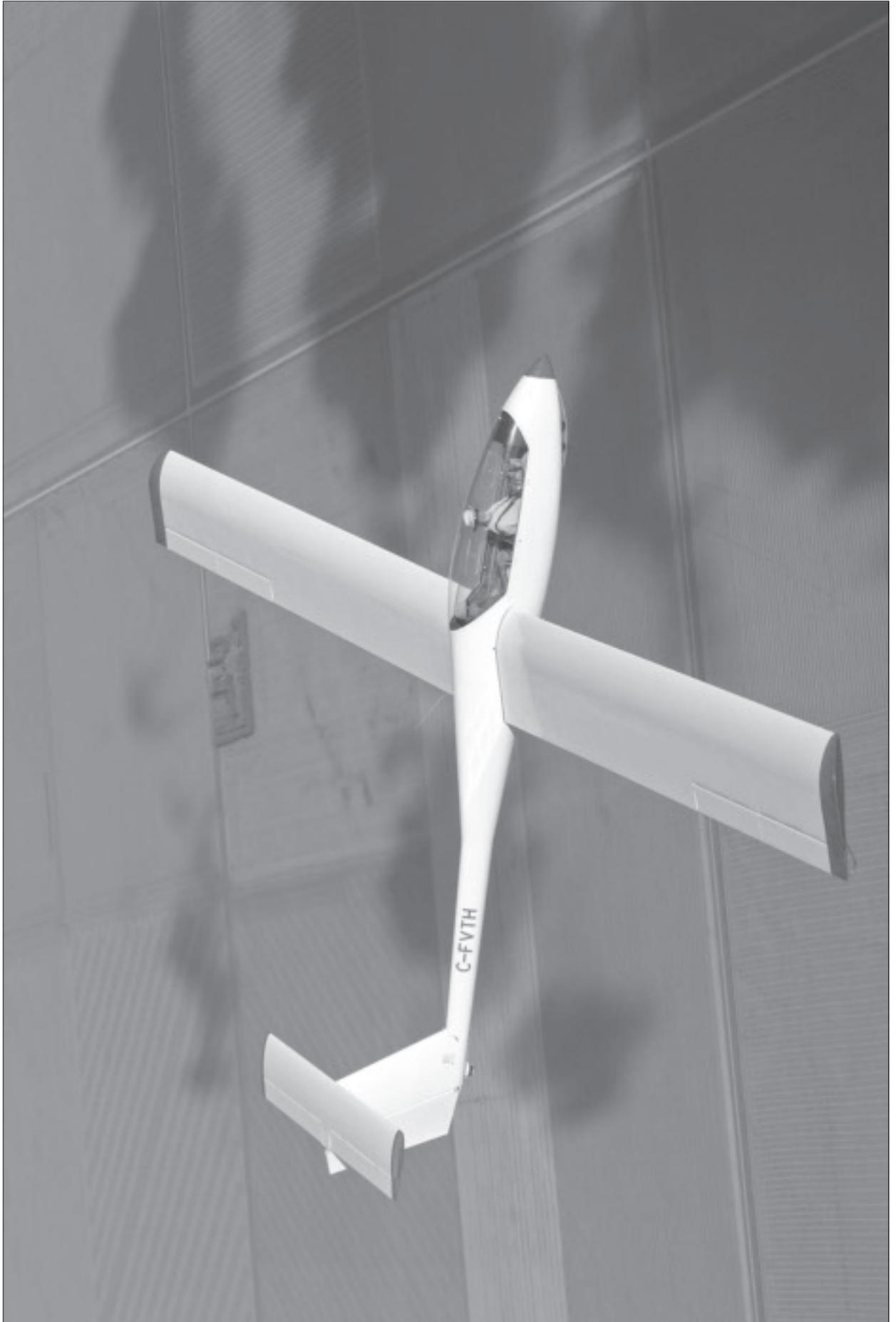
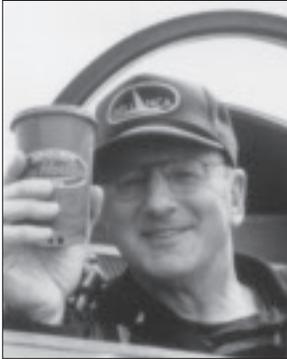


free flight • vol libre



Priorities

Doug Scott Ontario Zone director



I LIVE IN SOUTHERN ONTARIO, home to about 40% of SAC members. We soar on thermals, not ridge nor wave, height gains are limited, lakes surround us, over which we cannot safely fly, and they generate evil moisture, reduce viz, cause clag. Our population, therefore our clubs, are centred in two small areas of a vast, rocky province, which limits where we launch and land, and means that we share very crowded airspace with lots of other commercial, general and personal aviators. Our summers are short — just slightly longer than Quebec's. And maybe Manitoba's. In spite of it all, we're tough, we do pretty well. Come see Ontario for the '07 AGM. We have a variety of clubs to suit all needs, from training, to a few folks just enjoying themselves, up to advanced glider types and serious cross-country. In support of contest flying, Gatineau hosts their May Fly, and the Ontario Provincial Contest is becoming a York Soaring tradition. SOSA proudly showed off their newly renovated clubhouse for the '06 Nationals, and their degree of organization and preparedness was fantastic. Pat Templeton says he hadn't seen

so much excitement since "K" (not his real initial) ran himself over with the tow car. The other smaller clubs may lack the infrastructure for a contest, though Air Sailing figures that since they already lease the field and the gliders, they can host a contest by outsourcing the towing, catering, etc. A club with a business model for the new millennium! The upside in smaller clubs is a closer-knit group with more accessible information and easier and quicker communication.

This article is about our safety culture, and how we are working collectively to improve upon it. The introduction of the SAC Safety System has raised our collective safety consciousness, and though it is too soon to see concrete results, we are making progress. Transport Canada says our efforts will positively impact gliding safety in Canada. Small and large clubs share a need for updating and communicating the local safety culture, but they require different methods. When I instructed with the Air Cadets, we had briefings each morning and again at the close of flying, attended by all, because we were a captive group. Such practices are difficult at civilian clubs of any size, as pilots arrive and depart at will. The SAC Safety System, developed by our Flight Training & Safety Committee (FTSC), modeled on the TC Safety Management System (SMS), offers practical methods to involve all club members in creating, observing, modifying and broadcasting the club safety program. I love to use metaphors to illustrate a point. In football, when you throw the ball into the air, only three things can happen, and two of them are bad. Same with gliders. The trick is to maximize our chances of the Good, and minimize or mitigate the risk of the Bad.

Transport Canada's Aviation Safety Letter 2/2006 has an informative article on the apocryphal *Black Fly Air* implementing SMS, and includes an explanation of the "Swiss Cheese" model of accident causation which our FTSC has used for years to demonstrate how a defective safety culture allows accidents to happen. TC goes on to explain the importance of observing risks and hazards and gathering and sharing information on events that both *did* occur and that *might* occur. At a seminar I attended to introduce the SAC Safety System, there was some discussion that these methods were better suited to industry rather than airports, and I think this article refutes that viewpoint, and supports and validates the SAC program, which was developed in part from FTSC's close ties with TC. For more information on what TC expects from general aviation, see <<http://www.tc.gc.ca/civilaviation/general/Fltrain/SMS/Toolkit/menu.htm>>.

The *Black Fly Air* article was nicely juxtaposed with a typical Garth Wallace story about some guy who is ignorant of both mechanical airworthiness and airmanship standards and who rejects and misunderstands advice and constructive criticism and is therefore the classic "Accident-Waiting-to-Happen". Look around your club, see if you recognize an "AWH", either the Person, the Situation or the Culture. In implementing the SAC Safety System, many clubs have reported difficulty getting past the initial Risk Analysis stage and don't know when they will be able to complete a Safety Program Manual. When the season is over and it is easier to devote time to meetings instead of flying, I will be happy to visit any Ontario club to help move the process along, and to increase my own knowledge at the same time. Contact me at <dougmscott@hotmail.com>. Across Canada, similar assistance is available from FTSC members to all clubs. It will help if you invite members from another club sit in on your meetings — a fresh perspective and sharing of experiences will be beneficial to all.

... a thought on how a strict safety culture had a positive influence on me. I had 20 years flying power and a new glider licence. I flew tow a lot, gliders less, and one day, after several hours of towing in a crosswind, I readied for a launch in a Blanik. The duty instructor refused to let me launch, noting low time. I protested, saying I was flying the towplane all day in the same conditions. He said the experience and the skills required are different. I was momentarily upset, but soon understood, and have applied the same logic and process to others many times in my role as an instructor or check pilot. Are you current on today's conditions? Is the other guy? What is your role in preventing an accident?

free flight • vol libre

5/06 – Oct/Nov

The journal of the Soaring Association of Canada
Le journal de l'Association Canadienne de Vol à Voile

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Cover

Glen Buhr (rear) and Norm Pound on a cross-country in one of Winnipeg's Krosnos. "August 18 was quite literally the best day at the WGC we have had in years. All of our aircraft were in the air and we flew for an aggregate 49 hours 20 minutes. We racked up about 2100 km for the day including two 400+ km flights." *More on this great day on page 16.* photo: Doug Cameron

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The last flight of 2005

Roger Hildesheim, GGC



THE GLIDER TRAILER AND TRUCK were loaded the night before ready to go for a 5:30 am drive. A kiss on the cheek to Sonia and Lucile as they continue in slumber, a breakfast treat for Patches and I'm out the door. Start up the truck, scrape off the ice and head out in the early dawn. The fall air is crisp and cold. Forecast looks good for wind (and wave), and the expected high temp of 15°C should make for a very pleasant day, this last day of wave flying at Lake Placid. This is the last chance for wave in 2005 as the MSC towplane heads home to Hawkesbury later today.

Driving down Highway 416 to the Prescott/Ogdensburg bridge, the sun starts to rise. A thin veil of morning fog is lifting off the fields creating a miniature low level cloudscape that I slice through in the low-lying regions. Crossing the bridge, the St. Lawrence is also covered in fog but unlike the fields earlier, this fog is churning as if the water itself is boiling, valiantly resisting the relentless march of winter weather, struggling to hold onto the last vestiges of summer warmth. Only six weeks ago I was flying directly over this bridge in AT, enjoying a typical eastern Ontario cross-country flight. The US Customs building looks deserted but a groggy customs officer comes out carrying his morning coffee as I pull up to the booth. Two simple questions and he wishes me a great flight. Funny how similar everyone is in the morning when borders and politicians aren't involved...

Two hours later I pull into Lake Placid village. What's this white stuff! It's too early for snow and besides, there's still a good flying day ahead. Pulling into the airport, I see there is about 6 inches of snow on the grass and a 2 foot high snow bank down each side of the runway. However, the temperature is rapidly climbing and there isn't a cloud in the sky. Oh well; never rigged with this much snow on the ground before but the main runway has been cleared. Note to self: keep wings level as the snow banks are just calling for a ground loop. Pulling up to the airport FBO terminal I speak with MSC's André Pepin (DB), Lake Placid wave rider extraordinaire, who quickly quells any doubts about flying.

Soon a small army of pilots appears from MSC, GGC and RVSS, and the daily rigging ritual begins. By 10:30, two Grob twins, 74, DB, XS, ST and AT are lined up at the edge of runway 32. One by one the L-19 launches our sailplanes into the Hart Lake wave.

Check oxygen, radio, variometer, and GPS are on. As the towplane pulls me out onto the runway, the snow banks look much closer but still plenty of room for a 15m glider. All out and soon we're climbing out over town and then turning toward Heart Lake and the mouth of the mountain ridge knows as the "wolf jaws". Thermals struggling to rise from the snow covered ground combined with weak rotor make the tow a little rough but soon we are rewarded with the silky smooth laminar flow of mountain wave. Release, gear up, trim, change frequency to 123.3 and nose into the wind. Wind speed clocks in at about 35 knots at 7000 feet from 300 degrees.

DB reports 2-3 knots over the old Tahawus mine, 21 km south of the airport. XS, 74, and ST soon join him. Right now I'll climb a little more over Heart Lake. Soon it's time to explore and I head over to the south of the Sawtooth Mts but to no avail; 11,000 would be the highest for me today. I look out to the southwest and... I lose ⇨ p18



The SOARING ASSOCIATION of CANADA

is a non-profit organization of enthusiasts who seek to foster and promote all phases of gliding and soaring on a national and international basis. The association is a member of the Aero Club of Canada (ACC), the Canadian national aero club representing Canada in the Fédération Aéronautique Internationale (FAI), the world sport aviation governing body composed of national aero clubs. The ACC delegates to SAC the supervision of FAI related soaring activities such as competition sanctions, processing FAI badge and record claims, and the selection of Canadian team pilots for world soaring championships.

free flight is the official journal of SAC.

Material published in *free flight* is contributed by individuals or clubs for the enjoyment of Canadian soaring enthusiasts. The accuracy of the material is the responsibility of the contributor. No payment is offered for submitted material. All individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest. An e-mail in any common word processing format is welcome (preferably as a text file). All material is subject to editing to the space requirements and the quality standards of the magazine.

Images may be sent as photo prints or as hi-resolution greyscale/colour .jpg or .tif files. Prints returned on request.

free flight also serves as a forum for opinion on soaring matters and will publish letters to the editor as space permits. Publication of ideas and opinion in *free flight* does not imply endorsement by SAC. Correspondents who wish formal action on their concerns should contact their Zone Director.

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est une organisation à but non lucratif formée d'enthousiastes et vouée à l'essor de cette activité sous toutes ses formes, sur le plan national et international. L'association est membre de l'Aéro-Club du Canada (ACC), qui représente le Canada au sein de la Fédération Aéronautique Internationale (FAI), laquelle est responsable des sports aériens à l'échelle mondiale et formée des aéroclubs nationaux. L'ACC a confié à l'ACVV la supervision des activités vélivoles aux normes de la FAI, telles les tentatives de record, la sanction des compétitions, la délivrance des insignes, et la sélection des membres de l'équipe nationale aux compétitions mondiales.

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Les articles publiés dans *vol libre* proviennent d'individus ou de groupes de vélivoles bienveillants. Leur contenu n'engage que leurs auteurs. Aucune rémunération n'est versée pour ces articles. Tous sont invités à participer à la réalisation du magazine, soit par des reportages, des échanges d'idées, des nouvelles des clubs, des photos pertinentes, etc. L'idéal est de soumettre ces articles par courrier électronique, bien que d'autres moyens soient acceptés. Ils seront publiés selon l'espace disponible, leur intérêt et leur respect des normes de qualité du magazine.

Des photos, des fichiers .jpg ou .tif haute définition et niveaux de gris peuvent servir d'illustrations. Les photos vous seront retournées sur demande.

vol libre sert aussi de forum et on y publiera les lettres des lecteurs selon l'espace disponible. Leur contenu ne saurait engager la responsabilité du magazine, ni celle de l'association. Toute personne qui désire faire des représentations sur un sujet précis auprès de l'ACVV devra s'adresser au directeur régional.

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On the origin of the "MacCready" theory

Perhaps because I'm a denizen of academia (I retired from a Cambridge professorship in 2003), I do like to see theories correctly attributed. 'Stigler's Law' states that "no law is named after its true discoverer", and it is a pity to see that it continues to apply in the case of best-speed-to fly theory. I and others have repeatedly pointed out that Paul MacCready's great contribution was *not* the first publication of the theory, but the mechanical device of a rotatable ring on a variometer that enabled the theory to be implemented.

Once more then: the 'MacCready Theory' described (for example) by Pete Masson [*in the last issue*], was first published in *Sailplane & Gliding* in June 1947 by Ernest Dewing, who gave the relevant equation and solved it. In the same issue, George Pirie also arrived at the correct answer by more heuristic methods. Dewing was a second-year Cambridge undergraduate and Pirie a pre-war Cambridge graduate and member of the University Gliding Club. I have corresponded with both of them. But why not have done with names and call it the Cambridge theory?

I gave a full account of the history in *S&G* in June/July 1980 (*Why does the Best-Speed-to-Fly construction work? – With a little history thrown in*), adding that MacCready's contribution came two years later in *Aero Revue* for November 1949, prompted by the two-part article by Karl Nickel in the June and September issues of *Aero Revue*. I believe MacCready already had the solution before reading Nickel's article, and I know from correspondence with Nickel that he himself was unaware of Dewing's solution. I noticed that at the recent World Championships in Sweden an author referred to the '*Nickel-MacCready Theory*', a small step but in the wrong direction. The right step is backwards – to 1947.

This Cambridge theory lasted until my article in *S&G* for October 1964 entitled *The Arm-Chair Pilot* in which I introduced the 'threshold theorem' that the best speed to fly is found from the standard theory, but the "average rate of climb" is to be replaced by the chosen "critical rate of climb". This threshold is the rate you would set your MacCready ring at (if you still had one) and is denoted by Pete Masson as the *practical* rate to set in your modern electronics. He might have added that the one aspect of the theory that is still really relevant to modern racing is the undeniable mathematical fact that if you fail to take a thermal that is stronger than this rate, or take one that is weaker than this rate, you are wasting time.

Anthony Edwards, Cambridge

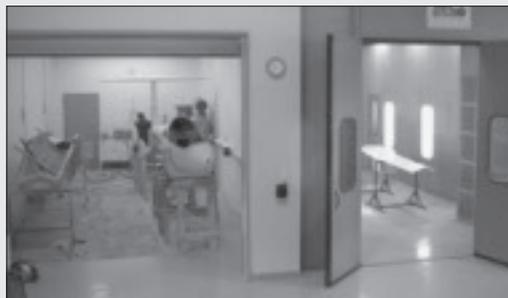
Pete Masson comments:

Brilliant! I would, however, request that no amendment be made to the article; even though it may be incorrect, I would prefer that the commonly understood phrase 'MacCready Theory' is used, which 99% of people understand.

Can I have a "Masson Theory" attributed to me? It goes along the lines of, "Throw the MacCready ring out the air vent, and fly as fast as you sensibly can that allows the best average climb rate for the whole flight!"

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Soaring stars in bank commercial

Jean Lapierre, AVV Champlain

Champlain invaded by cameras for a Banque Nationale advertising campaign

A FEW WEEKS AGO, I got an e-mail requesting a pilot for a Banque Nationale commercial — “Soar to freedom!” so I went to the casting call since I answered to two of the three requirements: I was a pilot with a glider (I own Bravo Mike, a PIK-20B). Sadly, a beautiful smile was also needed and with my braces my chances of acting were slim. None-the-less, the experience would be interesting.

A few days later I got a phone call; I wasn't selected, but my glider was to be used for close-ups while the winning candidate would use his glider for the in-flight shots. It was Bob Katz from MSC: he is a good pilot, has a very nice PIK-20D, and a smile to win over potential clients for La Banque!

Friday afternoon, 28 July, two strange men are looking for my glider to take measurements to make a suspension rig for the big day. Verifying that their insurance policy was good and valid, we proceed; tests will be Sunday and filming done on Monday, weather permitting. Sunday the rig arrives — it is a monster — in a previous movie they had suspended a Beech with eight comedians in it, so it should be okay. Disguising Bravo Mike and Bob's glider with large red lines (Banque Nationale red of course), everything is ready for Monday.

Hearing the technical staff would be in early, I decide to sleep over at the club. At 0259 a truck drives in with a generator sufficient for the needs of the whole town of Saint Dominique. Following that, a trailer for the producers and the client, a complete cosmetic-hairdresser-etc. trailer, a high class restaurant with good coffee and croissants, fruits etc, a dining tent for 50, and three or four large equipment trucks. Set-up begins.

Bravo Mike is installed on its rig before sunrise, tracks for the close-up camera are laid down. The camera is angled



not to see my competition letters BM (which could suggest another bank!). After Bob was properly dressed in a sporty fashion, spending a few minutes to select the right sunglasses, we rig his glider. Another team sets up a studio in our hangar, lights are all over the place, electronic console and dozen of people running left and right to be ready for the take-off planned for the legal hour of 0505 to take advantage of the sunrise for the best shots possible. A helicopter equipped with a special pod for the aerial steady-camera lands. Two 45 gallon drums of fuel were shipped the previous day. Overall, more than 50 persons are on the field: technicians, chefs, cameraman, script assistant, producers, makeup artist...

To insure flight safety, I coordinate the pilots meeting with Pierre the helicopter pilot, the producer, Bob the star, Simon our towplane pilot, and about ten others who have a say in the matter. We agree on the communication frequencies, who is in charge, safety procedures, the modus operandi, etc. We are ready. The plan is to have as many tows as possible to get good shots.

The view was so nice, it was decided to film on tow. What a tow — close to an hour to 10,000 feet. Had to land once as the camera helicopter needed fuel. There were only four tows done, for a total of close to four hours of towplane time! High and early in the morning; Bob had to smile, deal with unknown air, a helicopter, the tow itself, look for decent fields, and freeze in his cockpit — looking good has its price! Some extraordinary footage was shot though.

A few minutes for Bob to refresh his makeup, and immediately close-up shots begin. In the cockpit, suspended eight to ten feet above the ground, spotlights radiating heat, our friend had to look ahead, turn his head and smile 50, no, 60 times, and it must have been 100°F in the cockpit. So, following the instructions of the director and in a steam bath, Bob did his work well with infinite patience. I think he had it right on the first shot but the fifty people there had to work, n'est-ce pas?

Everyone had a sit-down dinner: salmon, shrimp, paté, fantastic desserts. Finally around 1400 and the photo sessions over, it is done. The team starts another project in the hangar, by 1830 they leave, and the airfield finds itself finally quiet once more.

So two days (Sunday for set-up, Monday to film), a helicopter, two gliders, a towplane, fifty persons, four hours of filming, out of which fifteen seconds will be kept for this national advertising campaign. Get ready to see Bob Katz' face on your TV set, and on photos on all Banque Nationale branches.

Who knows, maybe this exposure will bring more awareness to our sport. ■



L'association de vol à voile Champlain envahie pour le tournage d'une pub de la Banque Nationale.

LORSQUE LE RÉALISATEUR a retenu notre copain Bob Katz de MSC, pilote de PIK-20 pour la publicité de la Banque Nationale, il a aussi retenu les services de mon PIK-20 Bravo Mike pour le suspendre sur un appareillage articulé pour les gros plans au sol.

Les ajustements se feront dimanche et le tournage lundi ou mardi selon la météo. Dimanche, maquillage de BM et du planeur de Bob Katz avec des lignes (rouge Banque Nationale il va de soi) et installation de la fameuse plate-forme.

02:59 am, dimanche, un camion arrive avec une énorme génératrice. Par la suite arrivent la remorque à maquillage, la remorque du personnel et des artistes, un restaurant traiteur, une tente salle à manger, trois ou quatre camions d'équipement et de matériel, et l'équipe de tournage s'installe.

On monte Bravo Mike sur sa plate-forme. Maquillage et habillage de Bob et on assemble son planeur. Pendant ce temps une équipe installe des rails pour une immense caméra près de BM. Une autre équipe installe un studio de tournage dans notre hangar et un hélicoptère se pose pour les prises de vue aériennes.

Premier vol, au lever du soleil, le tandem monte donc jusqu'à près de 10,000 pieds. Quatre remorquages sont effectués pour un total de près de quatre heures de vol. Bob Katz a bien gelé mais les prises de vues sont stupéfiantes.

Deuxième étape les plans rapprochés, Bob dans mon planeur a dû recommencer 50 ou 60 fois son sourire pour enfin satisfaire le réalisateur. Sous les projecteurs, et avec une verrière fermée il devait faire 100°F dans l'habitacle. Il s'est exécuté avec une patience infinie.

Tout se termine vers les 18 heures et notre piste retrouve sa tranquillité champêtre.

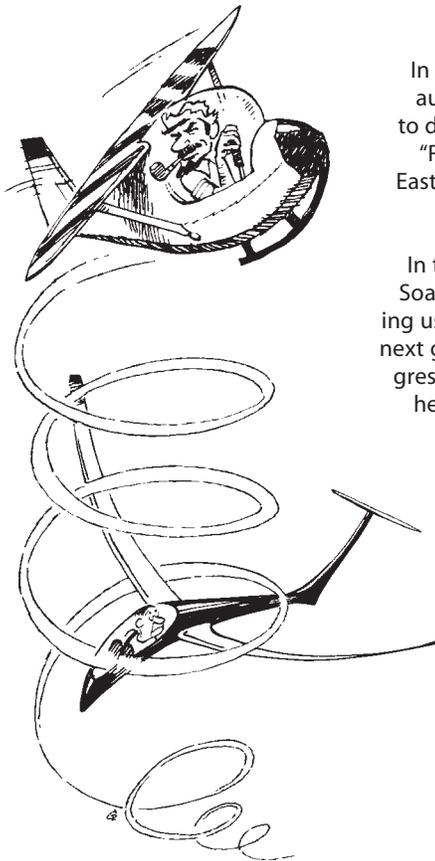
Deux jours, préparation dimanche, tournage lundi, un hélicoptère, deux planeurs, un avion remorqueur, cinquante personnes, techniciens, machinistes, réalisateur, chef assistante, maquilleurs, serveurs, traiteur, caméraman et j'en passe auront été nécessaires pour tourner des heures de film qui se retrouveront dans une publicité où environ quinze secondes seront retenues.

Que de gros moyens pour atteindre cet objectif et je l'espère une visibilité unique pour notre sport. ■

the REAL soaring pilot

Origin unknown

from a 1987 issue of *Vancouver Soaring Scene*



... loves to outclimb the wimp in an LS-4.



... holds a Heineken like his stick.

In the book, *Real Men Don't Eat Quiche*, author Bruce Fernstein has attempted to define the traits that characterize the "Real Man". Typical Real Men are Clint Eastwood, Sean Connery (but not Roger Moore), and Margaret Thatcher.

In the same spirit, a definition of a Real Soaring Pilot has emerged, thus providing us with a standard towards which the next generation of soaring pilots can progress, and perhaps bring back the era of heroism and mystique, when one flew solo in a simple primary on the very first flight and wimps disappeared forever after their first launch.

His flying A Real Soaring Pilot only flies cross-country. Scratching around the home airfield is not for him, and the sweaty hard grip on the stick or brilliant remarks to the lady in the front seat is left up to the wimps.

A Real Soaring Pilot flies solo on long cross-country flights, preferably over unlandable terrain, and returns hours after the wimps have tied down and gone home. If he has an evening engagement he'll simply fly faster, or settle for 300 km that day — the Real Soaring Pilot rarely flies less than 300 km except during contests, when a wimpy Contest Director has laid out a shorter task. He will not fly in bad weather unless he can fly in clouds. Not just any clouds: Real Clouds with ice, turbulence, and thunder. No wimps there.

His sailplane First of all, he *never* flies a motorglider. He also avoids forgiving types like the Schweizers, preferring character-builders like the ASW-12 and the Standard Cirrus (not just any Cirrus mind you, it has to be one of the early models with the pendulum elevator and no feel). Other sailplanes acceptable to a Real Soaring Pilot are the Nimbus 3, LS-3 (but not LS-1 as there's inadequate room for him to flex his muscles), ASW-20, and most vintage types. If he has borrowed the Grunau Baby, he loves to outclimb the wimp flying an LS-4. He is rarely heard on the radio.

A Real Soaring Pilot has short tows, and climbs swiftly in tight turns whether or not the thermals are strong. If he misses, he'll be back on the ground before the towplane, and runs to his car to get a second barograph while claiming record-setting soaring conditions. When he returns from a task, it is never with waste excess altitude.

His cockpit Silly computers are for wimps — a Real Soaring Pilot will only use one if he has built it himself (see "his profession"). Otherwise, all he needs is an old PZL with a home-made MacCready ring. No yaw string; he is always coordinated. Actually, with his sensitive feel and great experience, he does not need any instruments at all. No relief tube is needed; he can hold it until he lands.

His appearance A Real Soaring Pilot smells of sneakers. No cologne. He never wears a jumpsuit with sewn-on club patches all over, he leaves that to the Air Force types or former Air Cadets. He does not change his clothes before he flies; his everyday jeans and T-shirt are quite sufficient for the simple task at hand, although he may add a windbreaker if he plans to fly above 25,000 feet. His hat commands special attention and respect. It was white once before many years of sweat and grime accumulated on it. A Gold C with three Diamonds is, at times, casually pinned on at some random spot. A Real Soaring Pilot frequently sports a beard of the stiff and rugged type.

His favourite movies The Thomas Crown Affair, Airplane, Dawn Flight, and Goofy's Glider.

His profession He is not likely to be a physician (not enough time), a lawyer (too much risk), an airline pilot (too conservative), or a banker (way too conservative). Most likely, he will be an engineer, as this profession seems to attract the eccentric types with the necessary personality traits of the Real Soaring Pilot.

At parties Here we will find the Real Soaring Pilot in a small group where the results from the 1931 Nationals are discussed, along with winch maintenance and Pratt-Read restoration. Each Real Soaring Pilot holds a bottle of Heineken the way he holds his stick. When the music starts, he'll dance with Real Women and other men's wives. Afterwards, if he can't find his tent or camper, he'll sleep in the cockpit of any available Real Sailplane.

In competition You will find the Real Soaring Pilot high up on the score sheet. You can also recognize him by his flying technique. He always takes off with full water tanks, retracts his wheel so the gear doors brush the runway, and flies the course by himself. Leeches are promptly led into strong sink. His finishes are described by the wimps as "worm-burners" and dangerous, but they are actually precisely calculated maneuvers performed with great proficiency. On impossible days, he will finally drift in to finish near 7:30 pm, about the same time the wimps are hosing the mud out of their wheel wells.

Finally, the Real Soaring Pilot can be recognized by the quality of his crew (that is, if he has any at all!). These are Real Men or Real Women who hold up a wing tip without complaint, and will have cold beer ready for our Real Pilot as he rolls to a stop right at his tie-down point. ■

“So there I was...”

Carol Mulder
Central Alberta Gliding

“SO THERE I WAS...”

I hear that all good flying stories start out with these words. This pilot story is about my 5 hour flight to accomplish my Silver/Gold Duration.

My husband John and I attended the Summer Cowley Camp this year with high hopes for the weather, and some goals if the weather cooperated. This was my fifth time putting an appearance in at the camp. Aside from the very first time I was there (only for a few hours), the weather has not cooperated. We have been winded out, smoked out, and flat-aired out. With all ten days available to us, we hoped that this year might provide one or two days of good soaring for us. If all the planets aligned, I was hoping to try for my 5 hour Silver duration flight.



I've been flying the Jantar for less than a year, so still am relatively inexperienced with this type. I had a few good flights in the spring/early summer, but was still nervous about flying the Jantar at Cowley. With takeoffs on grass, the possibilities of strong wind, and the calibre of pilots scrutinizing, I was just hoping not to embarrass myself. My first flight was over in record time (12 minutes with a 3000 foot tow), it served to work out my jitters. I *could* fly the Jantar at Cowley.

The next day (Tuesday) started off looking like a perfect soaring day. The weather briefing at the morning pilots meeting confirmed that it could be a great day. I had a quick discussion with John about my monopolizing the glider on such a fantastic day. Luckily he had a great flight the evening before, so was supportive of my goal. We agreed that conditions already looked good, so we should hustle to get pushed out before we ended up number 10 in line. We managed to get the glider pushed out shortly after noon, and were #2 in line. A quick discussion on the conditions and my goal with Bruce Friesen, an Edmonton member flying a Standard Austria,

yielded a genuine well-wishing of good luck that I appreciated coming from such an accomplished pilot.

Finally it was my turn to go. The takeoff was good, and another tow to 3000 feet. Even though the conditions were good, I figured it couldn't hurt to give myself an extra 1000 to get established. With about 200 feet to go on tow, we hit sink and then more sink. Then all of a sudden, some lift — off tow at 12:17 by my watch.

I started circling and gaining a little bit of height. “OK, we're going up — time to stow the gear”. The plane is now much quieter. I still couldn't relax and enjoy the ride though. The thermal I was in was pretty weak and I only gained a few hundred feet. I decided to try the lift over the “Porkies”, the Porcupine Hills immediately east of the field. I lost my few hundred feet that I'd gained getting over there, found a bit of a thermal and circled in that for a while, but again I only gained a few hundred feet. Meanwhile on the radio was a chorus of, “glider X is at 10,000 feet [6000 agl] and heading north”, from all the pilots who took off after me. They had all climbed to 10,000 already, and I'm still scratching around at 7–8000. “I must be the worst pilot ever!” I decided to try the thermals back in the valley to the west. All of a sudden, I caught the elevator — Boom! Straight up to 11,000.

“Okay, I guess I'm not the worst pilot ever — I was just in the wrong thermal.” About an hour into the flight now, I could finally relax.

“Get high; stay high.” is the key to long flights I've been told many times. I finally managed the getting high, now for the “staying” part. With about four hours to go still, I need to find something to do. I decided that I should go look at the mountains. So, I cruised west across the Cowley valley to look around. I played around in a bit of a thermal for a while, and then flew north past 8300 foot Centre Peak. I managed to take a few pictures along the way, but decided that my attention was probably better spent on my flying. After my brief mountain tour, I headed back towards the airfield. Things were pretty quiet on the ground, as every serviceable glider was airborne by now and the only ones returning were club gliders who had used up their allotted time.

I was still at 10,000 and with everyone else gone I began getting bored. I still had three hours to go. The cloudstreets were gorgeous from the valley down to the south-east. I decided that I would try following a cloudstreet for a while to see what happens. Off I went, and maintained my 10,000 feet easily without ever having to turn. “This cross-country flying is a piece of cake on a day like today — I wonder what it feels like to be over 50 kilometres away and outside of final glide?” So, I kept going. I watched the flight recorder tick off the distance back to the field. When it went over 50, I was still at 10,000 feet and decided to head back. “This is so easy, I think ⇨ p14

Soaring the Hope Wave

Ken Armstrong, Vancouver Soaring

MY PERSPECTIVE as a new soaring pilot with just five years experience provides a different view from the complete novices or the highly seasoned soaring pros. Although the Hope wave isn't the all-powerful majestic monster that occurs in other parts of our Rocky Mountain chain, it has some other benefits. Firstly, its almost daily appearance makes it quite dependable as opposed to the large cycle waves found elsewhere. It seems that most afternoons produce a wave and long-time VSA members set their watches for the 2 pm occurrence. The more powerful waves found downwind of other ridges seem to occur about 40% of the time or less.

Since wave occurs predominantly in stable air masses, I was initially surprised that club members were finding sustainable wave when towering cu was prevalent in the area. Recently, after two weeks of afternoon wave observations, it occurred to me what must trigger the phenomenon. It's the dependable afternoon westerly. It appears the moderate to strong increase in the afternoon wind must drive the stable low level maritime airmass into the valley's lower level and this gets pushed over the Dog Mountain "bowl" areas. Of course, pushing the stable maritime air up and over the mountain gets it quite angry and it plunges downward in the vicinity of the highway cloverleaf where the bridge crosses the Fraser River. As is typical during fits of airmass anger, the narrow column of surging molecules overshoots its intended altitude, realizes its mistake and claws rapidly upward. Thus the Hope wave.

When it was first described to me, I was doubtful this could be wave with such puffy clouds dominating the area (positive proof that a little knowledge is a bad thing). However, my betters made me doubt my doubts. Mind you, subsequently flying in said wave, combined with the common cap cloud, strong, smooth lift and other factors eliminated my misgivings. I once had the pleasure of reading an article about a near-vertical wave propagated off a steep hill somewhere in the jolly olde country. [ff 87/6, p6 – see archives on the SAC website.] The Hope Wave seems similar. The actual wavelength is quite short and measured in yards (metres if you prefer), not miles or kilometres. One can watch the foehn cloud plunging over the ridge line a very short distance away whilst climbing at 1000 ft/min. In fact, a racetrack pattern upwind/downwind or across the wind seems to guarantee lift. This Hope area shuttle takes one almost over the descending cap cloud at the upwind terminus of the shuttle and almost under the leading edge of the lenticular-like cloud at the downwind limit — so narrow is the band.

Some days, with stronger winds and more stability, there is a band of lenticulars that run up the Fraser River Canyon but they don't generally seem to be joined like those in the Chinook Arch. Sometimes there are also secondary waves a few miles away near Jarvis Mountain and other locations. In fact, sometimes the Hope wave is the second wave downwind because the so-called Jones Lake area creates a wave farther to the southwest. These various waves are likely completely separate from each other and seldom "mesh" their wavelengths together. Therefore, they would rarely augment or diminish the amplitude of each other.

Another characteristic of the Hope Wave is the absence of a turbulent rotor. If it's there, I haven't found it to be significant. We have seen traces of slightly rotating stratus fractus, but it behaves more like a small developing cu in a thermal. Perhaps at its strongest, the Hope



Looking north from the airfield.

Wave might produce a more significant rotor, but no one has spoken of this as a risk.

Locals generally use the dependable "bowl" to the west and/or Hope Mountain to the east for their initial altitude gains and glide to the wave area between 2500 and 4000 feet to enter the lift band. At the bottom of the upward portion of the wave, a few knots of lift occur and quickly increase to 8 knots or more over a couple of thousand feet with the updraft tapering off as one reaches an elevation equivalent to the top of the wave cloud — which may have bulging contours and be cumuliform in appearance. During the times my *Xtreme* has entered this lift band, maximum achievable altitudes have been in the 6500–9000 foot range (L/D about 26:1 and min sink 224 ft/min). Because it appears only the low level is subject to the stable air, some of the higher performance gliders use this wave as a stepping stone to higher altitude penetration in other lift. We were able to introduce VSA president, Fionna Bayley, to the wave in the *Xtreme* and she spent the next few days enjoying the new experience with passengers in the *Blanik* with its similar soaring abilities.

Pros and cons of the Hope wave

The lift band is fairly small and localized so there is not a lot of variety or potential for using this wave to fly several hundred miles and you won't set any Canadian altitude records in this gentle wave.... On the upside, this is a great place for beginners to get a handle on wave phenomenon without the need for lengthy or high tows. Moreover, scary experiences with rotor aren't necessary and the Hope airstrip (with all of the local facilities) is only a mile away — so outlandings aren't a consideration. In a word, this wave offers high safety margins. For further info on wave phenomenon, read Ursula's book, *Stalking the Mountain Wave* (\$15 from t-burton@telus.net). For details on soaring at Hope visit the VSA website <www.vsa.ca>. ■

The day I landed the LS-4 “wheel-up”

On rumours of cross-country soaring and wheel-up landings

Daniel MacIsaac, SOSA

THIS YEAR my home club, SOSA, was hosting the Canadian Advanced Soaring cross-country clinic, so I thought it would be a great idea to participate. One major problem with this plan was the fact that I do not currently own a glider. I thought I might be able to use one of SOSA's soaring machines, but found that Lorna Novosel and Terry Macartney-Filgate had already requested and been approved for the DG-505 and LS-4. Likewise, Luke Szczepaniak had received permission to fly the Jantar.

SOSA also has two Juniors, so I requested one of those. The club directors stated that the performance of the Junior made it difficult to shepherd and, with the Junior Camp starting mid-week of the CAS clinic, they would prefer to have the Juniors at the field. However, I was welcome to audit the cross-country course, so I duly attended the Monday to Wednesday morning classes and gained some insight into cross-country flying.

On Tuesday morning, I was pleasantly surprised to find that I would be piloting the LS-4 after all, as Terry had to work that day. This was first revealed to me during the assignment of shepherds to students.

Many pilots graciously donated their time to act as shepherds and pass some of their knowledge and experience on to us fledgling badge or contest pilots. A major effort was made to team compatible planes so that the student could learn the most rather than struggle to keep up with his or her shepherd. For instance, Charles Yeates, flying a PW-5 as shepherd, was not assigned to any of the high performance ships, but rather teamed with an older glider with a modest polar. I was eventually paired with Ed Hollestelle and his LS-8.

Soaring conditions were marginal so a short task was called with Stratford as the first turnpoint. This proved to be overly optimistic.

Once off the ground, I struggled in weak lift from 2000 feet to cloudbase. While I waited for my shepherd to launch from the back of the grid and fought for altitude, I was drifting downwind and had to give up some of my hard-earned height to get back to the area of the field. Either the thermals improved or the vast number of planes circling and marking every scrap of lift made climbing easier. Whatever the case, most of us started down Highway 8 towards Cambridge and found a good thermal marked by one of the shepherds.

Ed and I were near the top of this thermal when he called that he was heading out on course. I said I would take one more turn, since I was about a hundred feet lower, then follow.

One turn later I was off in pursuit of Ed. But where was he? How could he get away while I did just one more turn? I pushed the nose of the LS-4 down and roared off in what I thought was the right direction. Finally, I saw him pulling up in lift a few kilometres ahead of me, and much higher! We again circled in lift but this time I was well below him when he struck out on course for Stratford. I continued circling as I wanted every scrap of height that I could get. Once I got to 500 feet below cloudbase, I again set off on course, but slightly to the south as I could see two well-formed clouds over Ayr.

I searched all areas under these clouds and found nothing! I was now low, out of gliding range of the field on a marginal day and considering landable areas. I called Ed and he said he was circling in lift over the junction of the 401 and Highway 97. I could make it there and the fields appeared to be just as good as the ones beneath my wings, so I scooted over.

Ed didn't steer me wrong; I joined the thermal and staggered skyward. After a while, Ed left again in search of the elusive Stratford, but had to return to the thermal that we were occupying as the clouds ahead were just not working.

Meanwhile, some of the others had caught up to us but they had the same problems. Paul Fish had to land out in the Discus CS when he couldn't connect with our ragged band.

At this point, our shepherds decided to scrap the task and some returned home, including Ed! Dave Springford and others continued on towards Guelph once they heard about our tribulations near Ayr. I stubbornly hung on and searched for lift. I listened to the radio chatter and noted that all pilots with the exception of Paul had made it back to the field and landed. In the meantime, the fickle day had improved! A cloud street appeared before my eyes leading back to the strip and beyond. I sailed down this to Peter's Corners southeast of SOSA — finally relaxing — only to note that the street was disintegrating behind me. I wandered about checking various clouds, the majority of which were disappointing, only to find good lift in the blue. ⇨ p15

The all-important difference

This article is reprinted from the 3/87 issue free flight. It's about risk but especially about attitude. What's remarkable is the superb and poetic style of the writing. It ought to be framed on every clubhouse wall.

Douglas Murray

Beaver Valley Soaring
from "Canadian Flight"

TO BE PERFECTLY SAFE IN THE SKY, you must make it a tenet of faith that you will not fly higher than you are willing to fall. That is obvious. Flying is the only mode of transporting the human body in which the medium is unable to support the vehicle used while it is in a state of rest.

To never fly higher than you are willing to fall places a restriction of such proportions on the whole exercise that the total endeavour becomes futile. So the choice is simple: do not fly at all; or fly so well that the odds against falling are reduced to an acceptable minimum.

Enduring the unacceptable was brought home to me with incredible clarity when I had checked out my wife, a low-time pilot, to fly her new Ercoupe. I had flown with her until I was sure that the only reason to continue the dual was my own fear. So I turned her loose with words of confidence, plus a clear agreement on the limits of her first flight.

She beamed her pleasure at being set free and achieving the right to fly her own aircraft by herself. I watched with pride, and a sinking heart, as she taxied to the end of the runway. The trepidation grew as she did her run-up with extreme care, moved at a snail's pace into takeoff position, and hesitated as she made her final checks.

I wanted to run out to the runway and demand we do one more circuit. Too late! The engine opened up and the little monoplane gathered speed, bounced once slightly, and lifted off. She was beyond any help but her own now; committed to a project that must be carried through, alone. Neither radio, nor signals, nor prayer, nor worry would replace what she knew, and how she would use it.

And suddenly I was calm. She had made the commitment that every pilot makes every time the wheels leave the ground. And as she lifted higher than was survivable in any fall, I shared her joy in challenging this exhilarating, frightening, and endlessly variable medium. Not even when she turned to land, holding off to clear the wires at the end of the threshold, nor even as the wheels reached tentatively for the runway and safety, did my pre-flight fears reassert themselves. Nor was there relief when she slowed to a stop. Just joy at the look on her face, and pride in shared accomplishment in the mighty challenge she had survived, alone.

Too big a reaction to a flight in a mere Ercoupe? Ah, but it was alone! And the more complex life becomes, the more crowded, the fewer the opportunities to take responsibility

for oneself, alone. So every opportunity is unique and should not be accepted lightly nor forgotten quickly.

Alone. Is that the magic which casts its spell on those who fly? There is a law of physics which makes flight practical. The laws are immutable for any given set of circumstances — as they are in land and sea travel. But the circumstances vary in confusing profusion. Thus, the right response also changes endlessly — sometimes in hardly finite ways; and at other times so dramatically as to make the response an experiment.

When things get ahead of the motorist, he often can slow them down, or stop them altogether by coming to rest. When elements tend to overwhelm a sailor, he can perhaps heave-to, take in all his canvas, batten down his craft, and wait, perhaps even in terror.

No such escape awaits the flyer. He usually has made all his mistakes before he begins his journey. When things go wrong there is no roadside stop along his airway at which to rest; nor can he furl his sails without sinking forcibly to the bottom of the sky. Due to the speed needed for flight, things that go wrong seem to multiply by the "square". Fix the first one immediately or it becomes two, fix both or it becomes four; then sixteen — until the only way out is an emergency landing with broken wings or worse.

How often we have cried, "Dear Lord, please get me out of this, and I'll never climb this high again." And how often, believing in God's indulgence, have we again ascended into the air, the very thin air, but less innocent, more preplanned, less ready to risk falling, more aware that God has other things to do than cradle brave flyers. Brave flyers get into trouble. Some, over and over again until, still brave, they run out of luck.

To the uninitiated, the flyers who fly through mountains are brave — as are those who skirt tumultuous storms — and those who loop and roll. But most often, those flyers, because they know they are deliberately increasing the risk, endlessly reduce the odds by practice — infinite, endless practice, and you'll find them as listeners in many hangar flying sessions.

Learning, not talking. Separating the bravado from the fact. Making internal judgements on what should have been done, what they will do if faced with similar circumstances. Speaking rarely, the responsibility of ⇒ p15

Outside your limits?

Mark Dowsett, *AIR* magazine

If you saw a friend flying outside his limits, would you tell him? – useful comment from the hang gliding world –

FOR THE MOST PART, we call it “intermediate syndrome,” as I think we find it a reason to warn newcomers in order to keep them alert to the dangers awaiting them as we release them from formal instruction.

No one can argue that the key to success in our sports is to fly within one’s personal limits. How many pilots have you seen that didn’t do that, get spooked, and quit? The ones who realize it before they are injured or worse, are the prudent, or lucky, ones. I am sure we have all got into situations when we wish we weren’t flying — I know I have. Whether it’s launching into conditions you thought you could handle or flying into terrain while going cross-country; things don’t go as smoothly as you wanted.

But when should we stop warning our fellow pilots about the dangers in our sports? The obvious answer is, never. Why am I writing about this obvious issue? — I have had some interesting experiences this year that relate to it.

I am not sure if I can speak for most pilots, but don’t you wish you could tell other pilots more often that you disagree with how they fly without losing them as friends?

It’s tough sometimes to judge ahead of time that a flight may not go so well for any given pilot; if you are not close flying buddies, maybe they have racked up more skill since you last flew with them? So who are you to judge?

This hit home for me last year. I was in Golden for the “Willi X-C” and ran into Charles Warren on the first day. I hadn’t seen him in years and we quickly got caught up.

One of his first questions to me, which is a typical question between pilots who haven’t seen each other in some time was, “so, have you been flying much lately?” I answered and posed the same question back at him — his reply was that he hadn’t flown in well over a year. I hate to use him as an example, but I had thought to myself while talking to him, “Why would an east-coaster who hasn’t flown in quite a while come to *Golden*, in *mid-season*, and fly a paraglider there in a *competition*?”

I was forced to think, “this is Charles Warren, he’s flown paragliders longer than I have, he’s got tons of air time, he is usually on the podium at the “Willi” when he comes.”

I didn’t vocalize my concerns to him and we both went on our holiday. That was the last time I talked to Charles. It still gets to me today; I ask myself, what if I had said something — would he have listened? Would he have flown differently? Would he still be with us?

But then I became a hypocrite. I should have known better, but I flew outside my limitations later in the season. I took

risks I knowingly shouldn’t have. Everything worked out fine, with little stress, but I took risks I shouldn’t have and I should know better!

I was called on it by a friend — thankfully — but I knew I shouldn’t have done what I did and knew I wouldn’t do it again. But I am glad he said something to me about it. I have been flying for 13 years now; it just goes to show that we all need guidance throughout our flying career.

Someday I am going to be too feeble to fly. I hope I know when to call it quits, but if not, I hope I have another friend around to urge me to hang it up.

And then there was a third incident, all within a month of the others. I was at Yamaska, Québec and a competitor showed up with a model of wing that was almost banned from the west coast years ago. It was a competition wing that had a bad reputation for doing crazy stuff for no reason.

But here I was in an area I had never been in, I was hired to come and run a competition, I didn’t know the pilots, and I didn’t even speak their language very well. This time I chose to say something. It was right at the beginning of the competition, so I wasn’t in a position to say too much, but I was glad I did.

Sure enough, on the last day of the meet, the most stable and least windy day, the glider locked into a spiral for no apparent reason. Luckily he miraculously came out of it less than 100 feet off the ground and landed softly.

I then took advantage of this situation and voiced my concerns again. I got to know that pilot a lot more over the weekend and was this time successful in discussing with him more about what I thought about the glider. By the end of the conversation, he handed the wing into the dealer to get it modified into windsocks. It made me feel good that I was able to do this, as I know he will excel more on a modern wing than he would on that old, bad competition wing.

More importantly, he will be safer.

So that was my little experiment. I hope my later experiment helped keep my new Québec friend around so I can fly with him again some day soon. I have to think of it as redemption for not saying anything to Charles when I had the thoughts and opportunity to help him.

I urge you to perform the same experiment with those around you. And if someone gives you tips or is critical about what, when, and where you are flying, know that they are only concerned for your longevity. ■

I'll follow that other cloudstreet back." Ha ha! Overconfidence has a way of biting back. In between the cloudstreets, I lost about 3000 feet and wasn't finding much in the way of lift.

So, there I was... I'm about 55 kilometres away from the airfield, not in great lift, scratching my way around so that I can head back into the wind. There were good landing fields below me, but I really didn't want to end my day there. I think the phone call to the ground crew would be excruciating. "... and just what were you thinking, getting so far away?" ... Sigh... time to draw on all my (limited) knowledge and experience. At this point on the radio, I'm listening to all the impending landouts in Claresholm (53 kilometres northeast of Cowley over the Porkies) where three pilots found themselves in weak conditions. Well, at least I wouldn't be the only landout if I didn't make it. "Keep scratching. As long as

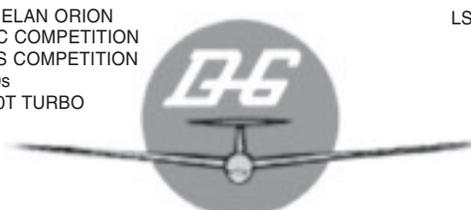
you're not going down, you're doing okay." I managed to gain a little and lose a little until I worked my way back to the original cloudstreet. Once I made it back over there, I found a good thermal and made it back to 10,000. Whew, disaster averted for now. I just had to stay high and work my way back to within final glide of the airport.

I was quite relieved when finally my height was again greater than the final glide to the airport. The good news was that my little sojourn had taken quite a bit of time, so I only had another hour to kill hanging around the field. I found a good thermal on the west side of the Porkies and managed to climb to 12,400 — the highest I'd been all day. Being right at cloudbase made me feel a little claustrophobic though, so I descended back to 10,000 out in the valley.

It was time to start thinking about the end of my flight. I would have no problem finishing the five hours now, but I sure didn't want to botch the landing. Not having the "soaring zen" yet, I haven't yet mastered the art of flying relaxed. My arm was stiff from having a "death grip" on the stick, and my legs were sore from working the rudder for so long. I mentally prepped myself for the landing, and planned to go through the checklist at least three times.

I was gradually descending (not circling in lift), when I got a radio call from the ground saying I had my five hours. I knew that by my watch, but it's always nice to have confirmation. I radioed back that I would be on my way in. I put down the gear at 7000 feet. No sense in waiting until the last minute. I flew back and forth over the Oldman reservoir to lose altitude and then joined the circuit. I concentrated more on that landing than I ever have previously. Nice landing, roll out, and stop. I did it! My best flight ever. What a great feeling!

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the day I landed ...

from page 11

Around 7 pm I decided that the flying was not worth the battle (which I was losing anyway) so I headed home. I had been airborne over four hours and had learned a lot; but it was enough for one day.

I did my pre-landing check, called entering downwind for 36 and announced that I would do a hangar landing. Normally, at this time of the evening, there is no activity on the field, so cutting across the take-off area of 36 is not a problem. Wrong!

Tuesday evenings, SOSA has student training and although the soaring pilots were happily ensconced in the clubhouse with beverage of their choice in hand, there was a full-scale operation underway at the flightline.

Since I wanted to land long, I changed my projected touch-down point and adjusted the circuit to allow for this. As I came abeam of the take-off area, a towplane trundled into position. As I turned final I saw that the towplane was attached to the glider and all the slack was out of the rope.

I called Rockton Traffic to state that I would land and roll out to the right. The towplane pilot acknowledged my transmission and I continued my approach. My touchdown point was still going to be long and I didn't want to use full spoilers on the LS-4 (I wasn't landing on an aircraft carrier) but that was fine as the hangar was down-field anyway. By turning to the right, I was cancelling my original claim of a hangar landing and ensuring that I turned away from the take-off path of the glider/tug combination.

During this final approach, I did not once think of my fellow pilots standing with refreshments in hand, staring out of the window of the clubhouse, ready to critique my landing. Instead, I was thinking of what a respected past instructor had emphasized.

"Keep flying the aircraft until you come to a complete stop." Bob Kurzwehnart's voice echoed in my head.

There was a little crosswind from the right and I kept the wings level as I touched down, slowed and turned right on to our diagonal runway. I coasted down the small incline and came to a stop, with the wings perfectly level. Bob would be proud! Just for fun, I played with the ailerons, keeping the wings level as I had many years ago in the 2-33. Finally, the wind abated and the left wing settled slowly to the ground. Meanwhile, the tug and glider took off well to my left.

Soon one of our avid students arrived with the retrieve vehicle to rescue me. However, he had not brought the tail dolly, so I asked him if he would mind getting that first. I didn't want to tow the LS-4 without it — the glider has a small tail wheel that is designed to

detach itself from the airplane once the side loads become large — I know this from previous experience ... you may be able to read all about this incident one day in a future *free flight* article under the title, *The Day I Ground-Looped the LS-4*.

Soon my helper was back. We moved the ship off to the little hangar and put it away. I then trudged up to the clubhouse to seek out my shepherd Ed to thank him and find out if there was any wisdom to be gleaned from the day's activities.

I encountered him near the bar. He graciously accepted my thanks for his time and effort and then critiqued my performance. While this was happening, one of the members said, "What are we going to do about the LS-4?" Since I had a vested interest in the plane, I asked, "What about the LS-4?"

He replied, "It landed wheels-up."

I had done its DI myself that day and had been very thorough, so I was quite surprised that I had missed any evidence of this event. Also, I was sure there was no entry in the DI book referring to this.

So I asked, "Who landed it wheels-up?"

Ed was looking at me with an odd expression on his face. Finally, he said, "You were flying it today!"

Suddenly the penny dropped: long landing, wings level, slight downslope on the diagonal, retrieve vehicle arrives and promptly leaves — all suggested to the landing judges that the LS-4 had arrived gear up!

Now everyone was looking at me with quizical faces. They all looked down and shuffled their feet. There were mutters of, "Well, it sure looked like you landed gear-up" and other such phrases.

"You appear to be disappointed that I didn't land gear-up." I said.

Steve Newfield summed it all up with, "Well, I guess this means there won't be any beer list ..."

It is amazing to see how easily a rumour can start. I thought this one was so good that I told everyone I met in the next few days that I had landed the LS-4 gear-up. It was interesting to see the range of responses to this story. Some were shocked, others supportive, and still others nodded their heads, having known that it was just a matter of time, considering the pilot.

So, if otherwise intelligent and able glider pilots can be easily led into a false conclusion, I will have to revisit all my earlier conclusions based on similar "facts" and be a little slower to judge others. After all, I don't want to start any rumours! ■

all-important difference from page 12

passing along advice that may lead a fellow flyer to safety or destruction one day, heavy upon them.

There was one such pilot who was extremely irritated to be called a cautious pilot. Affronted, in fact. He was skilled in weather flying, aerobatic flying, twin-engine, glider and helicopter flying. He flew extremely low air shows, and in formation, with a chosen few, would put his wingtip within hand's reach from the other cockpit. He did a hundred things most pilots would not dream of. Yet he was never known to takeoff without the most meticulous preflight of his aircraft. Without checking the weather in detail. Without previewing his route. Without knowing where every line of retreat began, and stopped.

He was careful to fly within the limitations of his own exceptional skill, knowing that these change from day to day through human frailty. He was careful to fly within the capabilities of each aircraft, knowing these to be firmly set by physical law.

He understood fully the axiom of never flying higher than you are willing to fall — unless you accept the necessity of doing everything in your power to prevent that from happening. And of never being seduced by hubris, the pride of vanity. Thus, despite the exceptional flying maneuvers he performed, he was a prudent pilot.

And if, despite everything, chance should one day overcome the strength of his mount, or surmount the depth of his skill, he will have fallen intelligently, accepting the challenges imposed by the environment he chose to face alone, armed with judgement, knowledge, and skill.

That's the all-important difference. ■

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Miscellany

Broken spoiler – asymmetrical deployment on Krosno

A low-time paraplegic pilot at York was on tow, flying (with Charles Petersen in the *Freedom's Wings Krosno*) as part of a Discovery Channel filming at the time when the actuating arm of the right spoiler failed and that spoiler deployed. There is some question whether he would have been able to handle the situation successfully given the low altitude, the amount of rudder required with aileron to keep the aircraft from yawing and banking right, and the strong (25 knots) 90 degree crosswind blowing over the chosen runway since a full circuit to the active runway was impossible.

Charles recounts:

Well, it was interesting – totally absorbing in fact. We had a camera plane following the takeoff. As we left the ground, the glider wanted to fly to the right of the tug, and increasing application of left rudder was needed to correct the tow. I asked Wayne MacDonald, a solo student pilot, if he had his right foot on the rudder and he looked and that was not the problem. As it became more severe, I looked at the right wing, and saw the spoiler deployed. Immediately, I moved to close the spoilers, but saw the control in the closed and locked position. A glance at the other wing confirmed that the left spoiler was closed. As the tug turned left, I had difficulty maintaining position, and we began losing altitude.

A quick glance out the right rear encouraged me to release from tow, and we wheeled smartly around the drag of the open spoiler in a sharp right turn. I opened the other spoiler briefly, and regained rudder authority and improved the left aileron authority. I headed for the threshold of the cross runway in a very strange sort of sideslip; left wing down but full left rudder in a left slip.



I could choose between control authority with an alarming descent rate, or less rapid descent with impaired control. I slipped to the threshold, deployed the spoilers for the turn to final, retracted the left spoiler for the approach, deployed it again to straighten up for final, and just before touchdown retracted it to lessen the descent rate from that of a brick. A last second flare and a smooth touchdown.

Discovery Channel has it captured on tape, as they had a videocamera in a towplane 200 feet off the left wing.

That's the story. Transport Canada are investigating tomorrow (17 Aug). The weld failure on this Polish-built KR03a also appears to be developing on the other bellcrank in the left wing. The spoilers had been shaken in the DI, and the problem was not apparent. I think it may have finally broken when I locked the spoilers just before takeoff.

No additional damage. No fresh linen. *Fortunam quam sapientum melior habere est! (Better lucky than smart).*

Though I'm naturally distressed by this occurrence, I'm still enthusiastically committed to this fine glider. It is very good for our work with disabled pilots, and the new hand controls are excellent. The problem is unrelated to the fitting of these supplemental controls.

Incidentally, Discovery Channel's *Daily Planet* show filmed that same day. They took film of Wayne MacDonald getting initial training on our motion simulator, and then in the glider, followed by his successful solo. The show will be aired this fall on both Discovery Channel and CTV, and is syndicated world-wide.

We have expanded our program to include childrens' organizations with this summer's addition of the Bloorview Kids Rehab. We also did our third year of outreach to the Gatineau Gliding Club the first week of July, after being featured – both simulator and glider, at the National Aviation Museum's Canada Day event at Rockcliffe Airport. We will again be applying for a grant from the Ontario Trillium Foundation to purchase a Peregrine (the USA-built Krosno) for GGC's full time program.

Fossett claims altitude record

BUENOS AIRES — Tycoon and adventurer Steve Fossett, already famous for sailing and solo ballooning records, claims new heights in a glider over the Argentine Andes. The 62-year-old Fossett said he and Norwegian copilot Einar Enevoldson, 74, rode powerful rising air currents above the remote Patagonia region on 26 August, reaching a record 15,447 metres (50,699 feet).

"We have made attempts in New Zealand, the United States, and Argentina over a period of five years, so this is a hard-won success," Fossett said, jubilant after breaking the record of 14,938 metres (49,009 feet) set in 1986 by American Robert Harris over California's Sierra Nevada mountains. Fossett's claim will now be subject to scrutiny by the FAI.

He and Enevoldson, a former NASA test pilot, rode in an unpressurized glider named "Perlan" — Norwegian for "pearl" — releasing from a tow to 3962 metres. The pilots then climbed [in wave] above the backbone of the Andes near the border of Chile. The two said they used El Calafate, a popular launch point near southern Argentina's glaciers, 2092 kilometres south of the capital of Buenos Aires.

Both wore pressure suits for the more than four-hour climb to extreme altitudes — where they relied on foot heaters to fight the chill in their cramped cockpit as the outside temperature dropped to -71°F. They also collected meteorological data for a NASA and US Navy study of the polar vortex, a pattern of high speed winds circling in the stratosphere.

Fossett said that during the flight they spotted a commercial airliner cruising below the glider at 35,000 feet. "I couldn't understand how the Chilean controller described us in Spanish to the airline pilot," he said in the statement, "but I understood the answer by the pilot: 'Wow!'"

Fossett and Enevoldson attempted to best Harris' mark — which stood for more than twenty years — during three winter seasons in New Zealand from 2002 to 2004. But they said the atmospheric wave pattern there was not strong enough to boost their glider high enough to match Harris' feat then.

In 2002, Fossett became the first to fly a hot air balloon solo around the world, landing in the Australian outback on 4 July. He nearly lost his life twice in six attempts at the feat.

Bill Cormier (AP)

"What a day!"

The cover photo of Glen and Norm in VTH was taken by Doug Cameron, flying with me in the back seat of our other Krosno on 18 August — I'm so thankful I didn't leave my camera on the ground today. This was without a doubt the most memorable flight of my year ... introducing a student to soaring at close to 9000 feet while flying alongside the person who introduced me to soaring and trained me, Glen Buhr, who is flying with our most senior club member Norm Pound ... somewhat of a legacy flight!

Twenty-two flights launched at Starbuck and what a great sight to see all of our single-seat

gliders flying. We had ten gliders airborne at one time thanks to our towpilots and the hard work of Art Grant (who actually never flew since he was so busy helping every one else get up thanks Art!). Single-seaters were giving position reports from Crystal City, Altona, Morden and the windmills down in St-Leon. The longest flights exceeded 400 km and 5 hours and altitudes up to just over 9000 asl. Norm Pound and Fred Kisil were out to visit. I took Doug Cameron with me in VTI and Norm Pound flew with Glen in VTH.....we met up out near Homewood and flew together out toward Carman/Elm Creek and got some nice air-to-air photos. Check the OLC for more details on where our pilots got to. There were lots of happy pilots today!

Andrzej Konarzewski

How heavy is your thermal?

Well, dry air is roughly 20% oxygen and 80% nitrogen, giving a "molecular weight for air" of 28.8. A litre of air weighs 1.285 kg per cubic metre. If some thermal is 3000 feet high and 330 feet in diameter (1000m high and 100m in diameter), we get a total volume for the thermal of 7.85 million cubic metres. This volume of dry air at standard temperature and pressure weighs 10,000 metric tonnes. Correcting to 28°C and 1028 mb gives a weight of 9294 tonnes for dry air.

Water vapor has a molecular weight of 18, only about half as much as air. I'll leave the correction to air at 40% humidity as an exercise for the reader but I'd be surprised if the corrected weight is less than 9000 tonnes.

Now you know why an airship can carry a decent sized load and why thermals are unaffected by any number of gliders riding them.

Martin Gregorie, from r.a.s



Tony Burton

It was tempting to use this photo for a caption contest! One whole wing of Peter Neary's 20m IS32 "Super-Lark" didn't fit into a small hangar at the Cu Nim field (an added shed now encloses it). Now permanently rigged, there is much more incentive to pull her out and go soaring.

Come and soar with the bald eagles! PEMBERTON SOARING CENTRE



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The following badge legs were recorded in the Canadian Soaring Register during the period 12 July to 11 September 2006.

SILVER BADGE

996	Randy Neilson	York
997	Zdzislaw Oczynski	York
998	Richard Jones	Toronto
999	John Mulder	Central Alberta
1000	Luke Szczepaniak	SOSA
1001	Angelo Savoia	SOSA

DIAMOND GOAL (300 km goal flight)

Jan Juurlink	Great Lakes	316.9	Ventus BT	Tottenham, ON
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GOLD ALTITUDE (3000 m height gain)

John Mulder	Central Alberta	3760	Std Jantar	Cowley, AB
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SILVER DISTANCE (50 km flight)

Randy Neilson	York	80.5	ASW-19	Arthur East, ON
Zdzislaw Oczynski	York	62.9	1-23	Arthur East, ON
Richard Jones	Toronto	106.0	HP-18	Arthur East, ON
Guy Blood	Edmonton	73.3	ASW-15	Chipman, AB
John Mulder	Central Alberta	56.9	Std Jantar	Innisfail, AB
Luke Szczepaniak	SOSA	60.8	SZD-51	Rockton, ON

SILVER ALTITUDE (1000 m height gain)

Randy Neilson	York	1890	ASW-19	Arthur East, ON
Zdzislaw Oczynski	York	1200	1-23	Arthur East, ON
Richard Jones	Toronto	1270	HP-18	Arthur East, ON
John Mulder	Central Alberta	1200	Std Jantar	Innisfail, AB
Carol Mulder	Central Alberta	1760	Std Jantar	Cowley, AB
Luke Szczepaniak	SOSA	1260	LS4a	Rockton, ON
Gary Hill	Edmonton	1520	L23 Blanik	Chipman, AB
Angelo Savoia	SOSA	1430	SZD-51	Rockton, ON

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33	FAI 'A' badge, silver plate pin (available from your club)	\$ 3.00
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FAI Records application, Flight Declaration form

SILVER DURATION (5 hour flight)

Richard Jones	Toronto	6:21	HP-18	Arthur East, ON
Carol Mulder	Central Alberta	5:11	Std Jantar	Cowley, AB
Luke Szczepaniak	SOSA	5:04	SZD-51	Rockton, ON
Gary Hill	Edmonton	5:24	L23 Blanik	Chipman, AB

C BADGE (1 hour flight)

2841	Richard Jones	Toronto	6:21	HP-18	Arthur East, ON
2842	Gary Hill	Edmonton	1:03	L23 Blanik	Chipman, AB
2843	Lyle Shwetz	Edmonton	1:20	L23 Blanik	Chipman, AB
2844	Carol Mulder	Central Alberta	5:11	Std Jantar	Cowley, AB
2845	Luke Szczepaniak	SOSA	4:05	LS4a	Rockton, ON
2846	Cuyler Green	Central Alberta	1:26	Bergfalke	Innisfail, AB
2847	Douglas Carlson	Gatineau	1:15	1-26	Pendleton, ON

Rick Jones did all his Silver badge in one flight with his HP-18 out of York Soaring on 7 July. Great going! For claims still coming, get them to me before November or they won't be processed until next April. Every year some don't make it on time.

the last flight of 2005

from page 4

breath... not because of oxygen problems but by being greeted with an absolutely spectacular sight — small rotor clouds enveloping valleys and a large cloud cap forming over Santanoni Peak near the abandoned Tahawus mine. Higher cloud starts to move in and the stage is set for Act 2 later as the sun slowly descends. The shadows on the ground lengthen and then suddenly a beam of sunlight illuminates the cloud at Santanoni Peak.

Dig out the camera, you fool! Don't let this sight fade without being recorded (forgetting the camera on my Gold altitude flight was very unfortunate — the camera is now part of my pre-flight checklist!) As the sun descends, the temperature drops and my feet are the first to disapprove. It's time — slide out of the wave and turn downwind. Wow, ground speed according to the GPS is 120 knots. Ease crosswind, stuff the nose down and race back to the airport 18 kilometres away. At 6000 feet, the smooth wave air mass becomes turbulent and rough, another sign that this "year-ending flight" will soon be over. Gear out, SWAFTS, keep the speed up in the circuit due to the turbulence, touchdown on the grass (well it's really snow). Peter Hill from RVSS helps me push AT back to the trailer. Soon, XS, ST, DB and 74 are all back on the ground. We are de-rigging when suddenly Bob Katz (XS) runs to his car yelling, "I need my camera!" I turn around and see the setting sun illuminating the high cirrus and for the second time that day find myself gasping for breath... spectacular!

The high cirrus is illuminated pink/purple from the glow of the setting sun. We both stand there staring and taking pictures as the runway lights turn on and remind us that it might be good to de-rig without needing the headlights from our cars. We all work to de-rig and ready the trailers for the drive home but we are all guilty of catching more glances at the sunset... Ah, the car batteries can power the headlights for a while as we take in the majesty of the Adirondack twilight.

So ended the 2005 MSC Wave Camp in Lake Placid and what turned out to be my last soaring day of the 2005 season. There were no FAI altitude flights earned on this day but Mother Nature gave us all a scenery-and-light show that was not to be quickly forgotten...

As yet another summer soaring season has now ended and the fall wave season is here again, sometimes it's good to remind ourselves of just how fortunate we are to see, feel and truly experience the magic of soaring.

Trading Post

Personal ads are free to SAC members (give me your club). \$10 per insertion for non-members. Send ad to editor. Ad will run 3 times unless you renew. **Tell me when item has been sold.** Subject to editing for length (usually 6 lines max).

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1-26C, C-FZDF, 1957, 1900h, current annual to May 14/06. Open trailer. Asking US\$10,000. For further info contact Orlan Dowdeswell, (306) 789-3302 or <odowdeswell@accesscomm.ca>. At Regina.

PW-5, C-GLDY, well cared for PW 5 in excellent cond. \$35,000 with good Avionics trailer, \$26,000 without trailer. Evelyne, <evcr@telus.net>, (250) 342-9602. Pictures and more info at <http://web.mac.com/ewsflys/iWeb/PW5/PW5_Intro.html>.

Jantar, C-GDPJ, 1978, encl. trailer, 508h, current annual to May 06. Asking US\$20,000. Further info contact Orlan Dowdeswell at (306) 789-3302 or <odowdeswell@accesscomm.ca>. At Regina.

Libelle 201, CF-TQL, #113, 1111h, fresh CofA, all ADs complete, enclosed trailer, located in Edmonton. \$17,500. Dave, <lvretra@second-impressions.com> (780) 221-8535.

SZD-36 Cobra, C-GQWQ, 1977, 897h. No damage. L/D 38/1, A-1 condition, kept in hangar. Modified PIK-20 fiberglass trailer. Located in Toronto. Asking \$15,000. Charles Kocsis (416) 908-5638, <karoly_cobra@yahoo.com>.

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ASW-17, C-GVQW, 1050h. 48:1 measured. 20 and 15 metre tips. New panel including LX5000, gel coat refinished. Great rigging aids, trailer, tow-out gear, waterbags, new chute, covers etc. Best value for performance on the market, US\$25,000. Eric Gillespie, (905) 932-7258 or <ekg@cunningham-gillespie.com>, Toronto.

ASW-20, C-GVDO, #367. Probably best original gel coat finish in Canada. Basic instr, 2 batteries with automatic switching, Dittel radio, ELT, chute, O2 bottle, Tow-out gear. Cobra trailer. \$39,500. Other instruments negotiable. <larryspringford@yahoo.com> (519) 396-8059.

Genesis 2, 1998, 331h, 100% race ready. Excl. cond., CAI302, 303, SageCV, WinPilot, ATR720C, trailer, chute. US\$45,000. Dave Mercer, <djmercer@telus.net>, (780) 987-6201, Alberta.

Nimbus 2B, C-GAJM, 1977, #25, 1120h, 20.3m, 49:1. Flaps, tail chute, 110L water ballast, Filser LXFAL flight computer/GPS/final glide calc, chute, trailer, and all glider covers. An absolutely beautiful flying machine, and proven competitor. Based at York. \$37,500. Peter Luxemburger <iluv2soar@yahoo.ca>.

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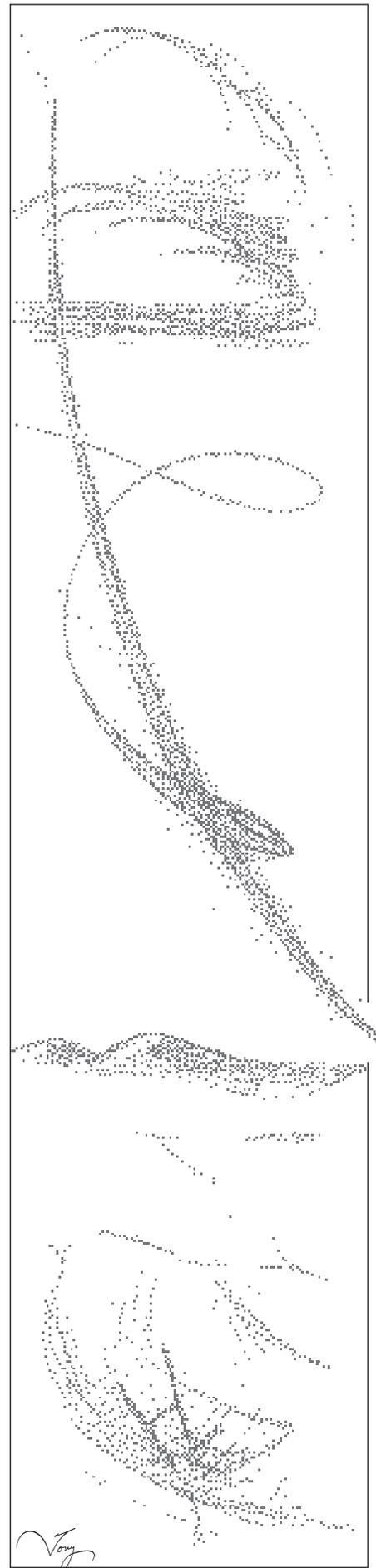
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SAILPLANE & GLIDING — the only authoritative British magazine devoted entirely to gliding. Bimonthly. US\$45 per year airmail, US\$35 surface. <beverley@gliding.co.uk>.

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AIR SAILING CLUB
NW of Belwood, ON
Stephen Szikora (519) 836-7049
stephen.szikora@sympatico.ca

ARTHUR GLIDING CLUB
10 Courtwood Place
North York, ON M2K 1Z9

BONNECHERE SOARING
5.5 km N of Chalk River, ON
Iver Theilmann (613) 687-6836

ERIN SOARING SOCIETY
7 km east of Arthur, ON
Peter Rawes (905) 838-5000
www.erinsoaring.com
info@erinsoaring.com

GATINEAU GLIDING CLUB
Pendleton, ON
Raymond Bastien (819) 561-7407
www.gatineauglidingclub.ca

GREAT LAKES GLIDING
NW of Tottenham, ON
Craig Wright (905) 542-0192 (H)
www.greatlakesgliding.com

GUELPH GLIDING & SOARING ASSN
W of Elmira, ON
Paul Nelson (519) 821-0153 (H)
www.geocities.com/ggsa_ca/

LONDON SOARING CLUB
between Kintore & Embro, ON
Sue & Chris Eaves (519) 268-8973
www.londonsoaringclub.ca

RIDEAU VALLEY SOARING
5 km S of Kars, ON
club phone (613) 489-2691
john.mitchell@sympatico.ca
www.cyberus.ca/~rvss/

SOSA GLIDING CLUB
NW of Rockton, ON
(519) 740-9328, (905) 428-0952
www.sosaglidingclub.com

TORONTO SOARING CLUB
airfield: 24 km W of Shelburne, ON
David Ellis (705) 735-4422
www.torontosozaring.ca

YORK SOARING ASSOCIATION
7 km east of Arthur, ON
club phone (519) 848-3621
info (416) 250-6871
www.YorkSoaring.com
walterc@sympatico.ca

Prairie Zone

PRINCE ALBERT GLIDING & SOARING
Birch Hills A/P, SK
Keith Andrews (306) 249-1859 H
www.soar.sk.ca/pagsc/

REGINA GLIDING & SOARING CLUB
Strawberry Lakes, SK
Jim Thompson (306) 789-1535 H
(306) 791-2534 W
www.soar.regina.sk.ca

SASKATOON SOARING CLUB
Cudworth, SK
Clarence Iverson (306) 249-3064 H
cinverson@shaw.ca
<http://www.ssc.soar.sk.ca/index.htm>

WINNIPEG GLIDING CLUB
Starbuck, MB
Susan & Mike Maskell (204) 831-8746
www.wgc.mb.ca

Alberta Zone

ALBERTA SOARING COUNCIL
Phil Stade (403) 933-4968
asc@platinum.ca
Clubs/Cowley info: www.soaring.ab.ca

COLD LAKE SOARING CLUB
CFB Cold Lake, AB
Randy Blackwell (780) 594-2171
caeser@telusplanet.net
www.clsc.homestead.com

CENTRAL ALBERTA GLIDING CLUB
Innisfail A/P, AB
Carol Mulder (403) 730-4449 H
cmulder@telus.net

CU NIM GLIDING CLUB
Black Diamond, AB
Al Hoar (403) 288-7205 H
club phone (403) 938-2796
www.soaring.ab.ca/free-flt/cunim

EDMONTON SOARING CLUB
N of Chipman, AB
John Broomhall (780) 438-3268
www.edmontonsoaringclub.com

GRANDE PRAIRIE SOARING SOCIETY
Beaverlodge A/P, AB
Terry Hatfield (780) 356-3870
www.soaring.ab.ca/free-flt/gpss/home

Pacific Zone

ALBERNI VALLEY SOARING ASSN
Port Alberni A/P, BC
Mark Harvey (250) 748-1050
countryroad@shaw.ca — <http://avs.a.ca>

ASTRA
Harry Peters (604) 856-5456
petersh@uniserve.com

CANADIAN ROCKIES SOARING CLUB
Invermere A/P, BC
Evelyn Craig (250) 342-9602
evcrinhv@rockies.net
www.canadianrockiessoaring.com

PEMBERTON SOARING
Pemberton A/P, BC
Rudy Rozsypalek (604) 894-5727
info@pembertonsoaring.com
www.mountain-inter.net/soaring/

SILVER STAR SOARING ASSN
Vernon A/P, BC
Mike Erwin (250) 549-1397
www.silverstarsoaring.org/

VANCOUVER SOARING ASSN
Hope A/P, BC
Fionna Bayley (604) 682-4569
club phone: (604) 869-7211
www.vsa.ca — info@vsa.ca