production and became the A6M2 type 0 Ship-Based fighter Model 11 or Zero-sen ("Zeke" to the allies). This model was also called A6M2a (not officially as the Japanese designation system really didn't have any sub lettering system and only the designation A6M2 appeared on the aircraft dataplates). Sixty-four Model 11's were produced and were mainly used in the Sino-Japanese (China) war.

As the success of the Japanese Army mounted in China in 1940, a grim reality set in for the Japanese Navy bombers. The war had moved so far inland (to Chun King) that the Navy's G3M2 "Nell" bombers were ranging past the ability of their fighter cover to escort them. Once they arrived on target, they would be deluged with Russian built I-15s, I-16s and US built Hawk III's. The Chinese pilots would wait at altitude and then make diving passes at the unprotected bombers.

Once the Zero arrived, these tactics changed. When the air raid sirens blew, the Chinese would man their planes and head to hide behind some nearby mountains waiting for the Japanese fighters to leave the area. On

September 13th the Japanese sent thirteen Zeros on a mission to Chun King. As usual, when the bombers left, so did the Zeros. A type 98 (probably a Ki-15 Babs) reconnaissance plane was also sent on this mission. The reconnaissance aircraft remained over the target at high altitude awaiting the return of the Chinese aircraft. The reconnaissance pilot that reported the returning Chinese aircraft and the Zeros turned to do battle. Twenty-seven Chinese aircraft lasted less than 10 minutes in the fight before being completely destroyed, without a single Zero lost. This battle also produced the first Zero "ace", Petty Officer Koshiro Yamashita, who shot down five of the Russian-built Chinese fighters. Needless to say, the first combat of the Zero was an overwhelming success and the legend of the Zero was born.

Here are the other "official" Zero types and how to identify them.

The A6M2b or A6M2 Model 21 was the main early production model of the Zero. The main difference between the Model 21 and the Model 11 was folding wingtips. After the 127<sup>th</sup> aircraft, a mass balance weight was added under the ailerons and the trim tab was removed.

The A6M3 Model 32 (allied code name "Hap", "Hamp" and finally Zeke 32) was the next variant produced. The Model 32 is easily identifiable based on it's clipped wings. The clipped wings were implemented to improve the high-altitude and climb rate of the Zero.

The A6M3 Model 22 was the next major revision of the Zero. The Model 22 went back to the basic airframe of the Model 21 with the new Sakae 21 engine. With the size of the new engine, the cowl shape was changed and the gun troughs were removed.

The A6M3a Model 22a added a rudder trim tab and a pair of long barreled type 99Mk. 2 Model 3 cannons in the wings.

The A6M4 was a modified A6M2 with a "turbosupercharged" Sakae engine. Very little is known about this variant, other than it was never put into production. It is also possible that this aircraft never existed.

The A6M5 Model 52 brought several interesting changes to the Zero. The wings were shortened 19.69 inches. The most distinctive difference however was the addition of individual ex-

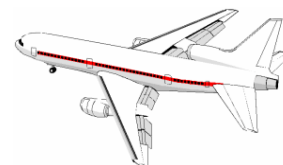
haust stacks on the Sakae 21 engine and the openings that were cut in the cowl for the stacks to protrude through. The model 52 also brought the first self-sealing fuel tanks, and protective armor.

There were three additional models of the type 52, the Model 52a (Ko) changed the type of cannon that was used in the wing guns. The Model 52b (Otsu) added bullet proof glass behind the windscreen and replaced one of the 7.7mm fuselage mounted machine guns with a 13mm machine gun (and likewise the look of the cowl changed as well with an enlarged gun opening). The Model 52c (Hei) added two type 3 13mm machine guns outboard of the two 20mm wing cannons, as well as removing the remaining 7.7mm fuselage mounted gun (leaving the fuselage with only a single gun port opening). The model 52c was also equipped to carry air-to-air rockets.

With the new allied planes coming of age, the Zero was changed again to fit another roll, that of a bomber. The A6M7 Model 62 included a bomb rack to replace the centerline drop tank, two additional 40 gallon wing tanks and thicker skin on the tail in order help sustain higher dive speeds.

The final version of the Zero, which was called the "the best Zero model" by the Japanese test pilots who flew it, was the A6M8c. This aircraft had a much larger cowl to accommodate the Kinsei 62 engine. This led to the deletion of all fuselage mounted guns. The aircraft never made it into production as the war ended before the first model made it off the line. The production model would have been known as the A6M8 Model 64.

As you can see, the Zero went through many different configurations. While it was quite a successful aircraft early in the war, the basic design was never changed enough to keep up with the F4U Corsair or the F6F Hellcat. While the Zero could out turn and out maneuver these aircraft, it was still significantly slower and lacked sufficient firepower to be a real threat late in the war.





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The Aero Historian is published monthly by the Twin City Aero Historians, Inc., a joint chapter of the American Aviation Historical Society and International Plastic Modelers Society/USA, for members and readers as part of their annual dues or fees.

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.

Mail Newsletter material and address changes to the editor.

Twin City Aero Historian  
Attn: Jim Kaltenhauser  
8219 Emerson Ave. S.  
Bloomington, MN 55420

Return address requested