THE LEADING EDGE
The Newsletter of the M.I.T. Soaring Association, Inc.
April 1996

Contents

Cross Country Class

John Wren

The 1996 Cross Country Class will be held at the New England Electric System headquarters in Westboro. The course will take place over three days, April 30th (7-10pm), May 2nd (7-10pm), and May 4th (12-5pm). That's a Tuesday, Thursday, and Saturday. You must attend all three days. The class will be $25 and I strongly recommend buying a copy of Jim Payne's badge and record handbook from the SSA. If you let us know in advance, we will have copies of the book at the first class.

This course is intended for solo students who are thinking of attempting their first cross country or badge flights this season. Topics covered will be:

- Soaring survival (staying up)
- Task planning
- Cross country navigation
- Off airfield landings
- Badge requirements and paper work
- and other topics.

For more information call or email Joe Kwasnik (508-366-0474, kwansi@neesnet.com) or John Wren (508-244-0647, 76467.3163@compuserve.com). If you know that you will be attending, let Joe know and he will save you a seat.

Her date was pleasant enough, but she knew that if her life were a movie, this guy would be buried in the credits as something like "Second Tall Man."
Russell Beland, brilliant "bad analogy" contest winner

News Briefs

Mark Tuttle

AVIATION!! I thought I saw a glider in the air! I did, I did, I did see a glider in the air!! Yes, MITSA is finally flying again. The first operation of the spring was Sunday, March 24, the very day I drove my visiting parents out to the field to show off my share in the Grob 102. Let's all shake off the rust and head out to the field again. Remember that last year some of the best soaring weather of the season happened in April, so this is not the time to find excuses for sleeping late and putting off going out to the field another weekend!

Annual meeting: The annual meeting was held at Vinny Testa's restaurant in Natick on March 10. The crowd numbered more than fifty, so it was a very social occasion, and everyone had plenty to eat. When the second meat course was being served, I heard someone exclaim, "What, more food?" I chuckled when I wondered what this person would say when the second dessert was being served. The business part of the meeting consisted of our new president Steve Moysey thanking the old board members and welcoming the new, delivering some enthusiastic encouragement for members to come out and fly, and awarding the club trophies for the year.

Trophies awarded: The Nicki Velforth trophy is given to the "best student of the year," and this year it went to Joe Kwasnik. The "paddle" is awarded to the "most enthusiastic new member," and this year it went to Steve Sovis. Both Joe and Steve are obvious candidates for these awards, since they have been individually or jointly responsible for many club activities including organizing ground schools and organizing encampments at Sugarbush. The Alan trophy is traditionally given for the best triangle, but Phil Gaisford's 600K flight last season was clearly the best flight this club has ever seen even if it did include more legs than your average triangle, so Phil won the award this year and clearly deserved it. The Tommy Thompson trophy is traditionally given to a person the club expects to give something back to soaring and is traditionally given to a person who seems to be working on an instructor certificate, but this year the club looked backwards instead and gave the trophy to Mark Tuttle.

The Draper trophy for best flight in a MITSA glider and the Francis trophy for the best 100K triangle were not awarded this year. So everyone should heed our new president's call for cross-country activity, and go out and win one of the trophies this season.

Annual check rides: If you want to fly club equipment, the MITSA policy is that you need a check ride with a club instructor if you haven't flown gliders in the last 90 days. Due to the winter weather, almost all of us will need a check ride before flying club equipment.

Annual dues: Payment of annual dues was due on April 1. Please send Mark Tuttle a check for your dues as soon as possible. His address is Mark Tuttle, 8 Melanie Lane, Arlington, MA 02174. If your dues are not paid on May 1, then your flying privileges will be suspended until your dues are paid. Feel free to send Mark email at tuttle@crl.dec.com or to call him at (617) 692-7635 during working hours or at (617) 648-1106 before 10PM if you have any questions.

Contest help needed: John Mahoney is looking for help running the Region 1 soaring competition at Sugarbush. If you are interested, please contact John at (802) 496-4241 (day) or (802) 496-2891 (night).

Crews needed: Bob Fletcher (fletcher@orion-gps.com) is looking for a crew for either the 15m or standard class nationals.

Flight tests: Mark Tuttle passed his flight test on April Fool's Day, and added an airplane single-engine land rating to his private pilot certificate.

News from George

George Mitsuoka

George Mitsuoka (george@3do.com) was an active member of MITSA who joined about the same time I did, and I think he even served on the board of directors, but he left us for the left coast. —Editor

Well, a lot has happened since I left Boston in 1990. I came to the west coast to work for Apple, which unfortunately cut short my MITSA training. I did take a few more glider lessons at the Fremont airport right after I came out, but they closed the airport and turned it into an auto mall before I could finish.

I started power flying lessons in 1993 at the Palo Alto airport and was close to solo, but then I got this 'great' new job at The 3DO Company and was working about 100 hour weeks, so flying got put on hold. This year I finally decided again that flying is going to be a priority, so I enrolled in three aviation classes at a local community college and am starting my power lessons again. I'll try to add a glider ticket as soon as possible after I get my private.

The MITSA newsletter has helped to keep up my interest in soaring. Just a few weeks ago I went up in a Grob 103 with a friend from MIT who was recently licensed and had a great time. We thermaled for about an hour and a half before I started getting dizzy. After the modest power maneuvers I'd been experiencing, continuous 2+ G circling took its toll.

I really appreciate the training I got at MITSA and wish that I could have continued there. MITSA is a great deal financially and a great way to learn to fly. Although it may sometimes be inconvenient, having all members run the club operations builds camaraderie that is missing at other flying clubs and commercial operations. I hope MITSA's current members appreciate how good they have it.

I also strongly believe that learning to fly in gliders is the way to go. My first power lesson was a breeze compared to learning to fly on tow and my instructor was amazed at how well coordinated my turns were. It's also amusing to see students in power ground school get really nervous when discussing cumulus clouds and turbulence, mountain wave, and engine out situations.

I'd be interested in hearing from anyone in the club. My email address is george@3do.com. I'd also like to know if anyone has broken my Duty Officer record for most glider launches in a single day (51, I think, with one tow plane!).

News from Sheila

Sheila (Eglowstein) Conway

Sheila Eglowstein (sheila_conway@om.cv.hp.com) was another active member of MITSA, who also joined about the same time I did, and I think she also served on the board of directors, but she graduated and left for Washington where she set all kinds of records in a 1-26:

Open Class		
Distance in a Straight Line	*47.39 miles*	*8-3-91*
Distance to a Goal	*34.97 miles*	*6-1-91*
Senior Class		
Distance in a Straight Line	*47.39 miles*	*8-3-91*
Distance to a Goal	*34.97 miles*	*6-1-91*
Feminine Class		
Distance in a Straight Line	*47.39 miles*	*8-3-91*
Distance to a Goal	*34.97 miles*	*6-1-91*
Absolute Altitude	*11,140 feet*	*8-3-91*
Gain of Height	*8,646 feet*	*6-1-91*

These records still held in Region 8 (Washington) as of November 24, 1995. —Editor

Hi everyone at MITSA! You may not remember me, but I was a member of MITSA in '88-89, known then as Sheila Eglowstein. I stopped by Sterling once since y'all moved from Mansfield, but there weren't many folks around.

Here's the update: I'm now known as Sheila Conway. My husband Charlie and I met in Seattle on my first day with the Boeing soaring club. He was flying with the FAA that day to get his CFIG. There was an "incident" on the field (an airplane came in gear up) which delayed his check ride, so we got to talking. . . the rest is history. We like to tell people we met at an airplane crash.

I took John's advice and kept flying. Unfortunately for my glider "career," I have taken to flying airplanes as well. Now whenever I get near a gliderport, I end up in a tow plane. There are much worse fates. I'm hoping to add a glider rating to my instructor's ticket this summer.

We recently moved to west-central Oregon. We plan to be flying in eastern Washington this summer in Ephrata. If any of you Bahston types come out this way, look us up!

Happy Flying!

Sheila Conway, 642 NW 12th St, Corvallis, OR 97330; (541) 752-8586; sheila_conway@om.cv.hp.com.

P.S. I get periodic updates on MITSA from Vitek, your friendly Blanik salesman.

The Lindberghs Learn to Glide

Morrie Tuttle

Morrie Tuttle (tuttle@zeus.unl.edu, aka my father) gave me the most unusual present for my birthday in March: well over a ream of pages of articles on aviation he had photocopied from magazines like Popular Science Monthly *and the* Saturday Evening Post *from roughly 1890 to 1930. The early articles speculate on how powered flight might eventually be achieved, and the late articles try to explain the phenomenon of flight to popular audiences. Here are excepts from two fantastic articles talking about the Lindberghs and their gliding. —Editor*

In the first article, "Lindbergh Learns to Glide" from the Literary Digest *(appearing in approximately 1930), we learn of Colonel Charles Lindbergh's first flight in a glider taking place shortly after his famous flight to Paris.*

Lindbergh's first trip in a glider and how it qualified him as a first-class pilot in this type of machine is described in *Popular Mechanics Magazine* (Chicago) by William H. Bowlus, holder of the American Glider Endurance record.

We were standing on the crest of Point Loma, explains Mr. Bowlus, that narrow tongue of land which separates San Diego Bay from the Pacific Ocean, looking down the precipitous cliffs that lead into the sea — 700 feet, almost straight down! He goes on:

" 'You don't fly here, do you?' asked Colonel Charles A. Lindbergh, who had come with me to the crest of the Point, where we planned to fly in a sailplane. 'Where do you land?'

"I explained that it was safe enough to take off into the wind over the Pacific in a light glider, and that, should necessity arise, a landing could be made in the brush near the cliffs or on the roadway.

"The day was ideal for gliding. I was willing to prove that he would encounter no unusual difficulties in being shot into the air from the top of the Point, and to demonstrate the ease with which one may operate a glider, I had the crew manning the shock cords shoot me out over the ocean, and for fifteen minutes I sailed about near the point where Colonel Lindbergh watched my maneuvers.

"After I had landed, Colonel Lindbergh took his place in the cockpit, and I gave him very few instructions. I told him not to force the glider off the ground after he had started moving, but to let the plane fly itself off after it had attained sufficient speed. I told him not to dive the glider to pick up speed.

"He was also to remember always to turn the glider while in an upward current of air and not while flying in a down draft. Usually, in making a turn, the glider loses altitude, and if this is attempted while in a down draft, the pilot suffers a double loss — the normal loss of altitude by the plane itself and the sinking due to the air moving downward.

"Since sail-flying involves use of energy derived solely from the air-currents, Colonel Lindbergh's exhibition of remaining in the air thirty-one minutes in this first attempt, and to maneuver it sufficiently, was a considerable tribute to his ability as a pilot.

"Once he actually climbed 150 feet while making a turn.

"During the flight Colonel Lindbergh qualified for a first-class glider pilot's license No. 9, in the United States. He achieved this by remaining above the horizon longer than five minutes and returning to his point of departure.

" 'It was great sport,' he commented as he stepped from the tiny cockpit. 'All you need is a hill and some wind. This was my first flight in a sail-plane, but it certainly was great sport. It also was the first time I have ever carried on a two-way conversation from plane to ground.'

"One explanation for Colonel Lindbergh's success in gliding a relatively long distance lies in the fact that the glider, owing to its extremely light weight, can soar three times as far as an airplane before it comes to earth. Should the wind fail while the light craft is slowly descending, the pilot has plenty of time to find an air-current that will buoy him up again.

"These rising breezes are not found by accident.

"Colonel Lindbergh, being an experienced pilot, knew just where to look for them.

"After her husband's flight, Mrs. Lindbergh went up alone and succeeded in staying in the air nine minutes."

In the second article, "Making America Glider-Conscious" from the Literary Digest *(February 22, 1930), we learn about the mounting US gliding activity. The article begins with an account of US Navy Lieutenant Ralph S. Barnaby flying a glider released from the belly of the dirigible* Los Angeles, *"the pride of the Navy." The glider was released "by means of a standard bomb release device on the under side of the dirigible," and the demonstration was to show "that gliders can be used as auxiliary-craft to dirigibles, much after the manner of life-boats on a ship at sea." The article goes on to describe the potential for gliding with, "Among believers in the glider is the Detroit Aircraft Corporation, which predicts that by 1935 there will* *be 1,000,000 licensed glider pilots in the United States. Already many clubs have been formed. The casualty list in the use of gliders is very small. In Germany these cat-boats of the air are called sailplanes. Lieutenant Dinort of a Reichswehr Chasseur Battalion has stayed in the air fourteen hours and forty-five minutes. W. H. Bowlus of San Diego, claims an American record of six hours and nineteen minutes. A flight of ninety-three miles, during which an altitude of 9,842 feet was attained, has been made in Germany." Finally, the article moves on to the Lindberghs and their gliding:*

Colonel Lindbergh, as seasoned a veteran of the air as could be found, and Mrs. Lindbergh, who is following close in his footsteps, have taken to gliding as ducks take to water. Without "previous actual experience" in motorless flying, Colonel Lindbergh won a license by making a flight of unusual duration for a beginner — thirty minutes — according to the Associated Press in a Dan Diego dispatch, which continues:

> Colonel Lindbergh took off in a glider plane, flew it out half a mile over the ocean, attained an altitude of 500 feet, remained aloft half an hour, and qualified for a first-class glider pilot's license.
>
> He made an application for the license after landing, and will become the ninth holder of the class of motorless-flying license in the United States.
>
> Mrs. Lindbergh watched her husband make the flight.
>
> The machine Lindbergh used was built by Hawley Bowlus, who was construction superintendent for the builders here of the *Spirit of St. Louis*, in which Colonel Lindbergh made his flight to Paris.

But today the ladies are right behind their menfolk (when they're not ahead), so it was not long before Mrs. Lindbergh was qualifying, too. The United Press in San Diego thus reports her qualifying flight:

> While her famous husband looked on, Mrs. Lindbergh was catapulted from Mount Soledad in a glider, and landed six minutes and ten seconds later, a qualified pilot. Mrs. Lindbergh had hoped to obtain a first-class license, but there were no updrafts, and she was unable to land at the point of take-off.
>
> Colonel Lindbergh stood beside the glider until his wife signified that she was ready to take off. Then he sprang aside and the attendants released the glider. It shot into the air from its 1,000-foot elevation. Mrs. Lindbergh handled the craft well on the take-off and kept it in a steady glide. She made a figure "S" several times, then found that lack of up-drafts would not permit her to return to the starting field. She brought the craft down in the field adjacent to the north, La Jolla Beach, a mile and a half from Mount Soledad.
>
> The fact that she stayed in the air more than five minutes gave her a second-class license.
>
> "It was great sport," Mrs. Lindbergh said. "I'm sorry I didn't get back."
>
> She was attired in overalls which evidently had been made for a man about six feet tall. Colonel Lindbergh watched calmly while his wife was in the air.

But gliding is not without its hazards, and even Lindy found it out. It was not long before he had an accident, but one which scared his friends more, apparently, than it did him. He disappeared in the heart of the mountains in a disabled sailplane, says an Associated Press dispatch from Lebec, California, which runs on:

> For an hour or more in this isolated area it was unknown whether the famous flyer had cracked up or whether he had mastered a crippled, motorless ship.
>
> Then he came up smiling. Just another experimental flight and no harm done, he revealed.
>
> Colonel Lindbergh came here with Hawley Bowlus of San Diego, to "play and experiment" with a sailplane. They established a camp ten miles beyond the ridge route, the main highway through the mountains.
>
> Immediately after the assembly of the sailplane, which was brought here on a motortruck, Mr. Bowlus made two trial flights, hopping in each flight from hill to hill.
>
> Then Colonel Lindbergh took off. As he sailed into the air, the right aileron, one of the ship controls, fell off. As warning shouts on the ground sought to apprise him of the mishap, the colonel circled around, gracefully maneuvering the sailplane on the air current. Then he soared over a distant hill and descended out of view.
>
> Fearing disaster, the little group started from the camp to seek the missing flyer. They had not gone far, however, when they came to a point where it was seen that the sailplane had landed safely. Colonel Lindbergh was found surveying the ship. It was undamaged other than the loss of the aileron.
>
> "I'll try it again tomorrow, if conditions are favorable," Colonel Lindbergh said. "This thing controls as well without wings as it does with them."
>
> The colonel said he was not alarmed when the aileron dropped off, but just let air-currents carry the sailplane. He said he did have "a little trouble" in landing.

> "The aileron fell off because the duralumin had become crystallized by hard knocks," Colonel Lindbergh said. "It was an uncomfortable feeling when I saw it fall."

No, Lindy didn't turn a hair. It so happened that February 4, the day after this contretemps, was his twenty-eighth birthday. Did he spend it recuperating or celebrating? He did not. He spent it planning more glider flights and making certain observations on gliding in general, according to the United Press, which tells us further:

> Colonel Lindbergh told the United Press that he hadn't been worried for a minute when the aileron dropped from the glider as he soared away from a camp in the Tehachapi Mountains, near Sandberg.
>
> "I didn't have a bit of trouble in landing," he said. "It wasn't especially hard to do. The ailerons on a glider are on the tips of the wings instead of at the back, and they are not fastened together. For that reason when one of them drops off the other remains to help land the plane."
>
> Lindbergh seemed more interested in his glider experiments with Hawley Bowlus, owner of the craft, than in the fact that it was his birthday.
>
> "We want to learn how a glider will handle in high altitudes and variable air-currents encountered in the Sandberg region," he said. "I'm going back there as soon as the glider is repaired."

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For more information about MITSA, you can contact the club by email, visit our web page, or contact Joe Kwasnik, our director of membership listed above.

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If I have seen farther than others, it is because I was standing on the shoulders of giants.
Isaac Newton

If I have not seen as far as others, it is because giants were standing on my shoulders.
Hal Abelson

In computer science, we stand on each other's feet.
Brian K. Reid

When a cat is dropped, it always lands on its feet; and when toast is dropped, it always lands with the buttered side facing down. I propose to strap buttered toast to the back of a cat; the two will hover, spinning inches above the ground. With a giant buttered cat array, a high-speed monorail could easily link New York with Chicago.
OMNI Magazine contest winner