THE LEADING EDGE
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Contents

MITSA in September Vermont Contest 1

Tuttle and Foley Gain Ratings 1

MITSA Policy on Damaged Assets 1

Private Pilot at Last 2

Memorial Day Contest L-33 Flight 5

My First Solo 6

Birds Do It 7

CB-SIT-CB Reminder 8

News Briefs 9

MITSA People 9

For Sale 9

About This Issue 9

MITSA in September Vermont Contest

by John Wren

GIVE THIS IMMEDIATE ATTENTION
IF YOU ARE PARTICIPATING

In September the Nutmeg Club of Connecticut will sponsor a gliding contest in Vermont. This will be operated as a low key sports class type contest. All gliders will be handicapped, all types are welcome and there will be two classes (experienced and novice).

The other thing that will be unique is that it will be held on weekends only. Rather than 6 or 7 days straight, it will be held from Friday the 9th to Sunday the 11th of September. Then the following weekend of the 17th and 18th.

At this moment we are planning to take one Blanik and possibly one single seater. We will need a team for both gliders. So, if you are interested **contact John Wren** for more details. Private Owners need to contact me also and I hope we will have a good turn out. This is a perfect opportunity for anyone wanting to try out a contest for the first time without all the pressure of a regional contest.

Doug Jacobs Wins Nationals

CONGRATULATIONS DOUG JACOBS
WINNER 1994 U.S. NATIONAL
STANDARD CLASS CHAMPIONSHIP

Doug flew an ASW-24. According to the last day's unofficial results, Doug won the day on a speed only POST task with a speed of 62.35 mph and a distance of 187.04 miles for 997 points. This earned him overall first place with 3291 points.

Tuttle and Foley Gain Ratings

by John Wren

Congratulations to Mark Tuttle and Ed Foley! Both completed their Private Pilot Glider Ratings in June. Lookout all you 1-34 and L-33 pilots Mark and Ed are on their way up!

MITSA Policy on Damaged Assets

by Board of Directors

At the MITSA board meeting in July we discussed the policy regarding members' responsibility/liability in the event of damage to MITSA property. This policy is not new but an important one that needs to be understood by all members.

Policy Each member of MIT Soaring Association may be held responsible for damages to club assets, while in his or her custody, in the amount of the claim up to the club's insurance deductible.

The current insurance deductible on our aircraft is $500.

A glider is considered to be in the custody of the pilot in command from the time it is assigned until it is properly parked.

Exceptions This policy does not apply to MITSA CFI's while instructing, MITSA students flying dual, or MITSA Tow Pilots while towing.

A copy of this policy will be posted at the MITSA office along with a list of active members. Please indicate that you have read and understand the policy by initialing next to your name. This procedure will be used in the future to inform members of significant changes to club policy. DO's will be asked to verify your initials are present prior to flying club equipment.

Private Pilot at Last

by Mark Tuttle

Ed Foley and I passed our private pilot exams last Thursday. Preparing the application for the exams involves counting flights and totaling hours, and it startled me to realize how long I'd been involved with this glider business. My first flight was in December 1987. I remember walking alone late at night down MIT's Infinite Corridor, and noticing a poster on the wall saying "Come fly gliders with MITSA." It dawned on me at that moment that flying was something I had always wanted to do, so I pulled the poster down off the wall and brought it home to show Margaret, my wife. She thought I was joking when I said I wanted to try it, and she was clearly not very excited about the idea. I was excited, though, and it was a good thing that I was excited, because it took three trips down to Mansfield before I could get my demo flight: the first time the operation was shut down due to turbulence, the second time the operation was shut down due to smoke from a forest fire just before my ride came up, and the third time I got my ride.

Since that first flight 6.5 years ago, my life as a student pilot in MITSA has been characterized by periods of frequent flying almost to the point of competency punctuated by long periods of nothing (some periods as long as a year) as my flying has been cratered by projects at MIT and DEC. Looking at my log book, I am amazed and a little embarrassed to say that as a student I have logged 219 launches for 26:45 hours dual and 32:51 hours solo. My log book looks like a who's who of MITSA instructors: an illegible scribble that almost looks like Dave Delonga, T. Guy Spencer, John Wren, Bob DeSaro, Derek Sherlock, Lee Marzke, Joe St. Onge, Al Muchinsky, Ken Rosenberg, Kerry Richards, Peter Foley, Roy Bourgeois, and Tom MacJarrett. Back in the old days, in addition to training with instructors, students also received unloggable flight time by flying with experienced club members, and my log book lists Larry Timpson, Ken MacDowell, Bob Wolff, and some of our current instructors back before they were instructors.

Lee Marzke had prepared me and signed me off, and John Wren had prepared Ed and signed him off. John and Ed had let me sit in on their final late-night prep session, and Lee, T. Guy Spencer, and Derek Sherlock had given me some fine-tuning in the air. I was ready for the test, but the weather wasn't. I woke up early Saturday morning to get a briefing, and it was going to be marginal but doable. It was going to be hot and humid, with conditions slowly improving to 5-6 miles visibility in haze and ceilings at 4-5 thousand feet by noon. I was relieved when the MITSA message was posted and said it was a go. Mike Dore was the DO for the day, and it seems likely that he would have canceled the day if I had not left messages for him and the tow pilots begging them not to cancel if the day was at all flyable. I discussed the weather with John Boyce, the examiner coming to give us our tests, and we agreed to give it a shot. John is an experienced pilot who has won regionals at Sugarbush, and has flown a long string of airliners for TWA including a 747 on the Boston-London route. In a later conversation, John talked about flying home hundreds of miles off the coast of Newfoundland and finding primary, secondary, and tertiary wave.

But coming back to the events of this story, Ed and I showed up early to get the glider on the line. When other people started showing up, they were disappointed to see how bad the weather was and to learn that there was no instructor for the day, but they stayed around all day anyway just to help with the exams. Many thanks to Mick Dickerson (his last day with MITSA until he returns from his tour with the Army in Arizona patrolling the border for drug smugglers), Mike Dore, Bruce Easom, Guenther Eichhorn, Dan Harman, Steve Moysey, Bert Speranza, and Michael Welles.

John asked who wanted to go first, and Ed was chosen (like a pair of penguins trying to push each other off the ice, with the second jumping into the water only after seeing that the first is not eaten by a walrus). After talking for an hour and a half, Ed and John emerged from the oral exam to fly, but the weather was still not great. They launched, but the high heat and humidity together with a slight tailwind made acceleration slow, the break from the ground was far down the runway, and the climb was a slow and painful climb over the trees at the north end of 34. John wanted to go to 4,000, but the tow pilot waved them off after 2,000 due to clouds and haze just before they started boxing the wake. They did steep turns and stalls, and soon landed with a precision landing. We decided to finish Ed's oral exam (John likes to discuss topics like ridge and wave soaring after flying), do my oral exam, and hope that conditions would improve. They never did. Since making the right decision about whether to fly is part of the test, we had little to gain and much to lose by pushing forward in such marginal conditions. We decided to wait for a better day, and discontinued the exam until Thursday morning.

The oral exam was kind of fun. After Lee Marzke's drills and John Wren's review, I felt pretty confident going in, and the oral turned out to be a pleasant conversation about soaring based on the Practical Test Standard. Do you know how to compute weight and balance for the Blaniks? What do you have to write down in your log book? What is the difference between a sigmet and an airmet? What is lapse rate and how does it affect soaring? A discussion of thunderstorms. What errors exist when using a compass? What is density altitude and how does it affect performance? How do you determine the best speed to fly in a thermal, in a headwind, in a tailwind, or on approach? What can you tell me about the airspace around Sterling? How would you go about landing at one of the airports with Class D airspace? Can you ever enter Class A airspace? How many people does it take to assemble a glider? How many people does it take to move a glider? What are the signals used to indicate trouble on tow? How do you perform a crosswind take-off? What would you do in this slack rope situation? Suppose the tow plane had a power failure during the take-off roll; how would you recognize this and what would you do? Is this 200 foot rule for low altitude rope breaks really a rule? What equipment is needed for flying in wave? When do you have to use oxygen? What is hypoxia, why is it dangerous, and what are the symptoms? Would you really think about taking off your gloves to see if your fingernails are turning blue? What conditions generate ridge lift? What are the rules for flying a ridge? If you are flying in an area with ridge and wave lift and you can see the airport upwind over the top of the ridge, do you think you could make the airport?

John seemed amused by the crazy complexity of the weight and balance graph for the L-23. He was not amused by my totally blowing the slack rope questions, and frankly I don't remember experiencing extreme slack rope during my training. John seemed to appreciate concise and direct answers to his questions: tell him you haven't got a clue when you don't, and tell him what you know when you actually know something. John liked to ask his questions in terms of situations I was likely to encounter when thermaling at Sterling or flying wave at Sugarbush or flying ridge in Pennsylvania. While talking about ridge soaring in Pennsylvania, having the phrase "of course, if you are flying with Karl Striedieck. . . " appear in the question gave me momentary thoughts of greatness, but that didn't last long. The afternoon ended with Ed, Mike, Dan, and me on Peter Foley's deck, getting greeted enthusiastically by Patty the monster dog on the way in, and feeling sorry for ourselves that the test wasn't over yet.

Thursday turned out to be a window of beauty in a week of overcast sky and rain. Peter Foley agreed to take a few hours (so he thought!) off work and tow for us, and ended up being MITSA's best dressed tow pilot by flying in a crisp, professional white shirt and tie. Bernie Loraditch agreed to come help us move and launch the glider. John Boyce agreed to come give the exam. We were all set, with a moderate left crosswind on 34.

John Wren's review session had covered a number of different ways that emergencies on tow can occur, and what to do about them. One emergency I had not thought about much was a tow plane power failure on the runway, and John talked about how he had seen this be simulated during a test. So imagine my surprise when Ed rolled down the runway and suddenly released 2/3 of the way down the tar. Later I learned that Ed had thought they were not climbing well enough, but at the moment I thought John Wren's exam scenario had come true. Ed launched again, Bernie and I settled into the golf cart in the shade waiting for Ed to return, and suddenly Ed was landing the glider again! It had been a simulated power failure on tow, and Ed whispered, "He's really making me sweat today." At the end of the day I learned that during the initial climb, the rope had gone a little slack and Ed had thought, "Maybe we're in a little sink." Then later during the simulated power failure, the rope had gone very slack and Ed had thought, "How is John Boyce speeding up the glider like that?" Then a few vital seconds later, Ed thought, "Oh, this is the emergency," and pulled the release.

Ed launched again, and over a beer in the afternoon, Ed told me about some of the ways John had tried to distract Ed from his flying. At one point Ed headed over to the sand pits to look for a thermal, and John asked, "Now where does your brother live?" Down below us. "Oh, you mean in the sand pit?" Unable to distract Ed, John took the controls and maneuvered Ed into an incipient spin. They landed a half hour later with the most beautiful low-energy landing I've seen in some time, and rolled almost immediately to a stop. They got out, and John said to me, "Okay, Mark, we're done; Ed's completed his test very successfully."

My first flight was supposed to be a tow to 3,000 feet. We boxed the wake on the way up, and did a slack rope exercise. It was actually the worst slack rope I'd ever experienced: John asked me to start the tow plane turning to the right (by moving to the left and holding position). Then he took control, maneuvered the glider high and left above the tow plane, dived down into the rope, and said those three dreaded words: "You've got it!" Correct procedure or not, I ended up resolving the situation by gently moving into position behind the tow plane as the tow plane pulled out the slack, but the rope pulled tight faster than I expected, and it pulled tight with a moderate bump while I still had in a little left rudder to slow my drift behind the tow plane.

We continued the tow, and suddenly the vario hit 10 knots after towing up 2,000 feet. John suggested that we release, but we had been suckered and couldn't find anything for a while until we hit uneven lift of 0-2 knots. We scratched and regained release altitude and drifted with the wind, and I got to demonstrate lots of circling at minimum sink. John kept trying to get me to find a field on the ground that interested him, and to get me to evaluate its suitability for landing. Around and around we would circle, and I never could identify the field he was interested in. Even worse, I kept falling in and out of the thermal. At one point I just said, "I'm sorry, but it is hard to find this field on the ground without losing the thermal." John replied, "Yes, I know it is, but unfortunately you have to look out of the cockpit when you fly." We practiced steep turns in the thermal, and suddenly we were climbing at a solid 3 knots up to 3,000 feet AGL.

We practiced stall recognition and stall recovery in straight flight and in turns, with special interest in turns. We entered downwind for landing, and John asked for a precision landing using cones we had placed on the ground. John's idea of a precision landing was different from what I had practiced (I had been practicing landing before and within 200 feet of a given point, but John wanted to see the wheel touching at a given point and rolling the glider to a stop within 200 feet of that point), so I was a little nervous. I was so fixated on touching the wheel at the given point that I must have tried to force the glider on the ground, so I flared too quickly, touched down lightly tail first, and rolled farther than John approved of: we stopped between the cones we had set out, but John thought the cones were too far apart. An interesting 45 minute flight.

I felt certain the rope break test was going to happen on my second flight, but we lifted off cleanly and climbed through 100 feet, 200 feet, 300 feet, 400 feet, and I started to relax and think I had been wrong. Suddenly the tow plane was falling out of the sky and I pulled the release. There was no thinking or intelligence involved in this decision, all I knew was that the tow plane was diving into the ground and I wanted no part of it. So there I was floating in the air and choosing my landing point when it occurred to me that this might have been the rope break test. I learned after the test that John had told Peter, "Why don't you make the simulated power failure look a little more dramatic this time," and he did. I was making a last minute decision about my landing point when I heard John say, "Okay, Mark, you've got the same two points to use for your precision landing." The landing point decision was resolved for me, and my most perfect landing of the day occurred as the result of a emergency exercise!

John got out and said, "Okay, Mark, we are just going to go up and do a few more things I think need to be done to call this a real test." So we launched for a 3,000 foot tow, and again we were suckered into releasing by 9-10 knot readings on the vario after 2,000 feet, and we climbed slowly in weak lift to a more interesting altitude. John asked for more stall recognition drills. In my first flight, I had demonstrated stall recognition by flying for five seconds on top of the burble and then saying "Okay, that's the burble." I thought I had been demonstrating a burble, but John apparently thought it had been taking me five seconds to recognize the stall! So this time I shouted at the first burble, and John's expression of happiness was so warm I wondered if it was more relief than joy.

We practiced cross-controlled stalls that led into spin entries and other unusual positions, and since I had expected John to put me in an unusual position and ask me to recover, I was surprised when he asked me to put myself into these positions to demonstrate recovery. At one point I told him I wanted to stop since I didn't think I had enough altitude left to do it and get back to the airport. John thought I was being a little over-conservative, and he demonstrated this by taking the controls, entering a spin for a half rotation, and recovering. He lost only a hundred feet and gained no excess speed; it was beautiful.

Finally he said, "Okay, Mark, the test is over as far as I am concerned. We've still got some altitude left, so you can do whatever you want, just don't do anything stupid." That's right: I wasn't going to do anything stupid. I was just dinking around, turning one way for a while and then the other, waiting for the altitude to bleed away, when John asked, "How would you lose altitude if you wanted to?" I dunno, pull out the airbrakes I guess. "Here, I've got the controls." John pulled out the airbrakes, entered a spiral dive, and pulled out gently at pattern altitude pointing directly at the airport. It was an elegant demonstration of precise flying.

We landed, and John took me off for the second half of my oral exam on ridge, wave, off-field landings, and downwind landings. Some parts of the exam were funny in hindsight. At one point during a discussion of off-field landings, John asked, "Suppose you've made a mistake and see a power line directly in front on you. Would you go over or under the power lines?" I said slowly, "Well, I'd have to say over." John said, "I'd have to agree with you," in a quiet voice that seemed exasperated that I would even have to think about that one. One topic that caught me completely off guard was a discussion of downwind landings with a strong tailwind. John explained how at some point during the ground roll the wind is going to be traveling backwards over the wings and reversing the effects of the controls, meaning that an attempt to lift a wing with aileron will push the wing into the ground. This had never occurred to me before.

Somehow, I passed in the end. Ed, Bernie, and I drove south into Worcester for a 4PM beer and "lunch" with Peter near his office. Thanks so much to Bernie and Peter for taking a day in the middle of the week to help us pass our tests. On the drive south we passed under a railroad bridge that had just been painted that terrible forest green color these things are painted with. The bridge had a single piece of new graffiti over the south-bound lane: it read "Mark T." in thin, wobbly black streaks. I couldn't believe it! I was finally popular: after waiting 32 years, it turns out that all I had to do was earn my private pilot certificate, and finally people were painting *my* name on bridges. But then there are a lot of surprises in life. When I married Margaret, she knew I was a math/computer nut and I knew she was a hard-core musician studying classical piano. She never expected me to fly, and I never expected her to fall in love with country-western music.

Memorial Day Contest L-33 Flight

by Peter Foley

Memorial day weekend dawned with the promise of decent weather and upon arrival at the field I had a busy schedule ahead with power students so I did not think too much about flying in the contest. That was not counting for the offer which was soon made to me by John Wren, "Are you in the contest? The L-33 is available today only." Too good to refuse, I was in.

After the power lessons which were going on at the same time as the briefing, John said that I had twenty minutes to get on the line. Where was the L-33?—still tied down not preflighted. I had no map, water, hat, sunblock and all the usual items that should be taken seriously on a hot afternoon. I had just spent two hours extolling the virtues of thorough preflight preparation, inspection and checks to my students.

On the line I was given the turning points and the camera by John and told to be conservative with the L-33 and land out only on airfields, in order that the L-33 could be aerotow retrieved.

Launch was smooth into the stiff breeze and 65Z seemed to be doing particularly well with the light ship in tow, once the L-33 reaches flying speed it is the most pleasant glider I have flown on tow.

At 2500' msl I pulled off in what felt like reasonable lift. I quickly lost it and was heading earthward. I thought of John briefing me to be conservative, but this was ridiculous. Still going down I headed to the IP which has been working faithfully this year if anything is happening. Down to 1600' and it looks like a relight when old faithful started to work for me, first zero sink and then with careful speed control we started to milk the thermal. Thirty minutes later and back at release height I am thinking that the chance of getting a cross country flight is about the same as six numbers in the lottery.

Things get better from that point and the lift starts to increase, the wind is strong and it makes penetration hard work. At 1:15, over the field I decide that it is worth making an attempt at Gardner and head out towards the mountain. It is blue out that way and with the wind we are descending quickly, half way to the mountain I turn and run for the field. No problem getting back to the field, start another climb and try again. It was a repeat of the previous, still in the blue. On the third attempt out the Cu's were starting to pop and I had 6000' at Wachussetts. Gardner was now reachable and the lift was strong. For the first time since release I was starting to feel happy. YN appeared and I got the feeling of proud mother hen looking after a new addition to the brood. When YN headed further west, it inspired confidence to head out to Orange. This was exciting, running below the street at 70 knots and still climbing, why isn't it always like this?

Turning point photo at Orange and I decided for Tanner-Hiller, This again went to plan.

On reaching Tanner-Hiller I was having trouble getting up wind to take the turn point photograph and was starting to lose height. I saw a 2-33 launching from the field and was politely asked if the "glass" ship at Tanner-Hiller would introduce itself. I think it was being flown by our good friend Bob Bourchard, who marked a thermal for me just as I was thinking about landing.

Climbing away in a strong thermal to 7000' , the wind finally favored us. Every turn Sterling was getting nearer. Plenty of height back at Sterling, I went to have a look at Stow. Too blue that way I turned towards Fitchburg. Close again but not enough for a photo I returned home.

The flight was four hours, hugely enjoyable and proved without a doubt that the acquisition of the L-33 was a superb decision bringing the club's cross country capacity into the 90's. Thanks to all who made that decision and organizers and helpers of the competition.

My First Solo

by John Wren, Chief Instructor

My log book says that I went solo on my 25th flight on April 20th, 1974. My memory would have said summer, because I remember it as a warm "tee-shirt" type of day. If you have ever been to England you'll know there are not many "tee-shirt" days in April.

It had only been a month since my first flight and like most I knew very little of this sport before stumbling into it. As usual, my self-confidence at such endeavors was quite low. I relied totally on my instructors to judge my progress and encourage me to go on. The fact that I was progressing at all pleased me. Prior to this I had felt that piloting an aircraft was well beyond my abilities. I kept coming back for more, not because I felt I could do it, but because I enjoyed it.

My progress seemed to depend on the instructor of the day. I soon figured out that there were good instructors and then there were great instructors. My last dozen flights were with the same instructor and this made all the difference.

Even though the club I was flying with was primarily an aerotow operation we still sequenced students for three flights at a time, as did most winch operations. So on this day the first two flights had, at least in my mind, not gone well. Speed control, decision making, and patterns needed refining. Another unique part of the operations then was that the student, and sometimes the instructor, never got out of the glider between flights. The retrieve crew would run out to the glider and push it back to the launch point. This left the instructor and student time to discuss the previous flight.

So it was not unusual to be strapped into the Blanik waiting for several gliders to take off. During this time my instructor had climbed out and was talking to several pilots in the immediate area. It was also not unusual for a student not to be told they were going solo until the last few seconds before take off. The theory being that they did not want you getting all worked up while you wait for you next tow.

This was to be the case for my first solo. As the launch crew brought the rope to the glider I became concerned that if my instructor did not hurry we would hold up launching. A mortal sin, punishable by many rude faces from your fellow students. It was not like him not to be going over the flight to come or at least the previous flight. But, to my surprise he turned and closed the canopy (the L-13 Blanik has only one canopy). "Hey, wait a minute aren't you forgetting something" I thought. He looked down at me and said "... you'll do ok. Just remember what you've been taught ." Suddenly I felt like a holed rabbit and he was beginning to look like a ferret.

But then it all clicked. "CB-SIT-CB... Done!" "OK look around what's going on, wind, activity on the field, what if...," was all going through my mind just as I had been taught. As the tow plane arrived I could hear my instructor yell to the pilot to give me a good tow, it was my first solo.

One finger up, "Up slack," I yelled. As the rope tightened, two fingers and wave your hand, "All out." It takes a while for an Auster to pick up speed. The Auster was our back up tug. A good thing too, it didn't have much power or life for that matter.

Now you have to understand, the Ink Pen gliding club had a small field. It was a 2200ft grass field and the end we were operating off of went up hill. The thing that made this all work was that the only obstructions were a waist high wire fence and the odd tree. Luckily they chopped down the trees at the end of this runway. Of course there was still the fence to get over. Taking off in the other direction was easier: only a fence and the power lines to worry about.

Once past the perimeter of the gliding club you climbed ever so slowly to 100 to 200 feet over another field. But, all at once, everything dropped away as you flew out over the Ink Pen Ridge. Not very high, but enough to keep gliders aloft for hours in the right wind. The beauty of this ridge is one of the most joyful memories I have of England.

We were at the most western part of the usable section of the ridge. Going east you would first pass over the chalk mine which was a few hundred yards from the thatched cottage I lived in. Flying along you would then fly over the Foxtail. The ridge was pretty much void of trees except for this lush row, which from a distance looked like the large brush of a fox's tail.

After several miles you came upon the Gibbet. This was the area of the best lift. Smooth, clear area where the wind raced up it's side. No trees, just this bloody great pole that stuck 40ft into the air. Great place this Gibbet. A few hundred years ago if you got caught diddling with your neighbors wife they would string you up in a cage on this thing until bits of you started falling off.

Anyway, the Auster breaks ground and clears the fence by 50ft. My concentration is welded to the tail of the tow plane and I can see every ripple in the rope. As we approach 100ft and the middle of the second field, CLANK! The rope releases from the tow plane! The first thing that enters your mind is fear. Fear that you did something wrong and the guy waiting for this glider is going to kill you if he loses his turn.

Because I had been thinking out the flight as soon as the glider started rolling, my senses already told me I could not turn back. So the only thing left was to fly straight ahead. Soon I was below tree height with good flying speed and the field I was over was racing by very quickly with the trees at the end coming into sharp detail. As I came closer the trees started to drop away, I had reached the ridge.

On a windy day I might have turned down the ridge and gone on with only a racing heart to contend with. But, today there was little wind and I had to find a field, NOW. My altimeter was now racing past zero and I guess 300 ft above the valley floor. There were two fields in front of me, both of equal size, shape, and surface. I choose the second because to get into the first would have required full brakes immediately to force the landing. The next field gave me a second or two to settle down. By luck, choosing the second field would pay a big benefit later in the day.

As I came over the trees that separated the two fields I made a slight turn to the right to take a diagonal track across the field. This would give me more of an area to land in. Speed was good, breaks set, 50ft, 25ft, 10ft, 5ft, and just hold it off. It was then that something jumped up in front of the glider. A RABBIT! I put his speed at about thirty knots, I was at around 40 or 45 and gaining quickly. Luckily he was accelerating and I was slowing down. Mr. Rabbit made good his escape and I came to a safe stop. No doubt we would both have something to tell our friends for some time to come.

Everything was quiet and I was alone. So, I sat for a minute or two trying to digest what had happened in the past thirty seconds. What had I done to cause all this and why did the tow pilot release me? After several minutes I start to worry if they even new I was missing. I never saw the tow plane change course, maybe he still thinks I'm on tow! At that moment a Motor Falke broke over the ridge and it was looking for ME! As it flew over I could see Pete Coteral waving and he seem to be very pleased that I was OK (I found out later that it was his Blanik he was worried about).

Later that day we were all back at the field, the Blanik was on it's trailer and I had taken two solo flights in a second Blanik. At the pub it was my first flight that kept me in free beers that night. I was told that the Auster release had fail twice earlier in the day, but at much higher altitudes. So, what did I learn from this? Anything can go wrong at ANYTIME and an interesting flight will get you free beer!

OH! The reason why the second field was better? It turns out that most of the property around our club was owned by one landowner and he did not like us. In fact, several years later I would find myself in court, as a witness, testifying that he had "shot down" a Blanik flying over the same fields. The field I landed in was the only property in the valley he didn't own.

Birds Do It: Gliding into Sterling Airport

by Christine Dunshee

The following article was written for Worcester Magazine, June 15-21, 1994, by Chris Dunshee, a student pilot with MITSA, as one in a collection of articles on ballooning, skydiving, hang gliding, and soaring. Photographs accompanying the article are a midair, fish-eye lens shot of Lee Marzke instructing in a Blanik, and a picture of either Kerry Richards or Mark Koepper landing their Dart.) Christine Dunshee is a biomedical photographer for the Department of Cell Biology at UMass Medical Center.

You're driving on I-190 near Sterling Airport when suddenly a black shadow skims over your car. Images of a hawk, a condor or even a pterodactyl come to mind. Glancing up, you witness the quiet emergence of a sleek white glider coming in for a landing.

Overhead, the pilot is "turning final" onto grass runway 3-4. Though he is aware of the cars on the highway, he's concentrating on airspeed, air brakes and a point on the grass to land. For birds, its natural. For the seasoned glider pilot, it can be as familiar as driving a car.

Perhaps you've always wanted to try gliding. Coming down off the highway is the first step, the second is arriving at the airport, and the third is a demo flight.

"Look to the hawks; they're the experts," an instructor told me on one of my first gliding flights. It makes perfect sense: it's what birds do.

Gliding or soaring is flying by using air currents and thermals. Whereas a power plane cuts through the air, a glider soars on it.

A thermal is a rising column of air that is warmer than the surrounding air. A black-paved parking lot is an excellent example of what can help generate a thermal. If a glider flew over a parking lot on a cool sunny day, a surging sensation on either wing would occur, indicating lift. Turning and banking in a circular motion would allow the glider to gain altitude and have an extended flight—anywhere from one hour to six or seven, with altitudes of up to 11,000 feet.

A member of the MIT Soaring Association who is also a competition pilot recently flew to Mount Washington and back in about 4.5 hours. Not bad for a plane flying only by means of air currents and thermals.

The most striking aspect of a glider is its vast wingspan and birdlike design. It's easily discernible in the sky by its wings and gentle, flowing motion.

The cockpit of a glider folds around you. After being strapped in, you feel like your wearing it. That's the idea. The glider becomes an extension of yourself.

Students fly in the Blanik, an instructional two-seater. The student sits in front with the instructor directly behind. Both seats are equipped with all the controls and instruments needed for flight. The instrument panel, while not extremely complicated, helps the pilot make intelligent flying decisions. You'll glance frequently at your altimeter, airspeed and the variometer—which indicates lift or descent—but you're not encouraged to stare at them constantly. While driving, you wouldn't stare at your speedometer.

A control stick in the middle can be moved to either side to move your "arms," which now span about 15 meters in either direction. Your feet rest on metal cylinders called rudder pedals.

A tow rope connects under the nose of the glider to the powered tow plane. Being towed aloft is one of the hardest parts of the gliding sport. Aerotow is kind of a herky-jerky sensation as the tow plane pulls the glider quickly down the runway. Your body is pushed back into the seat as the forward motion increases. It's similar to doing 90 mph in a '68 Chevy Nova on a straightaway.

The tension builds with the speed of the tow plane until the glider comes up off the ground. Because you're being towed so quickly, it's anything but relaxing and it's actually quite tense. Crosswinds can really send a glider veering. Unlike a Nova, a glider is designed to fly. It's clumsy on the ground but graceful once you get it into the air.

When the tow plane comes up off the runway, the glider is being towed above the airport to about 2,000 feet. Pull the yellow handle on the instrument panel and you're immediately released from the tow plane. There's a muffled pop and a sensation of floating away. It could be frightening, but being in control of the aircraft enhances your feeling of freedom.

The tow plane turns left while the glider quietly sails right. The tension is eased, controls become fluid and the pilot needs only to make gentle adjustments to heighten the glider's responsiveness.

You immediately feel the absence of noise and clutter, your brain focusing intensely on maintaining serene flight and seeking adequate lift. Everything else is left on the ground. You're weightless, the sun is shining. . . it's better than floating, more structured than skydiving and quieter than hang gliding. If you've ever listened to the snow falling, that's similar to the sound of soaring. Gliding is a dance.

Until the instructor decides it's time to practice maneuvers, that is. The romance of flying quickly gives way to the challenge of learning how, which can prove disheartening. No pain, no gain. The instructor is present to make sure that at least there's no physical pain. Recently, while coming in for a landing with my instructor, we were over I-190 at 1,000 feet when we should have been at 300 feet. Knowing I was way too high, my palms sweaty on the controls and in a potentially dangerous situation, my instructor took over. He took us further out over I-190, made a steep, banked turn and descended toward Sterling Airport at a more comfortable angle. No pain, no gain.

Another really interesting maneuver is a stall. You stall when you're flying slowly and the nose of the glider rises a bit too high. Suddenly you hear nothing—there's no wind coming over the top of the wing.

The glider buffets, the nose drops, the ground is there below your feet. Your stomach is lodged in your throat and your instinct is to pull up on the stick, but there's no engine to respond to that instinctive command. Push the stick forward, level the wings—lessen the angle of attack. You've lost altitude, but you're flying streamlined within seconds.

Some fly more streamlined than others. Last year, a competition pilot returning to the airfield at Sterling came in over I-190 very low and fast at about 80 knots. When competitive pilots have been soaring as far away as 80 to 100 miles and they decide to come back, they do so straightaway and as fast as possible. An irate Sterling police officer saw this particular landing and showed up on the field red-faced and angry, threatening to ticket the glider pilot for speeding.

If all this sounds like your airfield of dreams, check out MITSA some weekend at Sterling Airport. The soaring association, which has no affiliation with the university, was founded in 1968 by Charles Draper, an MIT inventor. It costs $100 to join, [$330] a year to be a member, and $16 per tow. These fees include instruction and the use of club gliders. Demo flights are offered for $50.

MITSA has two instructional two-seat Blaniks, three solo gliders, a tow plane and 65 flying members. All the members pitch in when it comes to moving gliders, launching, flying the tow plane and helping private owners. MITSA's membership resembles a small United Nations from various walks of life—all sharing a common love of flights.

CB-SIT-CB Reminder

by Derek Sherlock, CFIG

CB-SIT-CB

CONTROLS Full and free movement.

BALLAST Is your weight within limits for the glider? If you need to add or remove ballast cushions or lead bags, did you remember to do so? Did you place the lead bags where they are *well restrained*, and won't come loose to hit you or interfere with the controls in flight. Take special care when carrying passengers—they don't all weigh the same! Check the placards carefully each time you fly a new glider type.

STRAPS Tightened. (On the L-33, be sure the ring is in the locked position.)

INSTRUMENTS All set correctly. No broken glass.

TRIM Set for takeoff.

CANOPY Closed and locked. It's NOT enough to just look at the handle to see if its in the locked position; Pull up on the canopy frame or handle to see that it's *really* locked. (We had an incident where the pilot pushed the lever into the locked position when the canopy wasn't all the way closed.)

BRAKES Check for full and free movement. Check that they are locked for takeoff.

Do this checklist before you allow the rope to be hooked up. If the launch is then delayed for some reason, PULL THE RELEASE before you undo straps or open the canopy or whatever. Then re-do the checklist from the start before you hook up the rope again.

This is the standard MITSA checklist, taught to all new students. If you currently use another one, no problem, but please review it to be sure it includes all these items.

Happy Flying!

News Briefs

Thanks to Bill Brine

Bill Brine had a big role in the club's recent L-23 and L-33 purchases. He did most of the original negotiating with Vitek Siroky (our dealer) and put together the two plane package purchase. Bill also visited the LET factory and talked with the test pilot. Thanks for the thorough job!

1st L-33 Landout

I claim two records for my Sunday-before-Memorial Day flight.

1. First land-out (at Gardner) in the MITSA L-33.
2. Quickest retrieve after a land out...I was on the ground less than 15 minutes. I called the Sterling FBO when I landed. He radioed to Ken MacDowell in the air in 094, who had just released a glider north of Sterling. Ken continued on to Gardner, and off we went.

-Al Gold

Video of John Mahoney's Salto Available

Our family went to the airshow at South Weymouth and I got some good video shots of the airshow. I captured John Mahoney's Salto flight. If you would like a copy of the tape (I have a little collection of soaring videos), then get me a VHS or Beta tape and I'll make you a copy. I got some good shots of the Thunderbirds, an A-10, and a few other aerobatic acts too. Gulf had a little blimp there.
-Shaun Keller

MITSA People

submitted by various club members

Enno's and Arianne's baby Jennifer

Former MITSA member, Enno Adema and his wife Arianne are now the proud parents of Jennifer, born April 26, 1994, and weighing 2.6kg (5.75lbs). She was 4 weeks premature, but is healthy and doing well.

Still no word on whether she'll be learning to speak English, French, German, or Dutch.

Two Former Members Located

George Mitsuoka has a new address. Dominique Estival saw the MITSA entry on the Internet and sent e-mail. Contact Shaun Keller for addresses.

> Up-to-date address lists can always be found in the filing cabinet in the MITSA office. –Mark Tuttle

For Sale

Soaring Merchandise

MITSA has some nice stuff available from our Sterling office (pay the D.O.):

- bumper stickers *I'd rather be soaring* $1 each
- MITSA T-shirts (mostly M) $5 each
- US Soaring Team cloth patches $1 each
- 1983 (the latest!) Sailplane Directory (pictures and specs) $5 each
- soaring posters $5 each

About This Issue

by Shaun Keller, Editor

It's another big newsletter. This time I didn't have to learn the publishing software from scratch (there's always some new twist to encounter), but it still took about 16 hours to produce.

It's the Dog Days of summer. If you are taking it slower, why not take some pictures (prints please) and send them in for me to publish? I know that there have been a lot of good flights this year and I hope that you will write about your flight while you still remember the details. Where did you go? What was the weather? What were the decisions you made? The address is: 32 Kenneth St. West Roxbury, MA 02132-2023. Phone: (617) 327-3193. E-mail: keller@databoss.com or keller@world.std.com.

Photo Credits: All photos by Shaun Keller. These were taken from my Grob 102 during a flight this spring.