

M.A.R.C.S. SPARKS

Monthly Newsletter of the Madison Area Radio Control Society
Madison, WI
AMA Charter # 665

Volume 42 - JUNE 2003 - Issue 6

Minutes of MARCS General Membership Meeting, May 1, 2003

By Burr Fontaine

The meeting was called to order by President Wayne Lanphear at 7:10 p.m. with 35 in attendance.

New Members: Jeff Alexander is a former member that has a renewed interest in electrics and has been coming to the last few meetings.

April Minutes: The minutes of the April meeting as printed in the May issue of SPARKS were accepted as published.

Treasurer's Report: An updated financial report is available for review during the meeting by anyone interested. Ed McDonald has compiled and has available a list of members that use each of the available flying frequencies.

Old Business: President Lanphear presented Andrew Morrow with the Most Improved Junior of 2002 certificate.

Special thanks go out to Mike Kimmerly and a crew of volunteers including Al Vick, Ed McDonald, Vince Streif, and Brian Englehart, a friend of Mike's, for putting the new roof on the shelter at the field. Brian not only volunteered his time and knowledge to get the job done right, but he brought his nail gun, air compressor, generator and assorted supplies to get the job done quickly.

There was a good turnout for the Annual Field Workday on April 12. The new spectator and pit fences donated by Schultz Sport and Hobby were installed, bridges across the drainage ditches were repaired, brush was trimmed, and some of the members had the last laugh in an ongoing fight with a couple of the plane-grabbing trees. Jerry Buss was responsible for the sloppy Joes, chips, and soda at noon that provided a nice finish to the morning's work. Mike Kimmerly plans to add a white tape to the top edge of the low fences to increase their visibility.

New Business: *Gate Locks:* Sometime between 3 p.m. and 8 p.m. on April 24 the MARCS lock on the gate was cut with an acetylene torch. At 8 p.m. a City employee discovered the cut lock and noted there was flying activity at the field. Unfortunately, no license number was recorded so

Come Fly With Us

MARCS meetings are held on the first Thursday of every month at 7:00 P.M. in Room 201B of the Madison Labor Temple, 1602 S. Park St. in Madison. Visitors are always welcome. We think we have a great hobby and we invite you to come and see and consider joining us.

Officers:

Pres: Wayne Lanphear, bgbird@charter.net
Vice Pres: Don Weigt, weigt@mailbag.com
Secty: Burr Fontaine, 233-9063
Treas: Ed McDonald, edgarnmcdonald@msn.com

Membership information:

Ed McDonald
Phone 249-0734

Flight Instruction Coordinator:

Dan Dudovick
Phone 273-4339

Mail address for official business, other than for publication in SPARKS:

PO Box 8864
Madison, WI 53708

MARCS Web Site: www.marcswi.org

Web Master: William Velez
william@velez.org

The MARCS web site contains links to War Birds and Electric Flyers Special Interest Group web sites

Editor: Jerry Buss
1809 Browning Rd
Madison, WI 53704

e mail: jbuss@itis.com Phone: 244-8534

Contribution of articles is encouraged. Deadline for submittal is the 20th of the month.

we don't know who was at the field. If you have any information about this please inform President Lanphear.

We are responsible for keeping our gate lock locked at all times except when it is necessary to unlock it long enough to pass through the gate after which it immediately should be locked again. Anytime you find it impossible to lock the gate with our lock please contact Wayne or one of the Board members immediately.

A discussion followed on what to do if City's lock is found unlocked at a time when the landfill is officially closed. The procedure is to go ahead and use the gate but leave the City's lock as you found it, i.e. don't lock the City's lock. Also, if there appears to be no landfill employee present at a time when the City's lock is unlocked please let Wayne know about it.

Instruction: Great news on flight instruction. Dan Dudovick reported 20 members have volunteered to be flight instructors this year including *seven members that are new instructors!* Consequently, for the first time in recent years every presently registered, new member will have an instructor. A special thanks to the 20 member instructor crew and especially to the seven that are volunteering for the first time.

The new pilot orientation day is scheduled for 9 a.m. on Saturday, May 3. New and beginning pilots will have a chance to get some stick time with either their own plane or one that will be provided.

Field Safety Rules: President Lanphear reminded everyone of the AMA and MARCS safety rules that are posted at the field and encouraged members to speak up and in a friendly way discuss the infraction when a safety rule is broken. If cooperation is not achieved, please inform Wayne because our AMA insurance may not be valid if safety rules are intentionally broken.

Additional field improvements: The City Parks Department has furnished some new, freshly painted trash barrels. In addition, they will provide some No Spectators Beyond This Point signs for us to put up on the spectators fence.

Electric Plane Activity: Dave Rush reported on the last electric fly at the Dome for the 2002-03 winter season. There were 25-30 planes available and on one occasion 12 were in the air at the same time. Dave's comments about pylon racing and some close encounters drew a few chuckles.

Upcoming Events: After the new pilot orientation day on May 3, the next scheduled event this summer is the Big Bird Rally on June 14. The events in July are the Electric Fly-In on the 5th, the Boy Scout Fun-Fly on the 12th, and the Float Fly and Picnic on the 20th. More details on these next month.

Other Business: Tom Lazar needs at least one member that is not a Board member to serve on the nominating committee for the fall election of Club officers and Board members for 2004.

Raffle: Our thanks to Greg Sutter for the donation of a Flitter as a prize tonight. **Winners tonight: Wayne Lanphear** - Flitter; **Mike Kimmerly** - Polo Shirt; **Rob Goebel** - Maxtech Dremel Bits; **Mike Kelly** - Polo Shirt; **Ed McDonald** - MARCS Hat; **Jeff Alexander** - MARCS Hat; **Dick Brandt** - MARCS Hat.

Show & Tell: Show & Tell pictures are on the Club's website, www.marcswi.org. **Greg Sutter** brought two projects. Greg referred to the first as a Zaggi Rip-off that was very easy to build, inexpensive, fast, and fun. The other project was a 1/3 work in progress. **Charlie Schultz** displayed a Sig ARF Curtis Jenny park flyer kit. This has a 32 inch wingspan and comes with a 180 gearbox type motor. **Dave Rush** came with a full hanger of four electrics: 1) A Lightning - Free Flight conversion with magnetic actuators and a ready to fly weight of 1 oz, 2) An Extra 300 with a twin GWS drive that provides enough power to almost hover, 3) A Fantastic Models GeeBee also with a twin GWS drive, and 4) A Thomas Morse Scout with a Guillows Free Flight conversion.

The meeting adjourned at approximately 9:00 p.m.

Philosophy 101

Don't ever forget, to a dog you're family; to a cat you're staff.

We Have Volunteers

Having bellyached in these pages about the lack of volunteers for things like the pilot training program and helping out at some of the club's events, it looks like now it's time to pass out some compliments. Dan Dudovick says he has lots of people who have stepped up to serve as instructors and that's great news. No new members will have to wait a year for help and no instructors will be over worked. Also, at the field work day a whole lot of people turned out and made short work of the work. A couple of months ago I said I would publish the names of people who turned out to help at events, but, first of all, I don't have a complete list of names of you who came to the field day, but even if I did it would hard to find enough space to list them all. But thanks guys. It felt like we really had a good thing going that day.

As you know, the Boy Scout Fly In is on July 12. We will need pilots, spotters and a couple of guys to heat up and serve the food at noon. We will build gliders again and help will be needed with that too. Come on out to help the

MARCS 2003 Calendar of Events

Event	Date	Location
Big Bird Rally	June 14	Kettle Field
Electric Fly In	July 5	Kettle Field
Boy Scout Fun Fly	July 12	Kettle Field
Float Fly and Picnic	July 20	Rilie-Deppe Park, Marshall
1.5 Meter Hand Launch	August 16	Long Island Sod Farm
Kindschi Scale Rally	August 17	Kettle Field
Fall Thermal Soar	September 6	Long Island Sod Farm
Warbirds Over Dane	September 20	Kettle Field

club retain its reputation for community interest and also to keep the good volunteer thing going that we seem to have established so far this year. Last year some of our members seemed to be having as good a time as the scouts.

Please Return the Questionnaire

The back page of this issue of SPARKS is a questionnaire that the Ed McDonald, at the request of the Board of Directors, has prepared to sample MARCS members on opinions as to what issues most need to be addressed in planning for the club's future. Your participation is needed to help form these plans. Please fill out the questionnaire and return it to Ed. You can give it to him at the next club meeting or mail it to him at 1918 Gulseth St., Madison, WI 53704. If all else fails, you can even leave it at the field in the mail box next to the frequency board.

Discount at Docktor's

By Hal Humphrey

I had a couple of fellows who work at Docktor's Hobby Shop ask me to tell MARC's members to identify themselves when they make purchases so that they can give them the 10% discount to which they are entitled.

Wanna Fight?

By Dave Lorentzen

I am a Class B open combat class newbie looking for some air time and playful souls to sharpen combat skills.

I am a new but somewhat competent pilot with crepe paper rolls, Skull Bandit, and willingness to take chances. I have flying privileges at both the club site and the Dane County Aeromodeling (Verona) flying site.

If you are of like mind and skill, don't like flying straight, and don't mind someone chewing your tail, contact me, Dave Lorentzen, (a.k.a. Fresh Meat), 831-5517 or david.lorentzen@mpcug.com.

Don't have a class B open combat aircraft? They're

relatively cheap (\$35-70, not including electronics and sundries), and take a not-so-expensive .20-.30 engine. They build in less than 20 hours. Oh yeah, they're pretty tough – I've buried mine into fairly solid ground (in February) past the carb, rinsed the dirt out of the air intake, and launched it. Check out Skull Bandit, Bat Trick & Choker, Predator, among others available.

PS: If your name contains the words "Dr." or "Evil", don't even think about calling.

Aviation History Series

As you know, the centennial anniversary of Kitty Hawk is at hand. Orville Wright's celebrated flight took place on December 17, 1903. In observance of that, I have prepared a series of articles that will appear in SPARKS starting next month and running at least through December that will discuss a few of the pioneers and some of the more prominent discoveries and events that preceded Kitty Hawk. You will probably know at least some of the names, like Chanute, Bernoulli and Lilienthal. Others, like Cayley, Otto and Mozhaisky may be new to you. You will read of the first jet powered flight in 1883. You will also read of the first attempt to organize an international air line service in -- are you ready for this -- 1840! I hope you will find it interesting and that you won't be too disillusioned to discover that the Wright Flyer wasn't the first machine, by a long way, to achieve powered heavier than air flight or that someone may have preceded Orville's manned flight by more than five years.

Whizzers War Bird Report

By Craig Lovell

Over the last few months a number of articles have been submitted by some of the warbird guys to introduce warbird models and some of the needs and issues involved with building and flying them. In my article on the tools useful in building various planes, I touched on how much I enjoy building from plans. This article and the next will

cover how I go about the process or figuring out what I need for materials in building a plane from plans and a couple of techniques I use to get things laid out and cut. To build from plans what you start out doing is cutting the parts to match the templates on the plans. It amounts to fabricating and collecting the components to make up the plane much like a kit manufacturer does before they ship it to the hobbyist.

Before I get too far into this topic I'd like to present a couple points for your consideration. You can most definitely build your first RC plane from plans. Would I recommend it? No. I would recommend you build a kit or two before tackling building from plans. You'll learn a bit about building and see how constructing an RC plane is approached. Not all plans provide you with building directions. In fact unless it's been a plan published in magazine you aren't likely to get any building instructions. Sig has some of the best directions I've seen in there newer kits like the 4 Star 60, LT 40 and Something Extra. The Midwest success series of kits had very nice directions as do most of the Top Flite Warbird kits but those planes aren't great for a second or third plane. In short if all you've built are ARFs I'd recommend a kit or two first. Can you jump from an ARF to a plan built plane? Most definitely, but you might encounter a bit of frustration before you're all done.

What is a good first plan built plane? It is probably easier to answer what the best flavor of ice cream is (Death by Chocolate). I guess I'd suggest one that has been published in a magazine so that you'll have some building notes and most have a bill of materials. We'll get to what that is a bit later. The most critical point in selecting the plan is that it be of a plane you're really excited to build and hopefully one that isn't too difficult to build. Model Airplane News (MAN) publishes an issue each year, which has a plans listing. Each plan listed has an associated level of difficulty rating. Unfortunately the plans service at MAN has been pretty poor the last year or so but if the plan you are interested in has been published in the last couple of years its probably available. I don't know if Radio Control Modeler (RCM) or Model Aviation (MA) have difficulty ratings for their plan offerings.

The number of plan sources is huge. Bob Holman offers a huge number of plans done by many different designers. I really like Bob's offerings by Brian Taylor, Jerry Bates and Dennis Bryant. Incidentally Bob has supported our Scale event for years. Of course one of the most prolific sources of plans exists in our club. Frank Baker has published over a dozen plans. I think most were published in Model Aviation or Radio Control Modeler. I've built one of his Wellingtons and have started a Gypsy Moth. Nick Ziroli is a big name in plans and his construction is very straight forward, some come with directions and Bill Of

Materials (BOM). In addition to the guys mentioned earlier, Roy Vaillancourt, and Jim Meister are couple of my other favorites.

Once you get your plan the first thing to do is take an hour or two and study the plans. Try to understand the construction, how the pieces will fit together and determine how many areas are fuzzy in terms of your understanding of how to do something. Often thinking on it over night or over a couple days will cause the light bulb to come on or give you new insight into how you may tackle the issue.

The next step is to figure out what you need to get the parts cut. The really good plans provide you a Bill Of Materials (BOM) it will detail the size and type of materials you'll need to cut the parts. If you've not done this before and don't have a well-stocked scrap box you might want to add a little to the BOM so that you'll be able to select the appropriate stock for the job and/or make up for mistakes. At this point you'll know what you need or know that you need to figure out what you.

Assuming you don't have a BOM here is my approach for figuring out what I need. I dig out or buy a couple of single sheets of 3"x36", 4"x36" and 3"x48" and 4"x48" sheeting. Thickness doesn't matter. I also buy a 1'x 4' sheet of light ply and draw lines on it which are 1 foot apart dividing it into 4 equal sections. If you buy this material so that its thickness matches the thickness of some of the stock required for the project great if not you can save it for later. In my case I use material that wasn't suitable for its intended use in past projects. Take the plans to Kinko's and get them copied. It's easy and pretty cheap. Then sit down with a red felt tip, your copy and your Exacto knife and start writing the thickness of each cut part on the template on the copied plan. It is also helpful to write down the quantity of that part you'll need. Sometimes you'll need parts of the same shape but of different stock. Write that on there too. Then start cutting the parts templates out of the copy. As you do this sort the templates into piles by type and thickness of materials. Once that is done take those pieces of wood that I referenced earlier and start laying them on the stock working to align the grain the direction needed (if that is an issue, it might be if the part needs to be bent or bear a load). Try to maximize the number of pieces you can get on a sheet or inside one of the boxes on the ply. When you fill a sheet consider how many pieces of each template you need and then multiple the number of pieces of required of each shape and that gives you the number of sheets of material you need to cut that group of parts.

For example: If I'm building a P-40 which has a tapered wing I'm going to need cut a lot of wing ribs of which few will be the same size. I'll probably only need two of each template, one rib for each side of the wing. When I fill up my

stock sheet with templates than I know I'll need 2 sheets of that sheeting to cut those ribs. Spend a little time checking prices on the cost of the sheet stock 3" is usually cheaper than 4" and 36" long cheaper than 48". Sometimes you can save a bit of money by buying more pieces of smaller sheeting and getting less parts out each sheet than cutting it out of the wider or longer sheeting.

For the ply parts it works similarly. The reason for dividing it into 4 equal parts is to tell you what size ply stock to buy. Again be careful sometimes you can save a bit by cutting the sheet in half thus giving you the two parts you need versus buying two pre-cut sheets to stack when you cut.

Keep track of these amounts and sizes as you go along and you'll have a list, which comprises the material you'll need for most of the cut parts for which templates have been provided. That leaves sorting out all of the sticks you'll need to serve as spars, leading edges, bracing etc. Basically you'll have to do a little counting and guessing based on the plan. If you have an advertisement from Balsa USA (often in Radio Control Modeler magazine) you'll find that it can be real helpful in telling what the common sizes are.

If you're really ambitious and want to save a bit of money, you can use a balsa stripper to make your own sticks for the project. Just remember that if the stock you are cutting needs to be over about 1/8" thick you are better off cutting the strips in two passes once on each side of the sheeting. The blade won't wander and you'll get a more consistent piece.

Once you've got all of this written down its time to buy the materials. My main sources for balsa have been the local shops and Lone Star Balsa, Superior Balsa, Sig and Balsa USA. Figure out what you need and stop in at a shop. Even if you don't or can't get all the wood you want you may be able to get some of it and start in on the rest of the task. Some of the shops will order wood for you if they don't have what you need. The advantage of buying at a shop is that you can select the weight of the wood to match your needs. If that doesn't work out or you don't have the time to run to the shop I'm sure the mail order folks will be able to help. I know that Lone Star will hand select wood to your specifications for an additional fee.

I know I've opened Pandora's box by mentioning wood selection. Rather than try to explain it I'd suggest you take a look at Sig Manufacturing's website. Sig offers the following URL: <http://www.globalsite.net/bec1/Articles/Balsa.htm> to help us better understand the issue. If you don't have access to the Internet I know Schultz's hobby shop used to have the two-page handout Sig provides.

After a project or two the wood selection process becomes second nature. Some would say a religion and there

are those of us who've been accused of balsa fondling. This has gotten a bit long so we'll cover a bit more next month.

The Bent Bird Keeping the Wings On

By Don Weigt

The most common removable parts of models, and some of the most critical, are the wings. Wings fly better with the rest of the plane attached, establish the correct center of gravity (CG) and to add the stabilizing effect of the tail surfaces (and canard if it's that sort of design.) Fuselages are even more dependent on the wings: if they separate, wings often will flutter down with little damage, but the fuselage becomes an expensive and frail lawn dart..

The fuselage's main contribution to flight is holding everything in the right relative locations and not flexing too much, though its side area can be an important factor in the plane's yaw stability. Few designs rely on the fuselage to create lift, although all create a little bit at high angles of attack, and some, such as the Wittman Tailwind, intentionally shape the fuselage to help create lift.

The first step in keeping the wings on and working is to make sure they are attached securely. If held on by the usual dowel or two at the leading edge and bolts at the trailing edge, the dowels and bolts must be sound, the dowels must be secure in the wings, the wings must be strong enough where the bolts bear on them, and the fuselage structure the dowels and bolts connect to must be strong enough and secured to the fuselage well enough, usually at the sides. A good strong part that's loose isn't much help!

Threaded holes for the bolts need to have clean threads. If they aren't, fill and harden the threads a bit with CA or epoxy, and tap again. This produces a stronger thread in the hardened wood than can be made in wood alone. While the threaded wood may be as strong as nylon bolts attaching the wings, hardened wood ones will be much more durable, and often hold the bolts better than untreated wood, so there is less chance of the screws backing out in flight.

Tests of nylon bolts were done long ago, and written about in the model magazines. The conclusion was that they are plenty strong to hold models together, and that many models use sizes way to large. When very large, they don't let go soon enough in a crash, often resulting in major structural damage.

Also, nylon bolts stretch noticeably at the loads we apply, so they act a bit like springs to keep the wing and fuselage snug. Metal bolts are too stiff to act as springs in our models.

Many of the newer kits and ARFs I've bought recently have steel metric bolts threaded into captive metal nuts to secure the wings. This is true of everything from the small

light GWS foam models to my large gas powered Hangar 9 PT-19.

I can guarantee you'll tear the blocks out of the fuselage, or pull the bolt heads through the wings, before the bolts will break. I've done it! Planes assembled with steel bolts are little or no more protected in a crash than planes made in one piece. They only come apart for equipment access and easier transport and storage.

I use nylon bolts instead of steel on these planes. Usually I use a bit thicker size than the metal ones I'm replacing, but they still are lighter and provide some protection in a crash. Of course, if they are a different size than the original metal ones, I have to modify the plate or change the nuts they thread into so they match. But, if you change the hardware, "you have voided the warranty", so to speak! It's up to YOU to make sure what you do is safe and sound, and you can't blame the manufacturer if it's your modification that failed! So, if you make changes such as these, be careful, and test what you've done.

Many trainers and older designs use rubber bands to hold the wings on. They are stretched from one dowel fuselage peg near the leading edge, across the wing, and to another dowel peg near the trailing edge.

But, how many should you use? Trainers should be flown rather slowly, at about twice their stall speed. At that speed, the wings can lift about 4 times the model's weight, as lift increases with the square of the speed. The following assumes the trainer is a high wing model, not a low wing: Find how many rubber bands it takes to just hold the fuselage in contact with the wings when you lift the plane by pushing up on the bottom of the wing at the center of gravity. Now, put a total of 4 times that many on, and you're ready to fly! For a low wing trainer or sport model, do the same thing, but with the plane upside down.

If the rubber bands seemed quite a bit stronger than needed, use about 3 times as many instead of 4 times. Also, remember that rubber bands get softer and weaker when oily. So, used rubber bands hold less and less as they soak up more oil. You can slow the process by drying them in a bottle of kitty litter in your field box. You can also use a few more sets on the plane as they age. But, eventually they will need replacing. Do be alert for them losing much tension, and also replace any that develop nicks (notches in their edges.)

Of course, if you want to tear up the sky at higher speeds and fly sharper corners, the stresses will be higher, and you'll need more rubber bands.

Also, I read advice long ago to use more rubber bands, and stretch them less. They'll last longer, and if one breaks in flight, you'll have more left to keep the plane together and flying. So, if you're stretching them really tight to

reach the pegs, try knotting three together instead, and looping them across the wings twice.

Some models are so large more rubber bands are needed just to reach once from peg to peg. Number 64 bands are about as big as commonly available. My Mercury old timer is so big that it takes 3 number 64 rubber bands to reach from peg to peg one time. When I put 3 pair on, crossing from the front peg on each side to the rear peg on the other, that's a total of 18 rubber bands on this mild flying 5 pound airplane!

Another question about rubber banding the wings on is whether to run them straight front to back along each side, or to cross them so they make an X on the top of the wings. Either works fine. The straight way makes a little less drag, if they stay close together where they cross the leading and trailing edges. Crossed rubber bands are stretched a little farther and tighter. I cross them because that pulls them toward the center, making a tighter bundle where they cross the leading edge, and helping assure they won't slip off the dowel pegs.

Finally, rubber bands don't key the wing into position the way dowels and bolts do. So, make sure you put the wing on straight and centered! A few small strips of contrasting color that line up on the wing and fuselage make it easy to put the plane together the same way every time.

The second step is making sure the wings are strong enough not to bear the intended flight loads. But, that will have to wait for another month.

Prisoner of War

By Jerry Buss

This concludes the story of Walker "Bud" Mahurin's travail as a prisoner of war in 1952-53, taken from his book, *Honest John*. In last month's installment, he had just fallen into the hands of the North Koreans.

When asked how many MiGs he had destroyed, Bud was in a quandary. How would they take it if he said 3.5? Maybe he should say none. At length he decided to be truthful and said 3.5. His interrogator, Colonel Kong, was impressed. He had read of Mahurin's kills in WW II in American publications (the Reds had a pipeline to them through Hong Kong) and believed he had an important person in his custody. He questioned intensely about tactics, radar, strength and equipment.

After about three weeks, some Chinese soldiers arrived and took custody of Bud. He was elated. Surely now he would be taken to a regular POW camp where he would be among other Americans. Probably he knew some of them. After traveling for several days to the north, they arrived at an abandoned coal mine. Here Bud was confined below ground. When taken out for exercise, he was followed by up to nine interrogators. One was a radar expert, one an engineer, one a communications man and so forth. They took turns at him. When one was finished another began. Bud adamantly refused to answer questions. One of the

interrogators shouted that they controlled the skies. No one could deny it. He had better tell what he knew. Just then, the Fifth Air Force began bombing the stuffing out of a little town about two miles away. The interrogator was petrified with fear, but Bud resisted being lead to the mine shaft for shelter. He was very proud of his comrades and he wanted to watch the show.

Regarding tactics, Bud was asked what he preferred to have a MiG pilot do when he was on his tail. He replied that it made an excellent target if the pilot tried to climb. He didn't want him to make a hard level turn. When he was released, Bud discovered that for about two months after that the Reds had used turns as an evasion and escape tactic. The MiG had a clear advantage in rate of climb over the Sabre, but the Sabre could easily out turn the MiG and the MiG drivers paid a heavy price before giving up on trying to turn with them.

The fingers on Bud's casted left hand turned black. All feeling was gone. By himself, he smashed the cast off. The whole lower arm was black and blue and yellow. A few more days of restricted circulation and he likely would have lost it to gangrene. Over several weeks it recovered on its own with no medical attention. After two months he was given water and allowed to wash and to shave once a week. After another month and a half of intensive interrogation he was moved to a place near Pyaoktong, a small town on Korean side of the Yalu River. A large POW camp was located here, but Bud was put in an isolated hut located amid a distant collection of similar hovels. A few days later, he was roused in the middle of the night and made to march to a hut a bit farther from the town and the POW camp.

He had been out of touch with his comrades when he crash landed. They had searched for him for three days, but far from where he had gone down. As far as the USAF knew, Bud Mahurin was dead. He knew this and so did his interrogators. He had better cooperate with the People's Army. If not, he would never see Fort Wayne, Indiana, nor his wife, nor his children again. He was made to write out answers to technical questions. He gave some answers that were evasive. Some were truthful, but obvious. Most were simply gross lies. He broke the point of the stubby pencil he had been given to write answers and was given a pen knife to sharpen it. He broke the knife blade and secreted one of the small scraps of it away in his clothing.

Bud considered escape. As an occidental in an oriental country that was so grossly overpopulated that one could scarcely get out of sight of another person, it would be tough. Still, he tried digging through the back mud wall of his hut, concealing the dig with a mat. When he broke through, he was looking at the back of a Chinese soldier who was guarding the prisoner in the adjoining hut.

Then the subject of germ warfare came up. "Mahurin, you were the leader of the germ warfare program, weren't you?" Bud didn't know what his captors were talking about. The germ warfare questions intensified. "Mahurin, confess or you will never go home. Tell us how you conducted germ warfare against the people of Korea. Your comrades don't know you are alive. We can do what we want with you and the world will never know. Confess!" His days now began with being rolled out of bed, a wooden bench and a thin blanket, at 6:00 am. After a poor

breakfast, he would be marched to the interrogation building. Here he would encounter a tribunal of a dozen or more "experts." One would go at him and, when finished, another would take over. Sometime after noon, the tribunal would break for lunch. Bud got none. Then a new band of inquisitors continued on until after 7:00 p.m.. Then they would march him back to his hut. A poor excuse for a meal would be brought to him and then before 9:00 p.m. he would be returned to the interrogation hut where questioning by yet another team would go on until about 2:00 am. After returning to his hut, he would be allowed to sleep, if he could. He was so keyed up that his mind wouldn't stop its constant revolving. Always there was noise from outside. Sometimes it was Vehicle traffic, sometimes boisterous soldiers. Sometimes gun shots. At 6:00 a.m., not having been able to sleep at all, his new day, just like the one before, started all over again. It went on for two months. The charge of having waged germ warfare was absurd, but the interrogators clearly believed it. Their intelligence service had totally indoctrinated them. The grinding psychological brutality that was inflicted on him brought Bud to his knees mentally. Then the tactics changed. He was made to sit on a low stool at rigid attention all day and on into the night. Guards would pop in unexpectedly to see that he did not move to gain respite. His mental condition continued to degenerate.

Seeing no alternative, Bud got out the piece of broken pen knife blade he had been hiding and slashed his wrists. He was discovered and saved. Now he was given time to recuperate and it allowed him to recover mentally to some extent, as well. Then the questioning about germ warfare resumed. "Confess, Mahurin, or you will die." It was hard not to believe the threat, but he had achieved a victory of sorts. He had tried to kill himself and the Chinese didn't know if their treats really meant anything to him.

One day, a tape recording by four junior officers from the 51st Fighter Wing whose names and voices Bud recognized was played for him by his interrogators. They said they had conducted germ warfare raids on North Korea. Their leader was Colonel Walker Mahurin. Colonel Mahurin had been sent to Korea directly from Washington with the specific assignment of leading the germ warfare campaign. "Now will you confess?"

Bud was furious at first, but as he thought it over, he admired the men. They had not implicated their squadron CO's. Instead, they had named their deputy wing commander, a man remote from them and to whom they didn't have the same level of loyalty as to their squadron leaders. More importantly, when they had gone down, he had been on a 90 day assignment which should have been long over by the time they broke under the same kind of pressure that had lead him to attempt suicide. So far as they knew, he was safely in a comfortable office in Washington. Good job, guys! "No, you guys can go to hell. I'm not telling you anything!"

"What do you carry in your external tanks?" they asked time after time. "Fuel." Bud replied, repeatedly. "All right, Mahurin. Now you're going to die. You have been tried by the People's Court. You have been sentenced to death. You won't know when, but we are going to kill you. You will never get

home.” Bud’s wife had written an appeal to the Chinese in Peiping asking them to tell her whether or not Bud was alive. She enclosed a letter to him. It found its way to his interrogator, who used its contents to tantalize him with stories of how, on Sunday morning, they sometimes went for breakfast to a restaurant that Bud knew. At any time of the day or night he would be rousted from his hut and taken outside. Sometimes he would be marched out into the countryside. Sometimes they would go by jeep or truck. Always, the question uppermost in Bud’s mind was one of whether this was when he was to be executed. “How?” “Firing squad?” “Bullet in the back of the head?” “How?” They had told him that he would see it coming. After a time they would take him back to the hut and shove him inside. Broken in spirit thoroughly, when in the presence of another person he began to tremble uncontrollably.

Having survived a winter of brutal cold, ill-clothed and with no heat in subzero temperatures, suffering from frost bite, malnutrition and filth, the seasons turned to spring and, finally summer, 1953. Hints by his interrogators indicated that peace talks were progressing and that the war might soon be over. “But never mind, Mahurin, you’re not going anywhere. Your people don’t know we have you. They think you are dead. We can do as we like with you and unless you confess, you will never go home. You will die.” After great soul searching, Bud hit upon a plan. Maybe he would go home.

Starting in May, he began writing a confession of having conducted germ warfare. He and his pilots had carried flies and mosquitoes and ticks in compartmented segments of their external tanks. Flying at 40,000 feet in January and February of 1952, they had dropped these on the innocent people of North Korea. The bugs carried typhus and tetanus. Tetanus is a blood infection and typhus is water borne. Neither have anything to do with insects. At 40,000 feet, the bugs could not have survived. They could not have survived being dropped to a hard landing from that height into the winter weather either. His interrogator’s superiors loved it, however, and wanted embellishments. Ultimately, his interrogator wrote more of the confession than he did. It was all transparently absurd. In early August, Bud discovered that the war had been over since June 27. Would he go home? He finished the confession on September 4 and the next day set out in the box of a dump truck with several others, including the men who had named him in their confessions, for Panmunjom and repatriation.

Just before Bud had been shot down, the Russians had brought a claim before the UN Security Council that the US was waging germ warfare. The world was accepting it as Gospel. When he and others were finally repatriated, their troubles were far from over.

His Air Force friends made no issue of his false confession and welcomed him warmly. He and Pat and the kids spent a wonderful weekend as guests of the Gabreski’s. On the other hand, the press commented about the conduct of POWs most unfavorably. Twenty one POWs had refused repatriation and were regarded as traitors. Were any POWs to be trusted? Some papers hinted and some stated outright that Bud Mahurin and others who had made false germ warfare confessions were

collaborators. Senator Richard Russell of Georgia, the ranking minority member on the Armed Services Subcommittee and its former chairman, wrote the Secretary of the Air Force that “those who have collaborated and the signers of false confessions should be immediately separated from the service under other than honorable conditions.” Marine Colonel Frank Schwable, who had undergone the same kind of treatment in captivity as Bud was accused by the Marine Corps Commandant of collaboration and put before a board of inquiry that more closely resembled a court martial. He was ultimately acquitted. A national survey found that 75 percent of the population had heard of the germ warfare controversy. Sixty one percent of the informed favored no punishment for the signers of false confessions and 19 percent had no opinion, but 20 percent favored some kind of punishment. Of the 20, 4 percent wanted court martials, 4 percent wanted a prison sentence, 3 percent wanted light punishment. A single percent wanted them executed and another 1 percent wanted their citizenship revoked.

Bud had trouble getting a new duty assignment and ultimately concluded that he was not wanted. He and his wife were invited to a weekend retreat in Pennsylvania. Generals LeMay and Twining, along with a number of other top ranked officers would be there and he was to informally tell about his POW experience. On the eve of departure, he received a phone call saying that someone in the group was ill and the event was canceled. He discovered later that the event was held as planned. His daughter came home from school crying. Her friends said he had been in prison.

During all this time, Bud spoke to any audience he could get about his experience and the way the Communist interrogation system worked. He advocated a training program for air crews to prepare them for the possibility of capture. Many of his friends were supportive, but still there were awkward moments in public.

In all, 89 officers were involved in making false confessions. Eventually, all but 14 were considered cleared and after boards of inquiry for the them, only 4 were found to have truly collaborated with the enemy. On May 7, 1954 Bud received a letter from a friend, Fredric Smith, Commander, Air Defense Command, that “no official reservation exists,” about his conduct as a POW. Relieved though he was, it must have been a heartbreaking path from repatriation to this point. In 1956, Bud left the Air Force.

In 1957 a military panel decreed that POWs must give no more than name, rank and serial number to their captors. Ending *Honest John* in 1962, Mahurin criticizes this policy. Not a single former POW was involved in formulating it. He speaks prophetically about what future prisoners in the hands of Communist captors might look forward to. Within two years it all began to come true. Much later, in 1977, a far more rational policy was created, this time with much input from prisoners of the Viet Nam War. It essentially says give as little as possible, don’t give anything that will harm other prisoners, but do whatever else you must to prevent torture. Bud Mahurin was pleased. He said so in a post script comment that serves as the conclusion to Hanns Sharff’s book, *The Interrogator*.