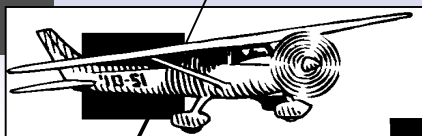


FEBRUARY

2008



MONTHLY NEWSLETTER of the
MADISON AREA RADIO CONTROL SOCIETY
 MADISON, WISCONSIN AMA CHARTER # 665

MARCS SPARKS

VOLUME 47

ISSUE 2

COME FLY WITH US...

MARCS meetings are held on the first Thursday of each month at:
MADISON LABOR TEMPLE
 602-South Park St., Madison
7:00pm room #201B

Visitors are always welcome. We think we have a great 'HOBBY' and we invite you to come and see, and **CONSIDER JOINING US.**

Officers...2008:

President: **Brad Witt**.....bwitt@chorus.net
 Vice Pres: **BILL KINNEY**...hukilau@centurytel.net
 Secretary: **Don Weigt**.....d_weigt@sbcglobal.net
 Treasure: **Dick Sutton**.....jdsutt@charter.net

Membership Information:

Dick Sutton Phone: (608) 437-6795

Flight Instruction Coordinator:

Ozzie Johnson Phone: (608) 274-0474

Web Master:

Jeff Alexander webmaster@marcswi.org

Club Photographer:

Otto Oie ooie3@charter.net

Club Safety Officer:

Bill Disch rcdisch_marcclub@hotmail.com

Club Website: www.marcswi.org

(Contains links to:) About us, Flying sites, Newsletters, Calendar of events, Pictures and Videos, War Birds, Electric Flyers, other Special Interest groups, and Membership information for: **MARCS** club and **AMA**.

Newsletter Editor :

John Steen steensr@yahoo.com

Minutes of the:

MARCS General Membership meeting

January 3, 2008

Submitted by **Don Weigt**, Secretary

The meeting was called to order at 7:03 PM by President **Brad Witt**. There were 22 people in attendance, no visitors or new members.

Brad thanked outgoing officers **Harley Nelson** and **Ed McDonald**, **Wayne Lanphear**, **Jerry Buss**, and **Roger Zimmerman** for their service. He also welcomed new officers **Bill Kinney** (VP) and **Dick Sutton** (Treasurer) and new Board members **Wendell Hottmann**, **Ed McDonald**, **Calvin Slota**, and **Roger Zimmerman**. All were applauded by those present.

Brad announced the wife of past member **Lyle Stone**, from Lodi, had died and the visitation was tonight. Some **MARCS** members were at the visitation, not the meeting. The sympathy of those present was expressed.

Secretary's Report: There was one correction to the minutes of the December, 2007 General Membership meeting as published in **SPARKS**: **Dave Rush** couldn't MC the Big Birds event, not "couldn't CD" it. The minutes were approved as amended.

Treasurer's Report: **Dick Sutton** thanked **Ed McDonald** for his help with the report. Compared to January, 2007, the balance is down about as much as the cost of the runway and generator. Income exceeded expenses for the month, as this is the time of year when members renew. The report was available to look at. People wanting a copy could leave their



name and **Dick** would send them one. It was moved to approve. Someone stated the report didn't need to be approved. **Tony Kremm** insisted all reports need to be approved, according to Robert's Rules of Order. The rules will be checked. **MARCS'** paid membership for 2008 is now ~45, including those who paid tonight. Thirty three had paid previously.

OLD BUSINESS:

Runway: **Brad** said that the northeast corner of the winter fence had been repaired the day the Visquine was put up on the shelter on December 27 or 28th. The wind had pulled some of it off the posts. More ties were added to secure it better. The runway looked fine, the snow was undisturbed: no snowmobiles had been on it. **Brad** thanked **Harley** and **Bill** for their help putting up the Visquine. A picture of the fencing crew was shown. **Brad** hadn't yet sent it to be in **SPARKS** because his modem had failed and just been repaired.

Donation: **Brad** thanked the Screaming Eagles for their December \$75 donation to **MARCS**.

Swap Meet: Will be at the March 6 meeting. We may mention this at the hobby shops in an attempt to increase participation.

Annual Awards: **Brad** still needs the Smoking Hole and Tree Chopper awards returned for presentation at this year's banquet (in April). They need to be returned in the next month or so to be ready for presentation at the banquet. Members should be thinking about who to nominate for the awards.

The Tom Lazar New Year's Day Memorial Chili Feed and Fun Fly: The weather was cold and windy. Not many flew, but about 25 were there to watch, have hot chili, hot beverages, and sweets, visit, and help set up and clean up. **John Steen's** chili was a big hit, with little left. Those present applauded **John's** efforts. The parking lot had not been plowed recently. There was some snow on top of frozen large ice blocks where wet snow had been plowed and frozen, leaving a narrow track to drive in. Those bringing a lot to the event drove in, the rest parked on the landfill road above and walked down. Almost everyone managed to drive out without getting stuck or needing a push. Previously, the landfill had plowed the lot, when the truckers were using the Port-A-Potty, but they don't use

that road anymore and don't use our facility. **Brad** said **Charlie Schultz** had cracked the frame on his Blazer trying to plow the lot. It's a good thing he can re-weld it himself! Thanks, **Charlie!** Plowing isn't part of the club's agreement with the city or county. The field is on city property, but the county owns the parking lot.

Ed McDonald took pictures for the 2008 directory. Changed addresses and emails will be corrected, and new directories made.

Dave Rush reminded everyone that New Year's Eve day had been a much better day for flying. He suggested in the future having the event on New Year's Eve if it was forecast to be better than New Year's Day. **John Steen** said it would be easy for him to supply the chili a day earlier. Most of the membership could be told of the change by email, same as the **SPARKS** notice is sent. Only 26 members get their **SPARKS** by mail. They could check with a buddy who does, or a Board member. No formal motion made, nor any decision. This could be revisited at the December meeting.

Gate: **Wayne Lanphear** has changed the lock, to a different one with a long hasp, and the new combination. (See the back of your membership card. The other combination locks weren't changed yet, but will be later in the week. Those present applauded **Wayne's** contributions.

Banquet: The date still has not been set, but it will be in April.

NEW BUSINESS:

Events to promote flying: **Dave Rush** suggested we open the club several times next summer, in addition to the (usually) Scout oriented event. Make ourselves and the flying experience available to more people. **Brad** would like to have something at least monthly in the summer. He listed three requirements: advertising, people, and locking the gate afterward. Rockford uses about six planes with pilots and buddy boxes, plus about a dozen people for ground school. There are only four events planned at **Kettle Field** next summer: one in June, two in July, and one in August. Adding a monthly event should still leave enough time for other flying.

RAFFLE: Winners were...

Dick Sutton - Magnum .25 XL Motor
Bob Geimer - Issue of Flying Scale Models
Gill Hoffman - CA glue
Harley Nelson -CA glue

SHOW AND TELL:

Wendell Hottmann showed a 12 inch span 1.5 oz. Air Hog converted from 27 MHz to 2.4 GHz, with a 2 gram Spektrum receiver he got at Hobby Horse (~\$60), Pixie 7 speed control, two Blue Arrow 2.5 gram servos, and 2 cell 145 mAh LiPo battery. It flew OK at 1.2 ounces on the stock motors until they burned out after a dozen flights. **Wendell** replaced them with larger "pager" motors from **Greg Sutter**, and uses the original props. They are at the back of the wing. He had to move the radio forward to restore the center of gravity to the same place. It was uncontrollable until he did. The stock plane uses differential thrust for steering. Wendell added a rudder and elevator, and wired the motors in parallel: no more differential thrust. He reports it flies well, but managed only half a lap in the meeting room. He also suggested going to the model train show at the Alliant Energy Center to buy tools for reaming out holes in prop shafts, control horns, and so on.

Harley Nelson brought a glider release mechanism mounted on a glow powered "hauler" plane's fuselage and a sailplane fuselage to demonstrate the release. Rather than using latches or pins, he secured the glider with rubber bands. The release used a modeling knife blade glued to a servo output wheel to cut the rubber band. Worked well in the demo, and has been used in the air. There also was a guide about half way back on the glider fuselage bottom that kept it straight in the mount, and assured the glider would be pitched up before coming free. This makes the glider pop up off the plane, so it clears the plane's tail. **Harley** reports the servo could be controlled by a flap channel to cut several bands one at a time for drop tanks or whatever. He's also going to use the rubber band release for his dusters, as the doors in the bottom of the dust bins have quite a load on them and he's had some problems with other latches and releases.

PROGRAM: The second part of a video about

"flying aircraft carriers" was shown. It detailed how the large airships Akron and Macon were lost after short periods of trials. The Akron crashed into the Atlantic in bad weather at night when she was accidentally flown into the water. Her altimeter couldn't be updated because the crew didn't have current atmospheric pressure information to enter. Admiral Moffet was on board when she went down, killing 73 of the 76 aboard, including the Admiral. The Macon crashed into the Pacific while returning from a fleet training exercise. Her vertical tail failed from fatigue, damaging the stern gas bags. Too much equipment was jettisoned to keep her stern out of the water. She zoomed up so high the pressure relief valves released too much helium, causing her to descend into the sea. Only three crew members were lost. With the fire on the Hindenburg not long after, and the development of aircraft with transoceanic range, the era of the airship for long range patrol and transport ended.

Next meeting is Thursday, February 7, at the Labor Temple, upstairs, room 201B, at 7 P.M.

The meeting was adjourned at 8:45 P.M.

BOARD of DIRECTORS

meetings

These meetings are held on the same evening as the **MARCS** General Membership meeting, (first Thursday of the month) after its adjournment.

General Membership meeting: 7:00 / 9:00 pm

Board of Directors meeting: 9:00 / 10:00pm

Both meetings are held in room: 201-B. Club members are welcome to stay and observe the Board meeting. A Club member may have the floor by being recognized by the Chairperson. Input or opinions must be brief and to the point as the overall meeting time is limited.

AGENDA: February 7, 2008

Summary of appointed chairpersons

Revamping(?) the "Election Committee"

Adding 'public events' to the schedule

Member or Guest issues ?

**the: Tom Lazar Memorial
New Years Day
Hot Chili and Fun Fly**

With all the trouble **Brad** was having getting the lock on the gate convinced that we were friends and we did need to get in for the event... it was starting to look like it might be a bad day. Perseverance did win out and the delay was quickly put behind us. From then on things went relatively smooth. Parking turned out to be the only real discomfort (other than the wind-chill) with only a single row access through the ice-chunk field which used to be our parking lot. Charlie had given it his best effort, the day before, but ended up breaking the frame on his plow-vehicle and had to limp-off in dire need of some major repairs.

The new generator started right up and worked flawlessly handling all the power needs like a real trooper. The exhaust noise was noticeable and noted for positioning at upcoming events as not to be disturbing during them. So it was a good test run and given a gold star for the day's performance. This 4-5 hour work cycle only used about two gallons of fuel out of the unit's 6-gallon tank.

The attendance was fair and rotated somewhat between 9:30 and 1:00, at which time we pulled the plug (s), packed up, and headed for home. The 'Hot Chili' went over good and the day ended with enough to fill a couple of bowls.

I believe only two of our members braved the elements and flew their planes that day: **Dave Rush** and **Wendell Hottmann**...who had skis on his instead of wheels. Both were flying **electrics**. None of the **Nitro** or **Gas** flyers wanted to set up operations with their planes and flight box gear in the snow cover with the cold gusty North-West winds trying to move, at will, anything and everything that wasn't anchored down.

There has been some talk of perhaps having this event coordinated with the weather forecast next year...rather than being locked in on 'New Years Day', and notifying the club members by e-mail and phone when the choice of the day looked like a go, thus encouraging more members to come out to fly and enjoy the event. *(Which would include a BIGGER pot of chili)*

I have listed the members that attended this event below and thought it was kind of interesting the expansive area they all represent. A hearty "**Thanks**" to all of you that helped with the chores and made this a true club event.

John/Editor

- Brad Witt**.....**Middletown**
- John Steen**.....**Beaver Dam**
- Charlie Schultz**.....**Rio**
- Harley Nelson**.....**Oregon**
- Bob Geimer**.....**Verona**
- Calvin Slota**.....**Marshall**
- Steve Schnaidt**.....**Lake Mills**
- Wendell Hottmann**.....**Cottage Grove**
- Dave Rush**.....**McFarland**
- Wayne Lanphear**.....**Madison**
- Dick Sutton**.....**Mount Horeb**
- Ray Walsh**.....**Waterloo**
- Keith Higgins**.....**Sun Prairie**
- Chuck Backman**.....**Monona**
- Lindley Wolff**.....**Wausaukee**
- Mark Finley**.....**McFarland**
- Don Weigt**.....**Madison**
- Clayton Greaves**.....**Stoughton**
- Tony Kremm**.....**Brooklyn**

FEBRUARY 7th GENERAL MEETING
SPECIAL 'RAFFLE PRIZES' NIGHT

- E-Flite Divo 3D - ARF Airplane
- MARCS T-Shirts**
- Choice of 2008 Aircraft Calendars
- "Fifty Aircraft that changed the World"**
(Hardcover book donated by Wendell Hottmann)

PROGRAM...

Film... **"BUSH PILOT"**

M.A.R.C.S.

membership dues...*

Regular membership.....	\$50.00
Junior membership.....	\$20.00
Family membership.....	\$15.00
Associate membership.....	\$15.00

You must have proof of AMA membership in order to receive your MARCS membership card.

Treasure: *Dick Sutton*

* If you wish to receive the club "Newsletter" by regular first class mail, rather than on the internet, please add \$5.00 to your annual fee.

THE...BUILDER'S "WORK-BENCH"

ORGANIZE YOUR NEW WIRING

When routing the wiring in your model plane, mark all servo and servo extensions at the end plug-in. This makes it easier to wire the plane and clear up confusion about what servo each wire is connected to. Also, this can help when a problem arises during radio setup. A one inch long piece of masking tape works well for this job. Fold the tape over the wire sticking it to itself, creating a two sided tab. A ballpoint pen can print the info on the tape-tab before plugging it in.

KETTLE FIELD... up-date

by Brad Witt

At 9:00 am on Monday, January 7th **Harley Nelson** and I met at the field and removed the plastic from around the shelter. We promise never again to use 3-1/4" screws, and I promised to provide some 2" square drive ones next year. The parking lot was a sheet of ice, and both the field and the parking lot were covered with running water. **Harley** said it would have been a good day for a float-fly. We parked on the upper road and walked in. We were done in an hour. After leaving the field we both encountered dense fog on our way to **Charlie's** and could understand why the interstate accident, involving over 100 vehicles, occurred the day before.

SAFETY

is EVERYBODY'S BUSINESS

If you are an **AMA** member, you need to be concerned with safety at your flying field. It is easier to take the heat from a fellow club member for correcting him or her for a safety violation than it is to take that same person to the hospital or the morgue. If one person creates a serious enough safety incident, it could cost you your flying field.



[Bill Disch]

Generally it is not necessary to scream at or humiliate a person who is violating safety rules, A gentle reminder can usually do the trick. However, if it is really serious and a nudge doesn't do the trick, it may be necessary to take a more forceful approach or even call in assistance from your club's Board of Directors.

It is important that we all have the opportunity to fly in a safe environment. If you walked past a problem and didn't correct it, you just set a new standard and it was lower. If any of us observes a problem and doesn't try to fix it, we have

told the perpetrator that what they are doing is okay with us. Complaining to each other about the problem without confronting it only aggravates you and your friends while appearing to condone the activity. Find a way to bring it up or get someone else to do it but don't wait until the next club meeting or tattle to the Safety Officer. It needs to be fixed at the time of the occurrence so it can be discussed, if necessary, between all parties present at the time.

Every accident involving safety should be drilled into your mind and reviewed from every aspect to ensure that you know what caused it, what should have been done to avoid it, and what will have to be done in the future to prevent recurrence.

Try to make something good come from every accident by learning what caused it, then a plan to prevent it, and educate others at the same time.

by **Jim Rice / AMA insider**

COMMENTARY:*by...Don Weigt*

Are we content with MARCS' membership levels? Are we actively trying to find and add new members? I see little evidence, beyond the sheets in the hobby shops, Jerry Buss' scout events, and Ed's tireless efforts. Why is that? And, when we think about adding members, what do we have to offer them?

Most of us have laughed at or about company "mission statements" and the like. But, is there more to MARCS that just an informal group guys (including Pat McDonald and Gwen Beck being our only female members) who like to fly model planes? We can't even include "build models" anymore, given all the foamies and ARFs.

OK. If the majority of MARCS' membership just wants it to be that informal group, with no long term goals and no objective but to fly for fun, fine, if enough join to keep the club viable. But, our expenses are slowly increasing, and our membership continues to decline, if slowly

I don't need more to do! Do you? But, maybe, just maybe, MARCS needs to have some stated purpose, some goals and objectives, and even a membership target.

I think MARCS is about more than flying what we want, when we want; trimming the grass; and watching the trees grow. I think it's also about keeping the hobby/sport viable in the Madison area by providing a superior place to fly. I think it's about keeping it viable in the area by providing a good public persona. I think it's about doing our little part to help the national picture.

I think it's about finding more members, attracting and interesting more young fliers, improving the field as needed, and finding an alternate field if only for "just in case". I think we need to plan for the future of the club and model flying in the area, not just take it for granted what we have now and expect it to continue forever.

What do you think? Do we need to discuss this as a Board, or set up a committee to seriously think about what we want for the club in the next 10 years or so? If we just stand still, the world will pass us by. That's the way it is. Sure, the club and field have positives, but are they enough? What is the alternative to growth and change? Often, it's decline.

Will there be a MARCS in 2018? What will model flying in the area be like? If there is a MARCS then, what will be like? I don't take a trip without some planning. Should MARCS be making this journey without some plan for what it wants to be and how it will get there?

ELECTRIC BUZZZZZZZZ.....**BRODHEAD:**

FREE Indoor flying continues at Brodhead Wednesday nights 8:00 PM until 10:30

All are welcome. Because of our very safe 6oz limit we do not require **AMA** membership.

January: Every Wednesday

February: Every Wednesday except 2/13

March: Every Wednesday

April: Every Wednesday (will likely be able to start at 7:00 PM)

May: Only 5/14/08

ROCKFORD AREA: THE DOME

There will be flying at the Honanega High School dome in Rockton IL .

I believe the cost is \$10 (Possibly more). Proof of **AMA** membership is required.

Feb 16th 2008 4:30-8:30

Mar 22nd 3:30-7:30

CHRISTIAN LIFE HS GYM:

Christian Life High School – (North gym)

5950 Spring Creek Rd , Rockford, 61114

Corner of Spring Creek Rd. and Mulford Rd.

(planes will be limited to a 8 oz. flying weight)

Slow flyers and micro's encouraged

Electric helicopters welcome

\$10.00 flying fee – spectators FREE

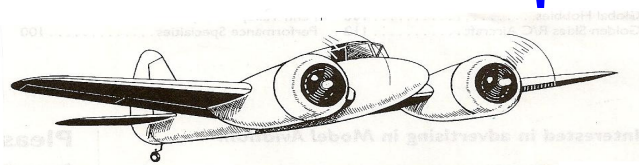
Sat 1/26 7:00 pm to 10:00 pm

Sat 2/2 7:00 pm to 10:00 pm

Sat 2/23 7:00 pm to 10:00 pm

Sat 3/1 7:00 pm to 10:00 pm

Sat 3/15 7:00 pm to 10:00 pm



2008-MARCS EVENT SCHEDULE

EVENT NAME	DATE	LOCATION
SWAP-MEET	March-6	General Meeting
MARCS BANQUET	April-?	Maple Leaf
SCREAMIN' EAGLES Giant Scale Fly-in	June-14	Kettle Field
ELECTRIC FUN FLY	July-13	Kettle Field
BOY SCOUT FUN FLY	July-26	Kettle Field
FLOAT FLY	August-2	Marshall Pond
Ken Kindschi SCALE RALLY	August-24	Kettle Field
WAR BIRDS over DANE	<i>Event looks doubtful for 2008</i>	Kettle Field
FIELD WORK DAY		Kettle Field
THERMAL GLIDER EVENT		Paul's Tree & Turf Nursery
1.5 METER SUMMER FLING		Paul's Tree & Turf Nursery

DATES, ADDITIONS, and DELETIONS will be updated as they become available.

You're Addicted to RC, When...

You read nothing but transmitter and model manuals in the bathroom.

You have converted your mobile home to have room for all your airplanes with just space enough to sleep.

Your RC insurance costs more than your car's.

You have something RC within a radius of 5 feet from you at all times.

You've heard, "Hey that looks just like the airplane I tossed in the bin after crashing last week," more than once at your flight field.

A full-scale airplane passes overhead and you move your thumbs to match its movements.

If you plan to go outside for any reason and it's windy, you go back inside again and find out when it's due to be calm next.

When the power steering goes, you tell the people at the garage to change the servo.

If you worked feverishly in all your free time, it would take three years to clear up your backlog of kits.

You host a fun-fly when it's so cold that one of the events is starting your engine.

You accept a crash as an opportunity to start a great new kit.

Every time you pass a garage sale, you look for wings.

If you spend more money at the local hobby shop in one hour than you make in a month.

You keep your old van just to transport airplanes in.

When you go to Home Depot and the PVC pipe and fittings section gives you ideas for new wing racks instead of plumbing projects.

The smooth tarmac bike trail at your local park has funny airport markings sprayed on it.

Your car has a ski box on its roof, yet you never go skiing.

You have a "special room" for your airplanes.

You have a gallon drum of adhesive in your shed.

You have at least three different heating irons.

Your neck shows a white stripe, that is the same width as your transmitter strap.

HELL AT LOW ALTITUDE

by Daniel Ford

Whereas now we go into combat hoping for zero casualties and regard any loss whatever as proof of unforgivable incompetence, the history of warfare is mostly a chronicle of high casualties and terrible sacrifice. In the history of American warfare, there is little to compare, on this score, to the carnage of World War II... "worse than anything probably that ever happened in the world," in the words of Henry Stimson, the U.S. Army secretary. The Book "**Into the Fire**" by **Duane Schultz** gives a fresh account of one particularly bloody mission from that war... an American bombing raid on August 1, 1943.

The target was Ploesti (pronounced "ploy-esht), a small city in Romania north of Bucharest. Its 12 refineries produced most of the petroleum that fueled the German war machine, so the Allies were eager to take them out. Alas, the city was 1,200 miles from the nearest Allied airfield, in Egypt...an impossible journey, or so it seemed, over water, mountains, and neutral Turkey. Surely the Germans would assume that Ploesti was safe from attack and therefore scant its defenses?

Wrong. Unknown to the Americans, the refinery complex was guarded by fighter planes and "more flak guns than those protecting Berlin," as **Duane Schultz** tells us in his vivid chronicle. The Ploesti raid was small by the standards of the Anglo-American bomber offensive against Germany, involving only 178 heavy bombers. Still, each plane carried a crew of 10, meaning that the lives of more than 1,700 young men were at risk.

Ploesti's planners were under no illusion that the raiders would have an easy time of it. To increase accuracy and to lessen the chance that they would be spotted before reaching the target, the pilots were told to fly at treetop level. "We estimate," wrote an officer who would have preferred a high-altitude raid, "that seventy-five aircraft will be lost at low level. Fifty percent destruction (of refinery capacity) is the best we can hope for."

At 20,000 feet a bomber crew would have needed to worry "only" about enemy fighters...and flak, the ex-

ploding shells from antiaircraft cannons, flinging shards of steel in a black cloud "so thick you could walk on it," as the saying went. At a lower level, menace would be multiplied by machine gun, rifle, and even pistol fire. A single bullet could disable a plane's engine or pierce its aluminum skin to kill a man inside. The low level flying created other hazards as well. A parachute requires a few hundred feet to deploy: Below a certain altitude, the crew of a crippled aircraft would almost certainly crash with their plane.

One airman assigned to the mission speculated that it had been dreamed up by "some idiotic armchair warrior in Washington." The planning went ahead regardless, under the code name of **Soapsuds**. Winston Churchill, the British prime minister, thought that the raid deserved a grander phrase, so the name was changed to **Tidal Wave**. It would prove no more appropriate.

When we think of American bombers over Germany, the plane that comes to mind is the tough, beloved **B-17 Flying Fortress**. But the U.S. Army Air Force acquired its planes in matched sets, and the alternative "heavy".....competing for use with the B-17...was a high-wing, slab-sided, twin-tailed flivver built primarily by the Ford Motor Company: the **B-24 Liberator**. German pilots supposedly called it "the furniture van," and indeed the B-24 was little more than a cargo hauler... the cargo, in this case, being bombs. It leaked gasoline; it was exhausting to fly; and its wings, if hit by flak or fighter-borne cannon shells, had a distressing tendency to snap off. But the B-24 was cheap and easy to build, and it flew faster and farther, with a greater bomb load, than the doughty B-17. It would be the plane that went to Ploesti.

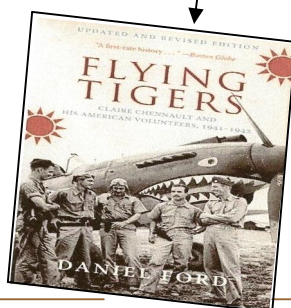
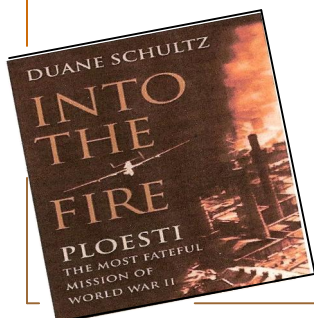
The cargo-hauling B-24 wasn't the only aspect of the mission that got in the way of success. The training had been unrealistic, against a mock-up refinery in the open desert that in no way captured Ploesti's urban grid. A trial run showed that gunners on the ground had no problem tracking the incoming planes and aiming their weapons in time... a surprise to the planners... but the higher-ups kept such information from the men who would fly the mission. En route to Ploesti, two group commanders disagreed about the proper engine speed. Their squab-

ble, combined with towering clouds, caused the formation to split before it reached the Romanian frontier. Finally, the lead navigator took a wrong turn, which wrecked the American's chance of making a coordinated attack. The planes reached Ploesti piecemeal, giving ample warning to the defenders, and many of the planes failed to hit the targets assigned to them.

"We flew through sheets of flame," remembered one pilots, "and airplanes were everywhere, some of them on fire and others exploding. It's indescribable to anyone to anyone who wasn't there." It was a bloodbath, and the results were paltry. American officials optimistically put the damage at 40%... but 40% of what, Mr. Schultz cannot say. Within weeks of the raid, he notes, "oil production at Ploesti was higher than before." No doubt it was, given the German genius at recovering from setbacks, but the lack of detail is frustrating. What damage did the raiders manage to do? What sacrifice did repairing the refineries require of the Nazis? The information must exist, for the Germans were also good at keeping records. But to judge by Mr. Schultz's bibliography and chapter notes, he wrote has his account without delving into German archives or any book not written in English.

So all we really know about the raid is what the survivors knew in August 1943. "The casualties were staggering," Mr. Schultz writes. "Of the 1,726 airmen on the mission, 532 were killed, captured, interned, or listed as missing in action." Most of the missing... imprisoned by the Germans or interned by the Turks... would return at war's end. In the meantime, that single, bootless, 27-minute raid cost the lives or freedom of as many young Americans as 10 months of combat in Iraq.

Mr. Daniel Ford is the author of "**Flying Tigers: Claire Chennault and his American Volunteers 1941-1942**"



In WW II you could start a decent fist fight by declaring the **Boeing B-17** or the **Consolidated B-24** to be the better bomber. B-17 pilots insisted that the B-24 was "the box the Fortress came in," while the Liberator crews sneered at the "Hollywood bombers."

The U.S. Government voted with its money and purchased 45% more Liberators than the Fortresses (18,480 to 12,730), making the B-24 series the most produced airplane in American history. That's remarkable, considering that the Liberator was a multi-engine bomber. (The fighter record is held by the P-47 with 15,500 copies.)

The Liberator's maximum speed was only incrementally faster than the Fort's, but cruise was definitely superior: 215 to 182, a significant 33mph advantage. Additionally, the Consolidated bested the Boeing in combat radius, which endeared the B-24 to the Pacific theater. In fact, at war's end, there weren't any B-17 units remaining in the Pacific, and the Navy bought nearly 1,800 PB4Y-1s and 2s. Where range counted the most, Uncle Sam called Consolidated.

The Boeing had a 35% greater wing area, which yielded a 7,000-foot higher service ceiling. Though the B-17 possessed a greater service ceiling (35,000 feet versus 28,000), typical bombing missions were flown at 25,000 feet. Average costs in 1944 were \$204,000 per Fortress and \$215,500 per Liberator.

In summary, there's less difference between them than many airmen suspect. In the ETO, the Fortress delivered slightly more bombs per mission, but the loss rate was identical: one bomber per 62 sorties. Any combat airman will tell you that his favorite airplane is the one that brought him home.

Barrett Tillman