free flight • vol libre

2/84 Mar-Apr

spring safety issue

MUSINGS

Last time, I neglected to acknowledge the assistance that I received from Gordon Bruce, Clark Keith, and Al Schreiter during the evaluation and selection of your Executive Director. At every stage we reviewed, individually and collectively, the applications and results of our interviews. Our decision was unanimous. Thanks guys.

More than for any other of my writings, I have been musing about the next subject. It came into focus on New Year's Eve day, when I met the mother of one of my daughter's school chums. I had not seen her for a while. "How are things," I asked. The reply, "terrible," was with a sob. This was not your usual small talk. It transpired that her daughter, who was a strong and active swimmer, had been run over by a water-ski boat at the family cottage in September. She took but three minutes to die.

The focus sharpened further with the memory of a girl who worked in my company's office; she died in October, the victim of an alleged kidnapping attempt. The focus sharpened still further with the remembering that one of our members has a daughter who is a quadriplegic because of a bullet that destroyed one of her neck vertebrae during a milk store robbery this fall. The whole picture is tragedy with little parallel; needless and unnecessary in the extreme, damning testimony to our society at its worst...

Even though we had a good insurance year so far, there were two accidents in western Canada that were disturbing in their cause. Both involved the take-off phase of an aerotow. In the first, the towplane was destroyed. In the second, the sailplane. Neither pilot was hurt, and by good fortune, the non-instructing passenger in the towplane also was not hurt. Passengers who do not instruct towing are not supposed to be in tugs, remember? From what I have been told, neither sailplane pilot was qualified to undertake these specific flights. Does the accident category of needless and unnecessary fit? Is this testimony to our association at its worst? What do you think?

It seems to me that we have enough problems without the needless and unnecessary. Al Schreiter tells me that we have only one low accident year in five. Let's work to have every year a good safe year. How about it?

Each of your presidents serves you a year at a time. It has been our tradition that each has six opportunities to share their thoughts with you during that year. This is my sixth. The year has been difficult. Without the help of your National Office staff, it would have been impossible. Without the counsel, encouragement, debate, and support of your Board and the active committee chairpersons, it would have been untenable. Without the encouragement and tolerance of my wife, Ruth, I simply would not have survived. My thanks to you all for your trust; especially to Ruth (who tells me that my usual closing is trite).

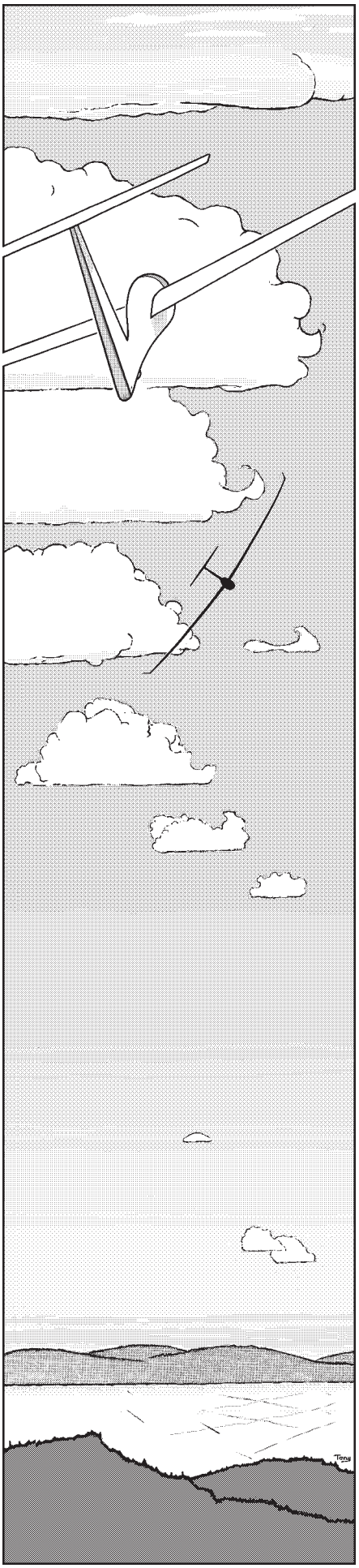
So –

Fly often fly well, fly safely, above all – fly!

Chers Amis,

C'est mon dernier message avant notre assemblée annuelle. C'était un honneur pour moi de vous servir en tant que votre président, et je vous assure que ça n'a pas été facile. Malgré les problèmes ça a été une période bien intéressante. C'était encourageant de voir la croissance du vol sur campagne et l'intérêt suscité par le vol de compétition et le vol d'onde dans la Belle Province. Je ne peux que vous en féliciter en distant: Bien réussi; continuez vos exploits; tentez le succès; et surtout volez beaucoup, volez souvent et en sécurité. Bonne chance.

Everyone should ensure that his/her "Canadian Soaring – Sites, Records, Diamonds" is kept current. Recent amendments are available through the National Office at $1.25 per set (incl. provincial sales tax & postage).



free flight • vol libre

2/84 **Mar-Apr**

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

Cover: free flight's first colour cover was taken by Hermann Ksander of Kawartha Soaring from the rear seat of a Puchacz on the low tow position of a double tow. Also behind the Wilga towplane is the club's Blanik in the high tow position.

DIRECTORS MEETING — 7/8 JAN

All directors except Dick Vine (Maritime Zone) were in attendance, with Bob Carlson presiding. It was also the first face-to-face meeting with the new Executive Director, Jean Matheson, for most of the directors.

Under business arising out of the last directors meeting, the dates for the '84 Standard Class Nationals were confirmed for Virden, Manitoba July 3-12, and the '84 AGM dates for Ottawa, March 10-11, 1984. Considerable time was spent preparing the agenda for the coming AGM.

The question of South Africa was discussed again. There seems little prospect to changing the federal government's peculiar attitude, but more sports are being affected and the directors decided to cooperate with other sports, for instance the Parachuting Association, in presenting a common front. There seems to be hope of obtaining funding again for 1984/85.

Reports from the Instructors and Insurance committees were reviewed. The Flight Training & Safety committee has done considerable work in coordinating the new licensing rules with Transport Canada, thereby protecting the interests of all glider pilots. The Insurance committee reported a reasonably good year for claims, and hopes to achieve some premium and deductible reductions as a result of the improved claims.

The directors devoted considerable time to the budget for 84/85 and concluded that even without federal funding, SAC could achieve its basic objectives with only a one dollar increase in dues for the coming year. Other means of raising funds were explored.

The best ways of dealing with Sport Canada were discussed extensively. It was decided to pursue federal funding and at the same time to explore possible means of participating in World championships.

The next fall directors meeting was proposed for Saskatoon on September 29/30.

84/85 INSURANCE RATES

After a reasonably good 1983/84 insurance year and some considerable negotiating, we have a proposal from our present insurers to renew the policy on the same terms as the present one, with the following changes in the rate structure:

Public Liability $1,000,000

Single-seaters premium	- $180	(optional extra $1M - $36)
Two-seaters	- $315	(optional extra $1 M - $63)
Towplanes	- $250	(optional extra $1 M - $50)

Hull Insurance

In-motion deductible	- $1,500	Not-in-motion - $500

Aircraft value:	0 - $7,499	5.0% of insured value
	7,500 - 19,999	4.3%
	20,000 - 29,999	3.9%
	30,000 - 39,999	3.4%
	40,000 plus	2.9%

We have checked the open market and could not find an insurer who would offer the same or better policy conditions at a better price. If we do, or if you can find one for us we will, of course, make recommendations for change to the Board of Directors. In the meantime, the surest and fastest way to further reduce our premium costs is for all of us to continue to improve our claims record.

Incidentally, last year again, as so many other years have proved, it is not contest or cross-country flying that drives our claims up. It seems that the area within about five kilometres of home base and the club aircraft are most likely to produce claims.

Al Schreiter

PS. Additional notes to the meeting: The executive director is attempting to have SAC membership fees tax deductible (except for that portion which applies to free flight). Revenue Canada has allowed this for other sports associations, and it should result in a $10-25 saving for members depending on their tax bracket.

The terms of reference for a "Safety Review and Appeal Board" have been drafted by Alex Krieger, as there is a need for an independent body within SAC to review any club or committee decision relating to safety that has inter-club or national effect. Safety matters within a club would still remain the perogative of the club CFI.

A 'Significant Flight Certificate' has been established to recognize remarkable flights which may not necessarily earn badge legs, records or trophies. Certificates have been issued for flights in 1983, for local presentation. Tony.

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 Royal Canadian Flying Clubs Association (RCFCA), the Canadian national aero club which represents 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, issuing FAI badges, record attempts, and the selection of a Canadian team for the biennial World soaring championships.

free flight is the Association's official journal.

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. Prints (B & W) are preferred, colour prints and slides are acceptable. Negatives can be used if accompanied by a print.

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 SAC Zone Director. Directors' names and addresses are given elsewhere in the magazine.

All material is subject to editing to the space requirements and the quality standards of the magazine.

The contents of free flight may be reprinted; however, SAC requests that both free flight and the author be given acknowledgement on any such reprints.

For change of address and subscriptions to non-SAC members ($18.00 per year) please contact the National Office.

President R.I. Carlson
Vice President H. Tilgner
Executive Director & Corporate Secretary Jean Matheson
Corporate Treasurer Don Dunn
SAC National Office
485 Bank Street, 2nd Floor
Ottawa, ON K2P 1Z2
(613) 232-1243

5 **Deadlines for contributions 5th day of each even month**

L'ASSOCIATION CANADIENNE DE VOL À VOILE

est une organisation à but non lucratif formée de personnes enthousiastes cherchant à protéger et à promouvoir le vol à voile sous toutes ses formes sur une base nationale et internationale.

L'ASSOCIATION est membre de "L'Association Royale Canadienne des Aéro Clubs" (RCFCA – Aéro Club National Canadien), représentant le Canada au sein de la Fédération Aéronautique Internationale (FAI, administration formée des aéro clubs nationaux responsables des sports aériens à l'échelle mondiale). Selon les normes de la FAI, l'ACC a délégué à l'Association Canadienne de Vol à Voile la supervision des activités de vol à voile telles que tentatives de records, sanctions des compétitions, délivrance des brevets de la FAI, etc. ainsi que la sélection d'une équipe nationale pour les championnats mondiaux biennaux de vol à voile.

vol libre est le journal officiel de l'ASSOCIATION.

Les articles publiés dans vol libre sont des contributions dues à la gracieuseté d'individus ou de groupes enthousiastes du vol à voile.

Chacun est invité à participer à la réalisation de la revue, soit par reportages, échanges d'opinions, activités dans le club, etc. Un "courrier des lecteurs" sera publié selon l'espace disponible. Les épreuves de photos en noir et blanc sont préférables à celles en couleur ou diapositives. Les négatifs sont utilisables si accompagnés d'épreuves.

L'exactitude des articles publiés est la responsabilité des auteurs et ne saurait en aucun cas engager celle de la revue vol libre, ni celle de l'ACVV ni refléter leurs idées.

Toute correspondance faisant l'objet d'un sujet personnel devra être adressé au directeur régional dont le nom apparait dans cette revue.

Les textes et les photos seront soumis à la rédaction et, dépendant de leur intérêt, seront insérés dans la revue.

Les articles de vol libre peuvent être reproduits librement, mais la mention du nom de la revue et de l'auteur serait grandement appréciée.

Pour changements d'adresse et abonnements aux non membres de l'ACVV ($18.00 par an) veuillez contacter le bureau national.

EDITOR
Tony Burton (403) 625-4563
Box 1916
Claresholm, Alberta T0L 0T0
Address for courier service:
c/o Claresholm Local Press
Claresholm, Alberta

COMMERCIAL ADVERTISING
National Office (613) 232-1243

ASSISTANT LANGUE FRANÇAISE
Pierre Lemaire

Limite pour publication le 5 chaque deux mois

5

OPINIONS

ANSWERING THE PRESIDENT

Dear Bob,

In answer to your questions in the French portion of "Musings" in 6/82, one cannot simply enjoy the delightful views without commenting or asking questions about its magic beauty. It's also no wonder that you take the back roads (Route 108?) avoiding the speedy autoroutes. To be more specific, the area seen enroute to Sherbrooke surely must be Sutton Mountain and Jay Peak. Jay lies a few miles across the U.S. border.

As for your question on wave; yes, there is definitely wave in this area. The Missisquoi and Appalachian members, operating out of Mansonville, Que. can most certainly comment on this. The last day of "Provinciale '83" was cancelled due to high winds. The 9:30 pilots meeting was only partially attended as some of the early bird pilots rigged at 7:00 am to wave soar at Bromont. It was certainly new to me that cancelled (normally rain) contest days in the area was called a "wave day". The Eastern Townships region definitely has great soaring potential that has to be exploited further. North northwest leads to great flat land soaring with already 20 assigned turnpoints that produce 50 to 500 km distances. South lies the challenging areas in the mountains. An example flight would be to reach Mount Sutton, climb the wave, coast across the U.S. border to Jay Peak, pass Belvedere Mountain (3500 ft average asl) and catch the cross-country wave corridor at Mt. Mansfield and head for Sugarbush. For those who wish, North Adams, Mass. would be an interesting turnpoint.

Bob, I hope I have not disappointed you with this answer. It may sound a bit like fiction, but I have had the pleasure to actually cross-country wave soar a 140 km O&R in this area at 12,000 feet asl nonstop, it's a great feeling; need I say more?

An answer to your second question, since Champlain is a small club, let me bring you and the SAC membership up to date. L'Association Vol à Voile Champlain has found a suitable piece of land to plant its roots. It consists of 150 acres located near Actonvale and plans are already drafted to promote soaring activities to the fullest. Yes, Actonvale is situated near the Eastern Townships. The site is well located for flights due west in the flatlands for initiating cross-country soaring safely and into the hills and mountains to the south for the more advanced. The areas mentioned before on your first question will then be exploited and encouraged by our soaring membership. Our greatest difficulty is the Agricultural Protection Board which had already denied us a site 18 months earlier. I need not mention the careful planning, request documents and other particulars for a favourable decision. A rejection at this time could have serious consequences on the soaring movement in Quebec. Being an optimistic group, as are most glider pilots, we have exchanged ideas and plans with the Missisquoi and Appalachian club to group together and merge in an effort to maximize efficiency in both equipment and operations.

In the near future, Bob, do drive slowly on your travels through the back roads of the Eastern Townships and look up, for you will see a majestic white bird and you will know deep within you that a glider pilot is indeed "doing his thing" over this magic land.

Robert Di Pietro

HANG GLIDING COMMENT

I was struck, when attending a meeting at Cu Nim, and again reading the 1/84 free flight , at the similarity of problems facing the hang gliding community and the soaring community. We too have been wrestling with the question of South Africa. We too have had questions raised recently about "What can the national association do for me?" and we too have seen our explosive growth of the late '70s give way to a more mature period of little increase in numbers. This has led me to wondering whether our two sports might not benefit from closer cooperation in attacking the common problems besetting us: pressuring Sport Canada, for instance.

Another area of cooperation could come in the area of membership. I see that financial pressures have become serious for some of your clubs and individual members. Those who cannot afford to continue should not be lost to flying, but could perhaps take up a less expensive form of soaring, namely in foot-launched gliders. On the flip side of the coin, those hang-glider pilots who can no longer afford the commitment of time *[we can't help you there, ed.]* or who as they grow older find the hang-gliding experience a little too intense, should also not waste the soaring skills they have developed, but turn them into sailplane-soaring abilities. Both sports could benefit from the exchange, for they are complimentary to an extent. Sailplanes are optimized for long cross-country flights and all-out performance; hang-gliders are flown more intuitively and initial X-C flights can be made with less trepidation as outlandings are simpler.

Perhaps your SAC directors would care to respond to some of the thoughts here.

Stewart Midwinter, VP
Hang Gliding Association of Canada

HOBBS — DAY 3

A competition pilot's most memorable flight

Hal Werneburg

Hal started flying with the SOSA Gliding Club in 1961, became an instructor in 1964, and a towpilot in 1968. Recently, he has been flying at the Cu Nim Gliding Club since moving west to Calgary in 1981. He has been active in SAC, provincial, and club affairs. Hal has a share in a Mini-Nimbus with which he has achieved two current Canadian records: the longest Canadian flight (a 804 km triangle), and the 300 km O&R speed (115 km/h). He is the past holder of the out-and-return distance record, when he flew a Std. Cirrus 506 km in 1973.

He has had much World contest experience, crewing in '70 and '74, and flying in the last four since then. Hal won the Canadian Nationals in '77, '78 and '80 and was third in '82.

Gliders owned in the past have been a Ka3, a K8, and a Std. Cirrus, and Hal has accumulated 1400 hours in gliders, 400 in power, and 36,000 km of cross-country flying. His present occupation is managing an instrumentation company.

It was hot. The sun was burning in a cloudless sky and the parching desert wind from the southwest had picked up and was buffeting the sailplanes lined up in long rows waiting to be launched. Heat was rising in shimmering streamers from the boiling concrete surface. From all appearances it was to be another day in the sun at the 18th World Soaring Championships in Hobbs, New Mexico.

I was near the end of the 15m grid – in the distance down the ramp I could see the Standard class being launched in rapid succession. Behind me the Open class had lined up with sailplanes so huge that four rows of them could barely fit across the immense ramp from which all launchings took place. There was still some time left for a few minutes rest under the wing of the Ventus, another look at the map and a couple of swallows of ice water from the cooler. Lying there under the wing with my head propped up on the parachute, listening to the distant drone of the towplanes. I deliberately tried to avoid thinking about the upcoming flight in order to relax mind and body as much as possible...

Things had been going along quite nicely since leaving Calgary as a hitch-hiker with Willem Langelaan, one of our Standard class pilots. After an uneventful three day trip we arrived in Hobbs where I met up again with Bruce Hea who had taken delivery of a brand new Ventus-B in Atlanta, Georgia and had brought it out to Hobbs for me to fly. Bruce and his daughter Kathy were to be my crew for the next three weeks. Both were new to world contests but performed admirably, again pointing out the well known fact that a good crew is of utmost importance in contest flying. For the next few days Bruce and I spent the somewhat cooler morning and evening hours installing instrumentation into the Ventus. This took place behind the "Super Eight" motel, our temporary residence on motel row in Hobbs. Frequently we were surrounded by various onlookers, some speaking a rather strange language which I finally discovered was the local version of the southern drawl.

After getting somewhat acclimatized to the local weather and surroundings, we joined the crowd at the Hobbs Industrial airport for the practice week. Hobbs Industrial is a huge ex-World War II training field and the few crumbling hangars scattered about the place gave it a rather disheartening appearance. But the flying was promised to be great and that's what we were here for.

The practice week gave us an excellent opportunity to become familiar with the contest area and weather conditions. The country over which we were flying was basically flat and ranged from mostly cultivated fields in the far north through to the southeast, to absolutely forbidding looking desert in the south. The western half and the far south were mostly scrubland with practically no chance of bringing off a safe outlanding. Mixed in with this were huge oil fields with derricks, pumps and power lines to make a pilot's life miserable.

The weather had been quite hot, even by local standards, with daytime maximums usually around 40°C. Trigger temperature was normally reached by 12:30 and cu would show up between one and two pm. Thunderstorms were likely in late afternoon in all quadrants (luckily Hobbs itself escaped the brunt of most storms). I had made four practice flights for a total of 1477 km and everything seemed set for a good competition.

The first contest day had brought what turned out to be the only outlanding for me during the event, 326 km of a 433 km triangle. Luckily none of the 48 competitors in the 15m class made it home, but it meant 19th place for me, landing in a cotton field. Day 2 brought a 20th place on a 375 km triangle to the southeast, and the realization that this contest was going to mean flying long hours over largely inhospitable terrain in the company of some pilots who had years of this type of flying under their belts and didn't seem to give a second thought to the country below. "Push on and don't look down" seemed to be the principle to be followed.

The organizers had made it obligatory to carry extra drinking water and food in the aircraft. I thought it was a wise rule. Also having drinking water easily accessible in flight was an absolute must; a half hour at low altitude sure takes it out of you. A working oxygen system was quite necessary. Cruising altitudes ranged all the way up to 18,000 feet and even at much lower altitudes I found it helpful to take a drag or two of oxygen once in awhile...

The time had come to climb aboard. After carefully stowing all the necessary paraphernalia and getting comfortable in the cockpit, I instructed my crew to swing the nose of the ship about 20 degrees to the left of the take-off run in order to compensate for the ever-present crosswind from the right of about 20 kts. While waiting for the towplane to taxi up, Kathy was shading the cockpit with a large colourful umbrella, certainly a great help in this boiling heat. As a last favour she poured more ice water over the pilot's hat, a primitive but effective way of air conditioning my brains. Then the canopy thumped shut, the tow rope was attached and immediately the towplane revved up and I was on my way....

During the pilot's briefing this morning the Contest Director had announced a 409 km triangle with turnpoints at Jal, about 70 km due south and at Big Spring, 160 km east of Hobbs. Both turnpoints were municipal airports, to be photographed using the somewhat unusual method (for us at least) of photographing a photo target instead of the turnpoint itself. The actual turnpoint would hopefully show up above the target once the film had been developed. The photo procedure was quite tricky and even minor infractions resulted in penalty points for the offenders, including myself once.

The weather was to be standard Hobbs issue: cu developing by 2 pm, surface winds gusting to 20 knots from the southwest, high temperatures around 40°C, chance of Cb late afternoon. The "Marfa Dew Line Front", a semi-permanent weather feature in these parts, had moved well east out of the contest area and should pose no threat. This front divides the dry desert air coming out of the arid southwest from the more humid air off the Gulf of Mexico and it is usually marked by well developed cumulus clouds. It can provide some spectacular flying and has helped several pilots set national and world records over the years.

After release I had joined a huge gaggle of about 40 sailplanes grinding around slowly in a weak thermal near the field. This early in the day the sky was still completely blue, and the only indication of life were the sailplanes flying in various gaggles around the airfield. Once in the gaggle and climbing with them I had to be very careful to avoid getting too close to other aircraft. This is extremely hard work when the lift is weak and everyone is intent on squeezing the last foot of altitude out of the thermal. A good audio vario is a must as I had virtually no time to scan any instruments. All my concentration was directed outside the cockpit watching gliders flashing by everywhere – above, below, inside, outside, in front and behind.

The start gate had been opened in the meantime and I began to observe the weather conditions on course in preparation for the start of the race. Weak looking cu had formed towards the first turnpoint with better looking clouds towards the second turnpoint. The name of the game now was to get as high as possible in order to take a photograph of the ground clock with as much altitude as was available.

The contest was using unlimited start height with timing done through the use of photos taken by the pilots of a huge ground clock kept in motion by a large farm tractor. The idea was simple but the execution required quite a lot of equipment and personnel and resulted in not a few arguments between pilots and officials.

I had decided to take my start photo and was approaching the photo point at maximum altitude, about 6000 agl, when I became involved in some of the most hair-raising and dangerous flying I had ever seen in 23 years of flying. About 20 sailplanes where closing in on the photo point from various directions at almost identical altitudes, everyone intent on taking his picture and getting out on course as quickly as possible. The slipping, skidding, diving and turning was unbelievable. It reminded me of dog-fight war movies, except done in sailplanes in slow motion. I am sure that everyone heaved a sigh of relief when this ordeal was over.

Out on course things had become blue again and it paid to keep a sharp lookout for flashing wings in the distance. Climb rates were getting better (4-5 kts) in rather disorganized thermals. It was time to put on some speed with the hope of catching some of those gliders up ahead. But speed also means losing altitude rather quickly and the ground did not look very friendly. The thermals were a great distance apart and missing one meant stopping to use weak lift, a definite no-no in a high speed contest such as this one. I resolved not to get below 2000 agl if at all possible. I was making reasonably good time towards Jal, sometimes flying with small gaggles, sometimes flying alone. I located the Jal airport to the east of the town in the middle of a large wasteland and quickly took my turnpoint photo.

To the east the sky was starting to look like a pilot's dream. Fat-bellied cu popping up like mushrooms about 50 km ahead meant a rather quick push in that direction. I was by now quite alone over the desert. Sand dunes covered the ground and except for the occasional track I could see no sign of human life. The lift was becoming really good now and by the time I reached the clouds I was racing along at 12-14,000 feet msl. Soon it became apparent that the "Dew Line Front" had moved west again and that I had actually met it on my way east. The clouds became thicker, visibility (which had been excellent up until now) dropped considerably and, what was most alarming, some clouds were starting to grow to great heights. The lift was still excellent under an almost complete cloud deck and gave me a very good speed. Up ahead I made out a city in the deepening gloom which corresponded to what I saw on my map as being Big Spring, the second turnpoint.

My teammates, Ulli and Wilfried, had rounded the turnpoint already and I was pushing hard to get there and turn my tail to the threatening weather in the east. I arrived over the airport to take my picture, when it slowly dawned on me that there was something wrong. I was all by myself, which is unusual for a contest of this size, normally I could see several sailplanes milling around at the turnpoint. A quick look at the map confirmed my suspicions that this was not Big Spring but Midland airport, about 70 km short. A typical case of wishful thinking, no doubt reinforced by the ugly-looking sky ahead which I now had to fly into.

The sky was literally black, with lightning strokes crashing down every few seconds up ahead. Somewhere in that mess was Big Spring. I decided to make a direct approach, flying under the darkest parts of the solid cloud deck over my head. And it worked; 3 to 4 kts up under each dark patch slowly brought me close to the edge of the main storm. Penetrating under it, the lift became silky smooth at about 5 kts. I decided to work it to the top right under the boiling cloud mass. Climbing up to the black bottom, I topped out at over 17,000 feet. It had become very cool at this altitude, and suddenly, snowflakes were blowing around in the cockpit. What a change from 40°C on the ground! I closed the ventilator quickly to keep from shivering and pointed the nose towards the turnpoint which was now barely visible out in front. Flying at maximum L/D to conserve altitude, I took my picture and turned back to the west. Immediately I ran into some of the heaviest rain I have ever encountered, but luckily the sink was not too severe and by speeding up I managed to get away from the worst of it. The lightning and thunder was now behind me, but I still had quite a way to go before I reached a gap in the clouds and sunshine. I had now flown for almost an hour under complete cloud cover and was glad to escape the turmoil behind me and see blue sky again.

I looked up into the sky and saw almost directly above me one of the most awe-inspiring sights of my life. The sun was illuminating the west side of a monstrous vertical wall of cloud which seemed to go on forever. No anvil was visible to give this giant a sense of dimension, just immense masses of cloud boiling straight upwards, seemingly into outer space. In sharp contrast to the brilliant whiteness of this colossus, the area below cloudbase was in deep shadow and appeared almost black. Lightning was flickering to the ground constantly – it seemed a miracle to me that I had dared to tangle with this giant and got away with it. This encounter was a very humbling and sobering experience, putting perspective back into what we in our fragile craft were attempting to do.

The clouds ahead had started to look more reasonable again and even though I had lost most of my altitude and was down to about 3000 agl I decide to push hard and hope for good lift under the clouds up ahead. But as if the gods were taking revenge, none of the clouds were working and my precious height was shrinking rapidly. What made matters worse was seeing other sailplanes racing along high overhead at speeds which seemed indecent. I aimed for a little town out in front, but passing over it resulted in nothing but a bit of reducing sink. I was down to about 1000 feet when I decided to try the local racetrack just west of town. Before I arrived there I noticed some dry grass and debris moving around on the ground, a sure sign of strong convection, I told myself. Lo(w) and behold, a dust devil materialized almost in front of me a few seconds later. Saved again! A rough ride took me to about 14,000 feet and the race was on again.

Superb soaring conditions allowed me to bypass all but the strongest (up to 10 kts) thermals and soaring along these magnificent clouds was sheer joy. All too soon the weather changed again. The clouds disappeared totally and a call to home base confirmed what I had suspected. The wind had picked up to about 30 kts and was gusting from the west. Also the afternoon was wearing on and as is typical of desert conditions, the lift was diminishing rapidly. Careful flying in dry thermals with the help of other gliders brought me to a point from which my final glide calculator told me to start my glide for home. My altitude was about 10,000 msl and there was no sign of Hobbs and the airport in the haze-filled western sky. Trusting my navigation, perhaps foolishly after my earlier mix-up over Midland, I set a compass course into the sun. After what seemed an eternity

continued page 14

JUST A SHORT RETRIEVE...

Paul Sears
from the MSC "Downwind"

This summer, Meg and I went with Kevin Conlin to Hobbs, New Mexico, as one of six Canadian entries in the 18th World Championships. The trip was memorable in several respects, not least in that the weather was good enough for us to fly 500 km plus on five consecutive days. However, this is the story of "The Retrieve".

Before the start of the official practice period at Hobbs, Wilf Kruger, Ulli Werneburg and I, along with pilots from a number of other countries, spent a few days practising unofficially at Seminole, Texas.

The day of my third flight looked interesting, as there was rather more cloud than on the previous two days. This marked the lift and provided some very welcome shade. After an hour and a half of flying, south to Andrews and northeast to Lamesa, I was heading further north towards Tokio (look at a map if you don't believe me!). However, conditions were deteriorating and I didn't like the look of some big clouds to the southwest, so I started towards home. There then followed a tedious period of scratching under dubious looking clouds while trying to make progress against a steadily increasing southerly wind. At Seagraves, about 12 nm north of Seminole, I was tempted to land at the airfield there, but a thermal appeared and I took it. It was a bit weak, so I dumped the water.

I was torn between two things: the wish to be as high as possible for the glide home, and the wish to get there before the rain (which I could see by this time). When I was high enough that I needed only 14:1 to get in, I set off. This didn't look good, but final glides never do, and that angle should be easily attainable even into the headwind.

In any case, I thought, there should be some lift under the rather big clouds enroute. I didn't find it.

There is little in gliding which offers more suspense than the "maybe" final glide and that, after a few minutes, is what this proved to be. After running through some rain and sink, I decided I could definitely reach good fields to the south of the town of Seminole, if not the airfield.

When I got to these fields I had rather less than 500 feet left and rather more than a mile to go to the end of the runway. There was nowhere to land in between, and at least a 20 knot headwind. The idea of continuing seemed decidedly too hairy, so I started a circuit and made a "blind" radio call to my crew, saying roughly where I was going down.

I had the choice of two enormous fields, separated by a track running south from a major road. There were no fences. I landed in the more westerly field, and after a very short ground run on the soft cultivated surface, I stopped close to the track and about 200 yards from the road. The only snag was the weather.

The wind was rising and very gusty, so I dared not leave the glider. After getting out, I pulled a lever to open the brakes. Thump! wrong lever. The gear had retracted, fortunately without breaking the doors. After I had pulled the other lever and opened the brakes, it occurred to me that the first action had at least reduced the wing's angle of attack, but now I could not rotate the aircraft. Help soon arrived, however, in the shape of the owner of the field and a number of children, who lifted the tail while I put the wheel down. We then parked the aircraft a bit more conventionally. I still didn't dare leave to telephone the airfield, and I couldn't raise anyone on the radio, so I asked the farmer to telephone for me. Everyone then departed, leaving me with a large sheet of waterproof material (the rain was just starting).

I waited in the rain, watching somewhat apprehensively as a large cloud to the SSE grew larger, emitted rain and lightning, and came closer. Within about ten minutes, though, the car and trailer appeared on the road, and then bumped down the track towards me. Meg and Kevin had arrived, with the welcome addition of Hagen Kruger. They had found me from just the information in my first "blind" radio call. The storm was very close, so we hurriedly derigged and got everything in the trailer just as the hail started.

There was one problem, however, the tail dolly had been left by the runway at the airfield and had been forgotten in the hurry to leave. This would be no problem normally, but in this trailer it stopped the fuselage rolling backwards. We would have to attach a rope to the release and tie it at the front of the trailer. Unfortunately, this would involve taking the fuselage out again, and by this time the hailstones were huge. Meg, Hagen and I huddled in the trailer and Kevin sat in the car as torrents of rain and hail poured down and lightning struck close by every few seconds. The din in the trailer was unbelievable.

After a long wait and several false starts there was a lull long enough for us to do the job. The fields were seas of mud by this time, but the track was still okay. Before we could close and level the trailer, though, another squall swept down upon us and once more there was so much lightning that it was too dangerous to stay outside.

We waited again, this time Kevin and I in the car, and Meg and Hagen in the trailer, its door still open. Squall after squall swept across from different directions. Kevin put earplugs in as the hail poured down on the roof of the car, and we watched the clouds in thoroughly alarmed fascination ... when they were visible through the precipitation. A tornado seemed quite possible.

The fields disappeared under water, which soon began to flow across the track. The wind blew with great force from every direction from east through south to west, and the rain, hail and lightning continued. In one vicious gust we felt the car lurch, and looked back anxiously at the trailer. It was still upright, but Meg and Hagen saw it move bodily sideways, even though it was attached to the car. For the first time in a week it was cold, and this eventually forced Meg and Hagen to risk the lightning for a few seconds and rush to the car, which could at least be shut, and had a heater. We even had some dry clothes. Kevin and I were unpopular, as we had eaten the food.

Night had long since fallen when finally the lightning strikes moved away somewhat and we felt it safe enough to close and level the trailer. This involved standing in running water while a cold wind pelted us with rain. Back in the car, we decided to go ahead to the other end of the track rather than back up a couple of hundred yards down a nearly invisible track in the dark.

We set off through a flooded wasteland with water running in great streams across the track. After half a mile or so, the track seemed rougher and we began to wonder about the wisdom of coming this way, but the idea of backing up now seemed even less inviting. At the bottom of a shallow dip, where even more water was coming across, there was a crunch and we came to a halt.

We got out to investigate. One of the back wheels of the car was in a hole. This was ascertained by feel, as the water came up to the rear bumper. The three males present tried lifting, while Meg drove. The car didn't

continued on next page

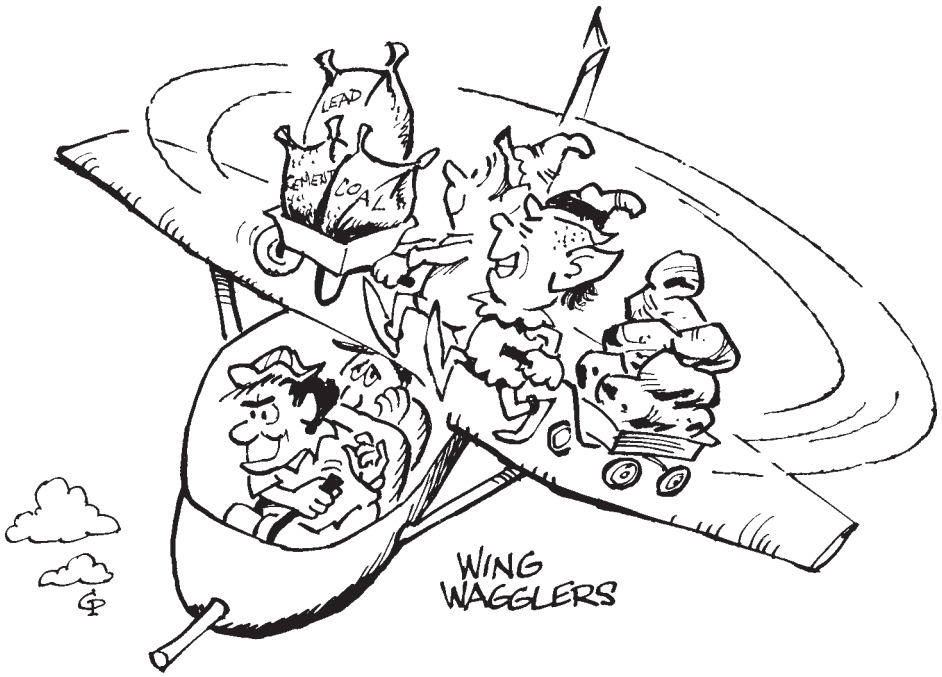
Bumble and the Gremlins

Eric Newsome

Part 3 The Case of the Elusive Towplane

Bumble's opinion of towpilots is low. Obviously, as they rely on power to drag them through the sky, they must be of a lesser breed. They are not very good pilots either, and instead of flying a steady pattern they fly erratically and seem to take a perverse delight in dodging about the sky in a mischievous attempt to keep him permanently out of position.

What Bumble does not realize is that, contrary to popular belief, towpilots are not a species of gremlin but there are many other gremlin types which specialize in making tows a refined form of torture. These gremlins waste no time in getting into action and, as soon as the wheel has lurched from the turf, the *Wing Wagglers* start to work. They operate by running across the wing from tip to tip and as they do so, their weight causes the wings to rock violently. There is no way to beat them for sometimes having pushed a wing down, which Bumble hastily corrects, they retreat only to the centre section and then rush down the same wing again. This is as good an explanation as any as to why Bumble invariably climbs out like a drunken sailor.



The *Wing Wagglers* quickly tire and by one thousand feet they have normally left to find another victim. At this point Bumble begins to relax, his mind slips into its usual neutral and his eyes begin to glaze. It is then that the *Towplane Tuggers* begin their sly attack. They have the ability to move the towplane bodily in all directions and are incapable only of putting it dead ahead of the glider. Bumble begins to sweat as his stick-hand jabs and weaves with the dexterity of a fencing master while his feet beat an unrelated tattoo on the rudder pedals. None of this has any influence on the relative position of the towplane and the glider, but it has a charming effect on the instructor: first he turns white and then pale green, and driven to extreme measures by a churning stomach, he lays his hand upon the stick. Curiously, gremlins have respect for greybeards and once the instructor takes over they cease their tricks. The towplane seems glued to the horizon, the rope is tight and the stick never moves while the instructor says soothingly, "See, it wants to fly in position unless you prevent it from doing so."

Again Bumble takes over and miserably wallows upward. One good thing about tows is that eventually they end. Hopefully.

If it is any consolation to Bumble, towpilots are also prey to gremlins. Most exasperating of all are the *Rope Snaggers* who elevate fences in order to break the trailing ropes of towplanes making high approaches. □

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budge. We unhitched the trailer (not easy as the chains were tangled and underwater, and Meg's bike was on its rack) and tried lifting again. Nothing moved. Kevin keeps about 300 Ibs of tools in his trunk, so we should not have been surprised. Evidently, it was time to start walking.

We hitched the trailer to the car again, finding out in the process that, while the water on the track was a mere six inches deep, it was over my knees just off it. As we set off on foot, the croaking of thousands of spadefoot toads surrounded us in the darkness. We came at last to a concession road, but it was separated from our track by a fence and a ditch. We couldn't have driven out this way anyway!

A pick-up truck was coming along the road, so we climbed the fence and tried to flag it down. The driver took one look and roared away from this dubious and bedraggled bunch. We trudged along the road to a nearby house, where the occupants were just about to leave in their station wagon. These natives were friendly and very kindly gave four very wet strangers a ride to the motel, where we set about getting warm and dry again. Wilf and Ulli then showed up with their crews. They had been searching for us, and had reported us as missing to the police. We borrowed a car and went to the local greasy spoon where we found both food and the Sheriff (this was his usual hang-out).

The retrieve actually finished the next morning. With a large crew we returned to the car and trailer. Most of the water had vanished, but there were still large ponds on either side of the road, complete with hundreds of toads. The trailer was unhitched, turned around and towed out, and Kevin's car was jacked out of its hole, which was then filled with rocks. Miraculously the engine started, blowing large amounts of water out of the exhaust. The convoy then returned to the airfield with Meg bringing up the rear on her bike.

The rest of that day was spent cleaning and drying everything from the car and trailer. We had all acquired new respect for the violence of the elements and were a bit apprehensive about retrieves during the competition. Perhaps by way of compensation, we only did one, and that took less than half an hour, with my crew arriving in time to help me out of the cockpit. □

A SEASON WITH CVVQ

James Bucknall
Rideau Valley

This story tells of my excellent visit and year of soaring with the Club de Vol à Voile de Québec in 1983. The year was made possible by the fortunate coming together of four factors. First, I had a sabbatical at Laval University, Québec City. Second, my partner in our Skylark 4 was unable to fly this year so that I was able to take OZH to Québec. Third, the soaring conditions were good this year. Last, but not at all least, the Club de Vol à Voile de Québec has two excellent soaring sites, and a very friendly and active membership.

A little history and geography. The CVVQ was founded in the mid-fifties. It moved to the present site at St-Raymond, some 50 kilometres northwest of Québec City, in the mid-sixties. The country north of the St. Lawrence river consists of a wide flood plain stretching from Québec City all the way down to Montreal. North of this cultivated flood plain are tree-covered mountains which stretch as far as the eye can see, and which are quite impenetrable. Cross-country soaring is, by-and-large, restricted to the strip of land bounded by Québec City to the east, the St. Lawrence to the south, Montreal to the west, and the mountains to the north. I said, "by-and-large" because the occasional brave soul crosses the St. Lawrence to fly on the south shore, and Gilles Boily skirted Montreal on his 500 kilometre St-Raymond/Hawkesbury/St-Raymond out-and-return this year.

The soaring site itself is nestled at the base of the mountains and is very picturesque. The field has a large runway and is sufficiently wide that several gliders can land at the same time without blocking the main runway. The site is also well endowed with a good clubhouse, numerous hangars for both club and private ships, and a well-developed campsite.

As I mentioned earlier, the membership of the CVVQ is very active. Flying starts as early in the year as possible which I understand is usually not before the beginning of May. We had a very cold and wet April and early May in 1983, so it was not really much before the middle of the month that soaring began in earnest. A late start, while perhaps frustrating, is not critical for a season's good soaring because the CVVQ becomes a seven day a week operation throughout the months of June, July and August. Great emphasis is placed on cross-country soaring.

Some statistics for 1983: number of glider flights – 2091, down from previous years although the hours flown (1833) were the highest ever. There was one 500 km flight, eight 300 km flights, one Gold badge and five Silver badges.

Glider pilots, when describing memorable flights to non-glider pilots, often get that sinking feeling that much of the joy of the flight is lost in the telling. Perhaps that is also true for stories told to fellow glider pilots. It is with some trepidation, therefore, that I recall one flight that for me was truly memorable. I should preface the story by saying that I have flown gliders for the last seven years, have over 700 flights, and have completed each of the legs for the Silver C several times, but for a number of reasons have never claimed the award.

June 20, 1983 had all the markings of a good soaring day so I decided that it would be the day that I tried to earn my Silver C. With the recent changes in the rules it is now possible to complete all three legs of the badge in a single flight. I declared Lac à la Tortue, some 75 kilometres away, as my turnpoint and set off around 11 o'clock. To cut a long story short, I made the out-and-return in under three hours and then flew locally for several hours before landing around 6:30 pm. The statistics of the flight were: flight time 7:32 hours, altitude gain 8500 feet, and distance flown 143 kilometres. While the flight itself was marvellous fun, what truly made it memorable was that June 20, 1983 was the twentieth anniversary to the very day of Oscar Zulu Hotel's maiden flight in England.

I got my comeuppance the following day. With my newfound confidence I declared Joliette as the turnpoint for my 300 kilometre out-and-return. All went well to the turnpoint, in fact the last 40 minutes before the turnpoint were flown in the best-developed cloud street that I have ever encountered. I had to leave the cloud street to take my photo only to discover that a very heavy band of cirrus had moved in which completely killed all lift. I could see the cumulus clouds some 10 kilometres ahead of me but I simply could not reach them. I finally made *"ma première vraie vache"* (that's French for my first real outlanding) at the place called Yamachiche.

Here comes the rub. As we were flying during the week, everyone was at the club to fly and there was no one available to crew. So all pilots act as a crew for all other pilots. This system works extremely well provided that no one lands out. If one person lands out you have a problem. The problem compounds exponentially if more than one pilot lands out. On that particular day, two of us landed out, so I put in a good day of hay-making with the local farmers before finally getting back to St Raymond some 15 hours after takeoff. I got a lot of ribbing due to the fact that my Skylark glider only flew 200 kilometres that day yet my Buick Skylark put on 300.6 kilometres with the retrieve.

I had to return to Ottawa after Labour Day. I left OZH in Québec because I wanted to return to Baie St-Paul, the CVVQ's wave camp, for a week of soaring around Thanksgiving.

More geography. Baie St-Paul is situated on the north shore of the St. Lawrence River about 100 kilometres northeast of Québec City. The environs consists of a horseshoe of 2000 foot high mountains, with the open end of the horseshoe being the St. Lawrence. Geologists tell me that the structure was caused by a meteorite.

During the week that I was there in October, there were some 16 gliders at the site, including a couple from southern Ontario and a couple from Nova Scotia. I had been told all summer long that no matter which way the wind blew, there would always be soaring. For the first couple of days the wind blew from the southeast and the only soaring was along the ridge of the St. Lawrence; a type of soaring which I found somewhat hairy at first, given the distance from the strip and the proximity of the river. Next it rained for two days. Finally the wind shifted to the west, and we had two good days of wave.

The wind was quite strong the first day and I climbed to 12,000 feet in my first ever successful wave flight. After about three hours of soaring, I had allowed myself to drift about 15 miles downwind of the airport and perhaps 10-12 miles from the ridge that led back to the airport. Imagine my concern, therefore, when I started back and found that I was making little forward progress at 70 knots. I put the nose down, got her up to 90 knots headed for the nearest point of the ridge, and discovered a lot about the glide ratio of Skylarks in strong winds during the next 10 minutes. I made it back to the ridge and used ridge lift to get back to the strip. I had used well over 10,000 feet of altitude to go little more than 10 miles. I later found out that the wind had been 70 knots at 15,000 feet. The trace of that flight is in my log book as a reminder.

The next day the wind was nothing like as strong. I caught the wave at about 3000 feet, lost it completely notching the trace and finally caught the upside of the rotor at 1500 feet which took me back up to the wave. The following five hours were blissfully spent between 9000 and 11,200 feet. I never did get my Gold climb, but I got within 100 metres several times as the wave cycled. There is always next season.

Talking of next season. I have already decided to return to St-Raymond this June for a week (I hope that coincides with their lobster party) and to Baie St-Paul for another week in October. I know the club would love to have another visitor. Just give them a call and I can promise you a warm welcome and, weather permitting, interesting soaring.

A tous mes amis du CVVQ, je vous remercie de tout cœur pour la saison de vol à voile que j'ai passée à votre club et j'espère vivement vous retrouver l'année prochaine. □

SMALL CLUB – BIG EVENT

Organizing the '83 Québec Provincials

Robert Di Pietro

The 4th Québec Soaring Championships has an interesting tale behind it, and going through the explanatory motions can be beneficial to others.

To begin with, how can a Montreal area small club like l'Association Vol à Voile Champlain host a competition? The airfield is too small to accommodate a large number of gliders and towplanes simultaneously. The membership has relatively no experience in organizing contests, not to mention the lack of equipment such as start gates, ground communications and numerous experts in scoring, staging, meteorology, and so forth. Well, volumes could explain it all, but let's be brief and simply explain to other small clubs across Canada with similar situations how they can possibly pick-up ideas and form solutions as we have. Oh, by the way, the formula is not that complicated; read on.

The first and third Québec Competitions were hosted by the Québec Soaring Club in St-Raymond (located west of Québec City), the second was handled by the Montreal Soaring Council in Hawkesbury. The Champlain members felt that the 4th should be our effort before the meet ping-ponged only between QSC and MSC. The Champlain club is relatively small with a total of 30 members but is extremely active. We felt the next meet would be our effort. How? For every problem, there are solutions. Some are lengthy and time-consuming, some are not. Since the former is not appealing, part of the problem-solving was utilizing a much lacking aspect to the soaring fraternity – PR. Our public relations department has been doing well in promoting soaring activities and participation, so here's how we did it.

1 SITE

Find a suitable site where the soaring conditions are attractive. Our solution was straightforward. From previous experiences, we realized that Bromont airport, situated at the foothills of the Eastern Townships, is an area highly developed for sports and recreation. Power traffic at the airport is light and should not cause any problems. The mayor of Bromont and the airport manager were contacted and soon thereafter we had the green light for our meet.

2 TOWPLANES AND STAFF

Other very important matters are towplane availability and finding some experienced personnel with contest knowledge to assure a smooth operation. This was handled as part of our 'PR' program with other clubs from our zone, and again the responses were more than positive. MSC and QSC promised a towplane each. Three were on site for the meet. For a while, we thought that the Québec club tug was lost due to mechanical problems. I am sure that the midnight oil was not spared to remedy the situation and not disappoint the contest organizers. Thanks guys.

With the planning in motion, further discussions brought about numerous ideas for future provincial competitions such as: a common site every year hosted by alternating clubs – alternate club sites with combined assistance from the others in publicity, mailing, scoring, trophies, ground crews, gate personnel, weather briefing, etc, etc. Suggestions such as these are much appreciated as they indicate interest and increase participation. Once the ball starts rolling and most become familiar with all the procedures, meets can easily be organized and eliminate the burden on just a few.

3 TURNPOINT PHOTO BOOKLET

The Champlain club is located east of Montreal and although I have heard of glider pilots flying through this region prior to the '83 season, it was quite unexplored. Out with the maps to plot interesting, challenging and safe areas to soar. A few nights' work, or shall I call it 'enjoyment' and enough turnpoints were chosen for the contest and also as badge flights or tasks for future years. We were fortunate that the winter of 82/83 arrived late. Mild temperatures and no snow gave us an early break to investigate and photograph all turnpoints on two weekend days prior to New Years. Mother nature can be nice.

Not to break the trend, we adopted the standard TP card information containing photo, reproduction of the 1/50,000 scale section to clearly identify the position and coordinates. One thing was a must: it was commented that most of the TP booklets used in contests contained printed photos that are not clear (fuzzy or poor printing) and disturbing to those who have not flown in the area before. Printing of good quality is expensive, but thanks to the business contacts of Robert Binette and the skills of a graphic artist named Jean-Pierre Brière, the whole package turned out fantastic. The printing costs were sponsored by a local insurance company, and as part of the advertising process, we proceeded to mail out five hundred booklets to all Québec zone SAC members, most of Eastern Ontario, the Maritime Provinces and all Provincial Council Directors from coast to coast. Believe me, it is heartwarming to receive letters of thanks and comments from many. Answering one letter (long overdue) from Mike Apps of the Alberta Soaring Council, those "clear professional pictures taken from a special camera" were indeed taken by an amateur (namely me) with a 35 mm camera equipped with an 80 mm lens and shot at 1500 feet from our Cessna 150 tug. No magic recipe required.

4 CONTEST PERSONNEL

A Contest Director must be assigned. This position must be filled by one qualified in all aspects of soaring, be orderly and carry the respect of fellow pilots. The MSC has a developed background in contest activities so our search area was somewhat biased. John Bisscheroux not only filled the requirements but was excellent in training and guiding the uninitiated, and achieved a smooth running operation.

The weatherman is a unique function. Do we throw tomatoes or hug the met-man. Although the actual soaring conditions can make this decision for us quickly, there still remains the fact that precise forecasts from this weather fellow has a decisive impact on the tasks and attitudes of the pilots for the days to come. Record breaking tasks on days that hot air balloons can't stay up may be stretching criticism a bit far, but I've seen some dandies. Due to past experience, we had our man picked, Denis Pepin (QSC), well assisted by Gilles Boily.

PS. Their predictions for the meet were right-on.

5 ACCESSORIES

Height Gate Although new start systems may eliminate the height gate, we elected to go as traditionally for now. So how does one go about obtaining this gadget? – borrow one from another club and hope that someone says, "I can build one of those better." Someone did and we now have our own. The other options are to use the borrowed unit or build from scratch on information articles supplied in soaring magazines.

Ground Communications Walkie-talkies are used for ground communications to eliminate tie-up on aircraft radio frequencies. Three to five are normally required and manned by the staging manager, height gate attendant, start gate and field security. If none are available from within the membership, do what we did ... borrow. Many large firms use professional quality units for their own internal purposes and some are only too happy to accommodate your needs over long weekends.

Forms Land-out and crew cards, tow tickets, weather info forms, take-off, start and finish time sheets are most necessary but time consuming to obtain. Printing costs for low quantities are high. I have a copy of a letter by Dave Marsden to the SAC dated years ago commenting on standardizing these very forms at the National Office level. Re-submit that letter Dave, we could use these forms for all levels of meets. To save on expenses and time, Champlain prepared masters and photocopied them.

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spring safety

4 articles for your consideration prior to your 1st flight in 1984

1 Parachute procedures
2 "Abnormal" flight
3 Low thermalling
4 How to share a thermal

1 GETTING OUT IN TIME

What to do with a parachute

Manfred Radius

Sometimes, when I am putting on my parachute before a flight, a fellow club member will ask me jokingly whether I am planning to make a jump. This question is an indication of his unfamiliarity with parachutes. He rarely gets to see one. He certainly was not supplied with a chute during his dual training, and also as a solo pilot he is filling the space behind his back with cushions.

In our sport, our continued existence depends to a high degree on the proper functioning of our flying machines. Not a year goes by that, somewhere, some gliders are losing their ability to fly or become uncontrollable. A major cause of such an emergency is the midair collision. Even when you are doing your utmost to avoid a collision by constantly searching the sky for other aircraft, there is no guarantee that someone else isn't being careless. If the aircraft is incapacitated for whatever reason and out of control, the parachute may offer the only chance of survival.

It makes sense to wear a chute on every flight – even on a short local flight, since the traffic is usually most concentrated in the vicinity of the gliderport.

The parachute is a reliable piece of emergency equipment. Provided there is sufficient height and time available for a bail-out, its usefulness depends largely of three factors: the pilot, who must be prepared to follow the proper bail-out procedure, the serviceability of the glider's canopy jettison mechanism, and the serviceability of the parachute.

Quick-release buckle used on many chutes. This one is not fully closed and could release if snagged. Push release lever all the way down until it "clicks".

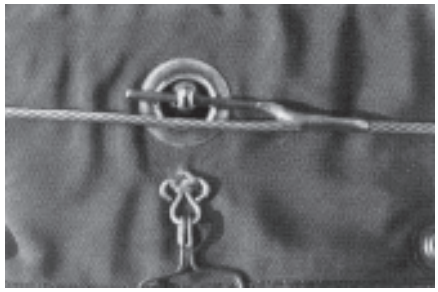
THE PARACHUTE Taking good care of your parachute helps to ensure that it lets you down safely, when you want it to.

Every chute should have its own bag for transporting and storage. Store it in a cool, dark and dry place (fluorescent light is harmful). If possible, hang it up, so rodents can't eat it. At the field, provide a designated place, where it is out of the sun or rain, away from batteries (acid), dirt and animals. Don't sit on it. This could bend the pins or mislocate the pilot chute. Have the parachute aired, inspected and repacked periodically.

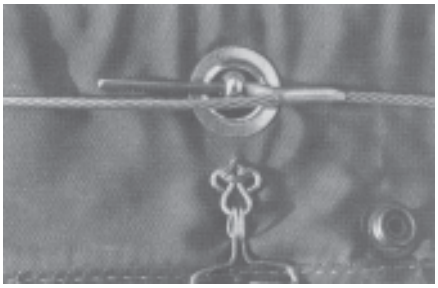
Before donning the chute, do a pre-flight check. Check the container and webbing for tears, excess wear, fraying, wetness and stains. Stains caused by grease, oil or acid are an indication of probable damage to the canopy and other components. If any of these conditions are present, the chute needs the service of a rigger. Check the hardware for cracks, excess wear, corrosion, and proper functioning of spring loaded snaps. Make sure the ripcord handle is seated properly in its pocket. Check the attachment of the handle to the ripcord, and the ripcord for kinks, excess wear and broken wires. A single broken strand necessitates replacement by a rigger. The ripcord pins must be straight and seated properly (see picture). Constant handling of chutes will cause the pins to work loose and possibly jam.

When donning it, lift the chute by its harness (see picture). Do not lift on the risers. The risers are connected to the suspension lines which you could pull out, necessitating repacking. Be certain to route and connect all straps properly. Adjust the harness snugly. This might be uncomfortable for walking, but will be comfortable when seated.

THE GLIDER The canopy jettison mechanisms must be well maintained to function properly. Unfortunately some are poorly designed. Be thoroughly familiar with the canopy jettison procedure of every glider type you are flying. It might be a good idea to practise jettisoning the canopy on the ground. Of course, someone has to hold the canopy, so it does not get damaged. This practice can be very beneficial, since time is an important factor in the event of a bail out. *[Schweizer canopy pins can easily get so bent or rusty with time and (mis)use as to be very difficult to extract inside the cockpit. Give it a try. ed.]*



This pin is not far enough in. With more handling and movement of the canopy container, it will work loose.



This pin is too far in. Note the thicker root of the pin could jam in the holder and make it difficult to pull the ripcord handle.

THE PILOT Given 'ideal' external conditions in case of emergency, its successful handling depends on the preparedness of the pilot. In case of an emergency, follow the three D's: Determine, Decide, Do it (fast).

• Determine Am I in control of the aircraft, can I land it safely? Am I high enough above ground for the chute to be useful? The required height varies greatly, depending on the aircraft's rate of descent and the time it takes you to leave it. If you activate your parachute as low as 300 feet agl, the canopy will most likely inflate.

• Decide If you have determined that you have no or insufficient control for a reasonably safe landing, and you have sufficient height, make the firm decision to bail out.

The correct way to lift a parachute — by the harness and risers.

• Do it (fast) Begin the bail out procedure immediately.

1) Jettison canopy. While jettisoning the canopy, you must remain strapped in to prevent you from bouncing around in the cockpit or from being pushed against the canopy in case of negative 'g'.

2) Open seat belts. When opening the seat belts, look at what you are doing.

3) Leave aircraft. You may be subjected to strong positive 'g'. In this case, getting out may be extremely difficult. Use all your energy and roll yourself overboard on the side which is easier. Avoid getting hooked on your ripcord handle.

4) Deploy parachute. As soon as you are clear of the aircraft, look at the ripcord handle, grab it and pull hard. Since you might be low, pull the ripcord as soon as you are clear of the aircraft. It is very important to look at the ripcord handle when grabbing it, to be sure you don't pull on something else. Pull out the ripcord fully and throw it away immediately so it can't interfere with the deployment. Do not grab anything during the deployment sequence of your parachute.

The correct way to pull the ripcord. Look at the handle, use both hands and pull hard to pull the cable out. Then throw it away.

When the parachute canopy is inflated, steer it by pulling on its steering lines. If it has no steering lines, you may be able to turn or slip by pulling hard for several seconds on one rear riser or some rear suspension lines. Steer away from water, power lines and other obstacles. Avoid turning close to the ground as the rate of descent is higher while turning.

Try to land into wind. The best way to avoid injury on landing is by using the 'Parachute Landing Fall': Press your knees and feet firmly together, bend your knees slightly, round your back a little, tuck your chin and elbows in, hold your hands in front of your face, land on the balls of your feet and roll your body on contact with the ground. Do not attempt a stand-up landing.

To prevent being dragged in high winds, get up quickly after landing, run around the canopy and hold it down at its apex. If you are being dragged, roll onto your back and pull hard on a bottom riser to deflate the canopy.

You might consider taking a first-jump course at a reputable parachute school or club. Besides having fun, you will learn the parachute landing fall, and having made a jump might take away some of the apprehension at decision time in an emergency and save valuable seconds. It may be noted that one of the recommendations the jury made as a result of their inquest into the midair collision last July 17 near Hawkesbury was that parachute jumps be considered part of training for student pilots. Finally, I suggest that you conduct all your flying activities in a professional, not a casual, manner. It is a matter of good airmanship to develop and apply only safe flying habits. One such habit is to recall the three D's — Determine, Decide, Do it (fast) — and to mentally review your bailout procedure before every flight. Give yourself the best possible chance of being prepared at all times. □

Douglas A. Tetu

Members of the Gatineau Gliding Club and all soaring enthusiasts in Canada were shocked and saddened to learn of the sudden passing of Doug Tetu, former CFI and Director of Gatineau Gliding Club, on December 18, 1983.

Doug joined Gatineau Gliding Club in the late sixties and immediately became one of the club's most active and dedicated members. He and his wife Winnie were to be found at the club every weekend during the flying season – rain or shine. Doug had a natural aptitude and great love for soaring. Not long after going solo he bought a share in a Skylark III with which he eagerly began cross-country flying. On any good day Doug led the way in attempting badge flights with an enthusiasm which encouraged everyone else to try something as well. Finally, in August 1976, his efforts were rewarded with a 300 km out and return flight from Pendleton to Gananoque airport and return. In the meantime, Doug had obtained an instructors rating and became one of the most dedicated and highly skilled instructors in the club. Doug's patience in instructing seemed endless, as was the energy and effort he put into it. Soon he was made Chief Flying Instructor and devoted himself to this challenge with his customary vigour. He personally gave spring checkouts to most of the pilots in the club and established an unmatched standard of safety.

In 1977 Doug acquired a PIK-20D with which he made many excellent flights. In the spring of last year he achieved his dream flight – a 500 km triangle from Pendleton airport, with turnpoints at Bonnechere and Lachute airports. This was only the second 500 km triangle ever flown from Pendleton. In October, Doug also achieved Gold "C" height at Sugarbush, Vermont.

Doug's passing leaves a large void in our club to which he had devoted himself so vigorously. We will most miss his infectious enthusiasm for flying, his competitive drive to excel at everything he tried and his expert abilities as a teacher of flying. We will remember him as a fellow pilot, an instructor, a gentleman and a great friend.

Ulli Werneburg

2 ABNORMAL FLIGHT

Allen Ash
from Australian Gliding, Dec '83

Accidents and near accidents caused by slow approaches and slow turns at low altitude continue to plague the gliding movement. Similarly, over-fast landings and high approaches leading to excessive overshooting are far more common than they should be.

I would like to put forward for consideration the suggestion that all these errors of judgement – and perhaps several others as well stem from the same root cause. Perhaps some of our instructors and more experienced pilots would comment and put forward their own ideas.

The misjudgements listed can be classified as pilot errors – since the instruments would show the correct state of affairs if they were consulted – so the first thing to consider is the pilot and his mental processes while committing the errors. When questioned on why he made a fast, slow or otherwise incorrect approach, the main feature of the pilot's reply is the assertion that, as far as he is concerned, the approach was not fast, slow or otherwise incorrect. The statement is usually dismissed as an attempt to cover up and excuse his mistakes, and I think it is here that the instructor is in error.

Let us assume that the pilot is speaking the truth and that he really did think he was flying in the prescribed manner. This leads to the conclusion that a faulty impression has been unwittingly accepted by the pilot as a correct one.

Alright, now we are getting somewhere! The next thing to query is what brought about this acceptance of wrong as right. My suggestion is that it is the acceptance of the unusual as normal — a subconscious acceptance of which the pilot has no later recollection.

Perhaps a few examples may make the latter easier to follow.

On a cross-country flight I had climbed to 8000 feet and set off on course at 80 kts. This speed was maintained for about 10 minutes before another thermal was encountered. In settling down to circle in the thermal, quite a conscious effort was required to fly at the required 42 kts. All the time, I had a feeling that I was on the verge of a stall and kept letting the speed build up. It was only above 50 kts that the feeling of approaching the stall was overcome. Several minutes later, however, the stall consciousness left me and I flew comfortably at 42 kts. I had become so used to the sound and feel of the sailplane at 80 kts that I had accepted this sound and feel as normal and a lower speed brought on a strong feeling of stalling — though the sailplane was never within 5 knots of it.

At the opposite extreme, I once spent 20 minutes trying to improve on "no sink" at a height of about 700 feet. Finally, because of drift, I had to give it away and land. It came as a shock when I found I was mushing in and eventually the wind gradient stalled the sailplane when it was still a couple of feet in the air. I was sure I had ample speed on the approach but 20 minutes of flying at low speed had robbed me of correct speed judgement on the approach and I had less speed than I imagined.

On another occasion, I had spent a pleasant hour at 5000 feet but then lost height quickly and found myself stalking thermals at the edge of the aerodrome at less than 1000 feet. I had given up hope of finding one and was working out an approach when a familiar tremor ran through the sailplane. The first reaction was, "Fly through it, you are too low to circle." Consulting the altimeter, however, revealed that we still had 800 feet in hand so I circled and climbed away. But throughout the first circle I had a strong feeling that my lower wingtip was almost brushing the trees.

In these three instances, I had for some time been flying in "abnormal" conditions — high speed, low speed, high altitude — and had come to accept these conditions as normal so that when true normal flight was resumed it seemed, for a while, that it was abnormal. It took only a minute to realize the mistake but for a while the feeling was quite strong that the abnormal was normal and vice versa.

The lesson to be learned is that abnormal flying should not be done close to the ground and that after such abnormal flying a sufficient period should be allowed for complete recovery before a landing is attempted.

I feel that many faulty approaches and landings are due to performing aerobatics close to the ground. After a session of maneuvers involving high and low speed flying, steep turns and general tumbling about, the pilot's senses are not as keen as they should in the normal flying range. After a series of stall-turns and vertical banks a pilot may make his final turn an excessively steep one. If, at the same time, his airspeed is low, he may slip off more height than anticipated, leaving less margin to straighten out and land. Sometimes, even a series of steep turns in a thermal will affect judgement.

I once saw a pilot, after a prolonged high-speed dive, make a deliberate slipping turn on his approach in an attempt to lose height while turning through 90 degrees. Airspeed during the turn became too low to pick up the wing at the correct moment and the wing hit the ground, cart-wheeling the glider and injuring the pilot. Opinion afterwards was that the pilot left it too late to come out of the slip, but it might be more accurate to say that, when he tried to recover from the slip, the controls had insufficient "bite" (due to low airspeed) to perform the manoeuvre as quickly as the pilot thought they would. Thus, what looked like an error in height, could in reality have been an error in reaction timing.

The primary cause of these accidents is that, when close to the ground, the pilot is flying by "feel" and not by instruments.

I certainly do not advocate watching the instruments while making an approach, but pilots should be aware of the possibility of misjudgement after becoming accustomed to unusual flight speeds or flight attitudes and should make allowance accordingly. If possible, normal flying (in speed and attitude) should be resumed as soon as height falls below 2000 feet. This gives about 10 minutes for the pilot's senses to re-accustom themselves to the sound and feel of the aircraft in normal flight before a landing must be made. This also means that aerobatics should not be performed below 2000 feet.

As with most aspects of flying, the more experience a pilot has, the less he is affected by abnormal flying and the sooner he recovers from false impressions. However, even experienced pilots can be caught out at times, so it pays to be careful all the time.

When dealing with future cases of slow approaches, undershooting, overshooting or steep turns near the ground it might pay to check back on what the pilot had been doing during the last 15 minutes of the flight. □

I find that the article has answered, in part, why my landings are sometimes nothing to write home about after a wave flight. What stronger transition can one experience than that which occurs on descent out of the wave?

You have been peaceful and detached while wafting around in the "baby-bottom" smoothness above the clouds – fingertips on the stick, mind in low gear. Then, with the decision to go down, the increased noise and motion of an "everything-hanging-out" descent and the sudden banging around in the low altitude turbulence you had almost forgotten about. As you enter the circuit, everything seems to be happening too fast, like in your pre-solo days, and you are likely to make errors of judgement. I have.

From now on I intend to check my full descent around 2000 feet agl to give myself a few extra minutes to reacclimatize myself to the weather and the glider in the world near the ground. Tony.

3 HOW LOW CAN YOU GO ?

Gene Hammond

reprinted from SOARING, Dec '83

If you have reached the point of having to circle desperately in any lift you can find at low altitude, you are adding worms by the handful to a can already full. Low thermalling is loaded with hazards.

What is the minimum safe altitude for thermalling? The answer is influenced by pilot skill, terrain, weather and other circumstances, but it is ALWAYS a critically important decision. We have all seen (or heard about) a glider circling so low that the wingtip vortices were creating their own dust devils, and we have wondered what would ever be so important as to make a pilot put his life and his aircraft into such obvious and mortal danger.

The answer to that could well be a world championship, or even a national championship. Or could it be something as foolish as the belief that a recovery from such a low altitude is the "macho" thing to do? It might even be that the pilot has no place to land anyway, so might as well circle (how'd he get in that position?), or he is trying to complete his badge flight. Or, might it be that the pilot has never given serious thought to the consequence of such an act?

There is no set rule for low thermalling, as can be seen from the following statements:

• "The minimum safe altitude for thermalling is one you'd be willing to spin from." — Steve du Pont

"Somewhere between 1000 and 600 agl the decision must be made to land or thermal." — Tom Rudolf

• "Our club doesn't allow thermalling below 800 feet agl in club equipment." Chicago Glider Club

• "During a contest, many things influence your thinking. What normally would not even be considered as a safe course of action is taken as a necessary part of competing, so the minimum altitude for circling goes by the conditions encountered. It must be understood by the rest of the soaring community that the competition pilot in no way condones thermalling at altitudes below 500-600 feet, but is willing to face the hazards of such actions only because he is competing. Even then, the competition pilot is extremely aware of his position and the wind conditions and is not willing to circle under what he believes to be impossible conditions." — Wylie Mullen, competition pilot

These comments were typical of those received while researching this question and typify the wide diversity of opinion on what is the minimum altitude for thermalling. From these comments, it can be seen that each pilot must finally choose his own altitude with guidance from the club CFI. Du Pont's comment is very pointed, and probably should be made the "Golden Rule" of thermalling.

Isn't it interesting, though, that if you have no idea of how much altitude is lost during a spin (having never been introduced to spins or having never done one for yourself), you have no idea what a safe altitude for thermalling is?

Cardinal Rule 1: It is impossible to thermal if closer to the ground than half the wing span of the glider.

Though stated with tongue in cheek, this is a true statement, and constitutes the lowest altitude possible to circle, whether thermalling or just trying to turn.

Cardinal Rule 2: If a glider loses 200 feet in a turn, it is terribly unwise to attempt to circle 200 feet above the ground.

Again, said somewhat tongue in cheek, it points out that you must know more about your glider than what the approach speed is. Isn't it obvious that if a turn is attempted and there is really no thermal there, that circling below the loss figure will result in collision with the ground? If it isn't obvious, perhaps a less demanding sport would be your cup of tea.

Cardinal Rule 3: If the wind is blowing, the minimum altitude to thermal should be raised by at least 500 feet.

This is not said tongue-in-cheek! When wind velocities exceed 15 or maybe 20 knots, low-level thermals are generally so erratic that they are almost impossible to use successfully. In addition to the roughness, the amount of drift encountered will be large, and each circle will take you further from the airport or safe landing field you had within reach. Under these conditions, a SAFE altitude from which a successful save might be made may be well above 1000 agl.

Cardinal Rule 4: Keep a place to land in range while thermalling (or looking for a thermal), and when your present altitude makes a safe approach and landing marginal, quit thermalling and prepare to land.

There is a large difference between knowing you can land safely and thinking you can land safely. As long as you know you can land safely, using a nice pattern and good technique, you are probably safe in continuing your search for thermals,

When "I know I can land safely" becomes "I think I can land safely", it is time for you to land without further thermalling attempts. The stress level rises sharply when 'know' becomes 'think', and that combination of stress and insecurity turns your thermalling technique to mush. Many studies have been conducted that show that as the stress level goes up, pilot skills go down, just when you need them the most. Combine this loss of skill due to stress with a strong wind and you have a problem that may be beyond the ability of the student pilot, or for that matter, the weekend pilot, regardless of how many ratings he may hold.

..."There I was at 200 feet, nothing but rocks below me and not a cloud in sight, when all of a sudden, the left wing rose sharply and the vario screamed wildly. I whipped the glider into a steep bank and climbed away from disaster at 2000 feet per minute!"

What a fantasy! The pilot drove himself into disaster and only with luck managed to survive. You have probably read or heard those stories and thought, "What a pilot!" (or "What a fool!"), but yet would like to taste that sensation of adventure which must accompany such a save.

How about this one? "I'd just turned final for the hayfield when I ran through this tremendous bubble. I sucked the gear up and climbed away from the other disgruntled pilots in the field and returned to the home base without further incident."

Please realize that such saves are extremely rare, and that's why they make such good adventure stories. If the attempts had not been successful, an accident report might have replaced the story. Pilots who speak consistently of making low saves are exhibiting the bad judgement that normally accompanies the "macho" attitude, and "macho" is one of the leading causes of accidents.

As Wylie Mullen stated earlier, competition pilots tend to set their minimum altitude lower than other pilots. What he also wanted emphasized was that competition pilots are generally highly skilled, have the best equipment, know their equipment very well, have accumulated more flight time than the "weekend pilot". They have landed out frequently (especially in their early attempts at badges and contest flights) and, even though they feel apprehension at the thought of landing away from an airport, they know how to do it and are willing to accept the consequence of landing away as part of competition.

Even with all of these things in hand, Mullen emphasized that it is foolish to attempt low saves under strong wind conditions or where terrain creates its own problems.

continued on page 16

4 THERMAL ENTRY

Some notes on safety, not technique

Jos Jonkers
Cu Nim Gliding Club

Do you always enter a thermal the correct way? Yes? Good for you! What about those pilots who have never learned how to organize their entry pattern? Since the topic of entering a thermal already being used by a sailplane at about your altitude is not covered in SAC's Soaring Instruction Manual, I will take this opportunity to bring it to your attention.

According to an unwritten soaring rule, a glider entering a thermal with another one already established in it should turn in the same direction as the 'resident' glider. If, from a distance, you are aiming for the thermal, determine which direction the other glider is circling. Assuming it is to the right, you should set course for left-most position of that glider (the point at which it is flying away from you; see figure 1). Entering the thermal at this point will prevent your circling pattern from crossing, and the centre of both circles will almost coincide.

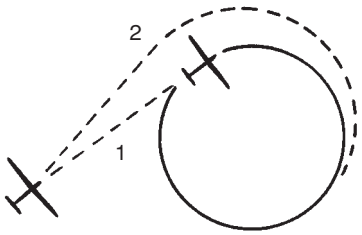


Fig 1

Try to time your thermal entry so that you and the other glider are positioned opposite each other. Depending on the situation, this may be achieved by following path 1 or 2 in figure 1. The intent, of course, is to see and be seen. It is entirely possible that the other pilot will not have seen you coming, or even be unaware that you are now in the same thermal if he has his head 'down and locked' in the cockpit. No surprises is the key to safety at this point! If you have a radio, use it if you are not sure you have been seen. If by chance your position wanders to a point where you cannot be seen by the other pilot, also inform the other pilot where you are, or readjust your circle. It is disconcerting to think someone may be nibbling at your rudder and not know which way to move for fear of making the situation worse!

Turning in the same direction is not enough. The centres of the circles must approximately coincide. In the situation shown in figure 2, glider #1 should in principle give way to #2 by changing course to the right and proceed behind #2. However, we know that increasing bank leads to only a small decrease in circle radius, so collision danger is high. It may be necessary to abandon the thermal at this point and turn away to the left depending on your separation from the other glider.

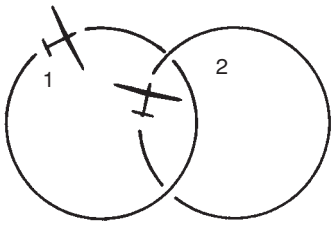


Fig 2

In the situation shown in figure 3, both left-turning gliders have to change course to the right to avoid collision. However, the moment at which this can no longer be safely done is hard to determine, so you should not delay long just because you like the lift you happen to be in at the time. Avoid situations shown in figures 2 and 3 by making early small changes to your circle, and note if the other glider follows your corrections and adjustments.

If you happen to encounter another glider entering your thermal and turning opposite to you and maintain that direction don't stand on your (unwritten) right-of-way. Play it safe and reverse your direction, *[it has been said before by others: "Being dead right has moral value, but only to your heirs". ed]*

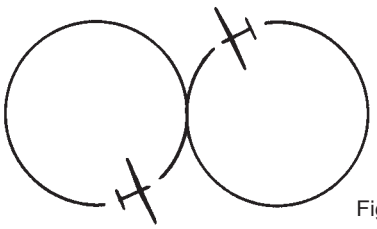


Fig 3

While thermalling, keep a reasonable vertical separation from other gliders and keep in mind that your and their wings are sticking out 5 metres vertically above and below.

In general, but certainly if there are more than two gliders in the same thermal, you have to stay out of the scattered patches close to cloudbase. Therefore, leave the thermal in time and anticipate stronger lift before reaching the edge of the cloud while flying straight ahead. It is prudent to climb near the edge of a cloud as you approach its base so that the chance of being "sucked-in" is minimized. □

Adapted from the Royal Netherlands Soaring Association soaring instructor's manual.

HOBBS — DAY 3

continued from page 5

Hobbs emerged from the shimmering haze rather low on the horizon. Reducing speed gave some relief but this was supposed to be a race. Slowly the goal crept closer, the calculator still saying that I was on the correct glide path. The air had become very calm; around me in the distance I could see several other sailplanes gliding smoothly toward our goal.

I was down to about 1000 feet and getting somewhat apprehensive as I reached the built-up areas of the city, when all of a sudden thermals started gently rocking the wings of the Ventus again. I had it made! I pushed the nose down and a few moments later zoomed across the finish line together with about 8 other gliders. "Good Finish, 28". Gear and flaps down, watch out for the other guys, touch down and roll out on the ramp from which I had taken off some 4-1/2 hours earlier.

Bruce and Kathy greeted me with big smiles and together we pushed the ship off the ramp and put it away in its trailer. Bruce had calculated my speed at over 145 km/h, the fastest I had ever flown in a sailplane.

Exhausted but content I left the airfield with my crew, knowing that I had successfully finished what was probably my most memorable flight.

A quick shower and change in the motel revived me considerably and got me ready for another part of the official program of the day. As acting team manager of the Canadian team I had been invited to attend a reception given by the CIVV, and I felt it was necessary and desirable for somebody to show up and tell the rest of the participants that soaring was alive and well in Canada. Being the only active competition pilot at the function, I was asked to describe today's flight first hand and caused quite a stir when I announced that for the first time in world competition a pilot had broken the 100 mph mark, namely Tony Timmermans of New Zealand at 164 km/h for 1st place. I ended up 21st for the day. Wally Wallington, the meteorologist with the Australian team, told me that the storm over Big Spring in the afternoon had given radar returns from 65,000 feet and had produced several tornados in the area.

In total I flew 12 competition days plus 4 practice days for 7245 km in 81 hours. The longest task was 609 km, the longest duration about 6 hours, 30 minutes. I finished in 11th place, with about 91`% of the winner's score, Kees Musters of the Netherlands.

It had been a tough three weeks, satisfying in a lot of ways, frustrating in others. What did I learn from it all? It showed me that the best pilots are extremely adaptable to changing conditions and have the endurance to fly consistently well under trying circumstances. It was a great experience for all of us on the team and I hope that Canadians will be able to participate in these events for many years to come. □

CANADIAN GLIDERS — 1983

Single Seaters:	
Schweizer 1-26	24
Jantar Std.	18
Schleicher Ka6	17
Standard Libelle	10
Schleicher ASW-20	10
Standard Cirrus	9
Skylark (2/3/4)	8
Schleicher ASW-19	7
PIK-20	7
Schreder RS-15	6
Schleicher K8	6
Astir	5
Pilatus B4	5
Schweizer 1-23	5
Phoebus	4
Std. Austria	4
Schleicher ASW-15	4
Schreder HP-11	4
Open Cirrus	3
Mosquito	3
Duster	3
Pioneer II	3
Schweizer 1-34	3
Open Libelle	2
Lark IS 29	2
Kestrel 19	2
Mini-Nimbus	2
Ventus	2
PIK-3C	2
Tern	2
Briegleb BG 12	2
Cobra	2
LS-1	2
Schweizer 1-35	2
Schreder HP-14	2
Schreder HP-18	2
Tinbus	1
M-100	1
Nimbus 2C	1
ASW-17	1
Dart	1
DG-200	1
RHJ 10	1
Monerai	1
Diamant	1
LK10	1
L-Spatz	1
Hornet	1
Woodstock	1
Club Libelle	1
Zugvogel	1
Sigma	1
PIK-20E	1
	210

Two Seaters:	
Schweizer 2-33	30
Blanik	21
Schweizer 2-22	9
Lark IS-28	6
Bergfalke	4
Twin Astir	3
Schleicher K7	3
Schleicher K 13	3
RHJ-8	1
Puchacz	1
Schweizer 2-32	1
HP-14 (mod)	1
Gemini	1
	84

Towplanes:	
Citabria	18
Super Cub	8
Cessna L-19	3
Cessna 150	3
Cessna 182	3
Cessna 305	2
Wilga	1
L-5	1
Champ	1
Scout	1
Champion	1
	41

Certain sailplanes not insured through SAC do not appear on this listing. Compiled by Al Schreiter.

BASIC INSTRUCTORS COURSE '84

EAST Gatineau Gliding Club
date: 13-18 May
contact: Wolfgang Weichert (613) 836-1318
Course Director: Ian Oldaker

WEST Cu Nim Gliding Club
date: 4-14 September
contact: Kevin Bennett (403) 253-0063
Course Director: Al Sunley

COURSE FEE - $75 (check with your provincial association for subsidies which may be available)

All applicants will be sent a course manual and a cassette tape upon receipt by the National Office of the course fee. To make best use of time on the course, it is necessary to listen to learn, and practise the lessons on the tape before coming to the course. The sooner you apply, the more practice you can get, the more progress you will make on the course. That is important!

At the end of each course, a SAC exam will be written, and you will be able to get your own revenge by filling out an evaluation on the course director.

Minimum qualifications for attendance: 125 flights as P1 (25 of which are from the rear seat), 25 hours P1, plus a recommendation from your CFI.

BOOK REVIEW ***"NURFLÜGEL" (Flying Wing)*** *by Dr. Reimar Horten*

As World War II came to an end, every German aircraft under construction or on the drawing board was some kind of tailless design. Alexander Lippich' work in this field is well known, while the accomplishments of the secretive Horten brothers was shrouded in mystery for years. Few people know that the fastest jet that flew during WWII was a twin engine Horten flying wing!

After years of experimentation with flying models, Walter and Reimar Horten built their first full size glider in the living room of their parents' home. They were mere teenagers at the time. The characteristic features of their aircraft were evident from the beginning; no fuselage, and no vertical stabilizers or control surfaces. "Nurflügel" gives a lively description of some surprising discoveries made during these early flights, which led to the design of a large motorized sailplane that they built in 1935, at the age of 19 and 21 respectively. This aircraft was both stall-proof and spin-proof.

The following year, they came up with a twin engine aircraft built entirely of resin-composite materials, using a technique that has been introduced by major aircraft manufacturers only in the last couple of years! In 1944 they built a sailplane with a 74 ft. span, that had a glide ratio of over 40:1, a number reached by only the best of today's sailplanes.

The proud and temperamental brothers had frequent clashes with the ministers in Hitler's totalitarian regime. This undoubtedly hampered the development of their brilliant designs. Later, the British tried to benefit from their knowledge. "While we cooperated with the Allied interrogators after the war", explains Reimar, "we never revealed the key to the successful flying wing! It was then both amusing and sad to see first the British, then the Americans waste large amounts of money on flying wing designs that lacked the essential aerodynamic features!" These features are revealed in the book, which also contains interesting flight stories, and a detailed description of all the Horten aircraft – over 40 different models, from hang gliders to heavy transports.

Hardbound, 240 pages, 330 illustrations with both German and English captions. The book is written in German, but contains adequate summaries in English. The 1st printing sold out in only 6 months!

Published by Weishaupt Verlag, Graz, Austria, and sold here by Scott Airpark, Lovettsville, Va. 22080. The $38 purchase price includes postage. An absolute must for your aviation library! Note: Canadian residents may send their personal check for Canadian $45 in lieu of U.S. currency.

CLUB NEWS

BLUE THERMAL MOVES

The new club in Medicine Hat has the luxury of two fields to operate from. The location map of their club which you see in the amendment pages to the Soaring Site Directory gives their "winching field" southeast of town. They have just recently leased a Scout towplane from the Grande Prairie club, so when aerotows are being used, the club will operate from the Medicine Hat airport which is very conveniently located right in town. The area has superb soaring conditions, so get in touch with them if you are in that part of the world.

VSA NEWS

The 1983 season was in keeping with the economy. We had very few students, and the inactivity of the instructors which resulted caused some controversy in the club. The level of general flying was not down greatly, thanks mainly to the conversion of the club fee structure from a billing system to a season pass system *[other clubs should check into this. ed.].*

The club pilots managed a two week excursion to Invermere in May where some spectacular flying was achieved and a one week trip with the Std Jantar and Pilatus to Ephrata at the end of June. A planned club expedition to Pemberton with objective of publicizing soaring in the area had to be cancelled at the last minute when the airport was closed for resurfacing. In addition to these club excursions, many private owners visited other soaring sites.

With the ending of the flying season, the club has embarked on the most major maintenance effort in several years. A workshop has been rented and each of the club sailplanes is being brought in for sprucing up. The most noticeable result of this maintenance campaign will be the Pilatus which has been turned into a 'Yellow Peril'. The old white paint (which was starting to become very shabby) was stripped off and the carcass spirited away to a paint shop and given a coating of 'President's choice.' Like it or not, the membership now has a yellow Pilatus to assault their eyeballs.

In 1984, the club will have a newer Blanik on the flightline. Towards the end of '83 a near-new Blanik was advertised for sale close by in the US. It was decided to purchase this machine and sell the older of our two existing Blaniks. So our faithful old EJA is up for sale. There are still a lot of hours left in the old girl yet, so she would make a good buy for one of the smaller clubs who would like to get the performance without the high capital cost of new equipment.

Lloyd Bungey

ESC SPECIALTY WEEKENDS

On 2 June, 7 July, and 11 Aug, Edmonton Soaring Club will be holding special weekend tasks of 30, 50, 100 and 300 km. Their newsletter, *Towline*, says that the 30 km task is for those who know there are thermals around the field; the 50 km task is for those who think there are thermals near the field; the 100 km tasks is for those who know there are thermals away from the field; and the 300 km task is for those who are stupid enough to believe other people who lie and say that there are definitely thermals on the other side of Hilliard (which we all know isn't true).

Anyone can enter, members from other clubs are invited, it is informal. No photos, no barographs – gentlemen's agreement – Marquis of Queensbury rules – so all you cheating dogs will have a ball.

As you've all been wondering who won the 6/49 Lottery — I'll put you out of your misery. The reason the runway is being widened is to allow sufficient room for my new 100:1 ASW-36 to land. The 50 foot motorhome parked at the field with the topless bar hostesses will be available for use by any self-respecting paid-up pilot. The private Wilga towplane (with towpilot) will be available for the club's use after I've had the first tow of the day; and the full-time uniformed crew will be on hand to help anyone after the "36" has been rigged and the thermals have been tested prior to my launch. They will, of course, be permanently billeted in that house I've bought just south of the field. Plans for the swimming pool will be finished shortly and construction will begin in April. Now, where did I put that ticket?

The attendance at the last club meeting was poor. If you want to make sure you don't miss out on the forthcoming events and all the good things that are happening this year, turn up! Don't moan that you "didn't know about that happening." Turn up. Remember my special events coordinator's curse: If you don't show up or support the club –

> May the fleas of a 1000 camels infest your armpits!
> May your spoilers stick on final, and all your beer be flat.

PS. The new club badges, one foot in diameter, in black velour, bearing the inscription, "I'm a real pilot", will be on sale for $3 or free to whomever buys the first round.

Jake Cronnswad

SMALL CLUB – BIG EVENT cont from page 9

Trophies Soaring definitely is a special sport and we thought the awards should reflect this. Thanks to Robert Binette again, he managed to obtain sponsorship from Alcan Aluminum and they donated magnificent 6 and 12 inch aluminum seagull sculptures, individually crafted and signed. This representation of "grace of flight" went to the victors at the '83 Provincials.

Accommodation/Banquet Camping was arranged right on the airport site. For those who do not rough it, great accommodations were made available. A ski resort lodge on off-season schedules meant fantastic prices on both lodging and meals. The panoramic dining room, overlooking the golf course and ski slopes was reserved for the banquet and removed the burden of catering. Keep it elegant, keep it simple, roast beef served for all.

The Champlain club enjoyed the challenge in organizing a meet and we are all more knowledgeable soaring pilots for it. We definitely encourage those who are thinking likewise.

HOW LOW CAN YOUGO? cont from page 13

For instance, circling at low altitude in the flat farmlands of the prairies is certainly more reasonable than doing the same thing below the ridge with a valley full of trees and rocks.

To summarize, good operating practice seems to dictate that no thermalling be attempted below 600 to 1000 feet agl, according to local rules and weather/terrain conditions.

Each pilot must weigh his own ability and equipment to decide if he wants to thermal lower. A common saying is that it is easier to explain a landing away from the airport than a crash caused by attempting to thermal too close to the ground, so getting back to the field is not necessarily a reason for thermalling down low.

It is not "macho" to attempt low saves. Some other foolish act probably brought you to that point, so your bragging only shows a lack of judgement earlier.

Once a pilot has made the decision to land, no attempt to thermal should be made.

The development of sound judgement as to what constitutes a safe thermalling altitude is the responsibility of each pilot and is an extension of the good judgement exercised during the entire flight. □

Ian Oldaker comments, "Steve du Pont's definition of safe thermalling height is very pointed, but remember that spinning at a 'low' altitude will turn your spin recovery techniques to mush also. There is no way you will get back to straight and level efficiently seeing the cold hard ground in front of you."

HANGAR FLYING

TEAM ATTEMPTING HIGH-ALTITUDE RECORD

In Tehachapi, California a team of volunteer pilots are involved in a project called FL500 (flight level five zero zero). The ambition of the project is to use a sailplane to gather high altitude atmospheric data, and also to break the world sailplane altitude record of 46,267 feet set in 1961 by Paul Bikle. The modified Grob-103 two-place sailplane will carry one pilot plus either an instrumentation pallet or a second pilot. Both pilots will use pressure suits of a type similar to those used by U-2 pilots.

Approximately 36 flights are planned between late 1983 and March 1984. The area to be explored for mountain wave is 70 miles north of Los Angeles. It is expected that the sailplane will make a good platform for high altitude research because it doesn't contaminate the surrounding air mass with combustion by-products. The facility will also be available to many universities which would not otherwise be able to afford high altitude research.

Modifications to the sailplane include:

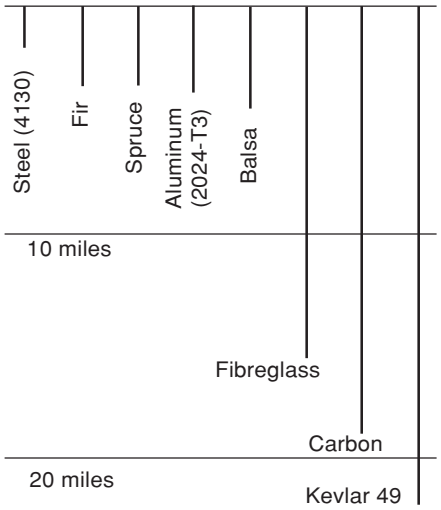
- Electrical system with a 35 amp-h battery to power extra avionics and the pressure suits' heated faceplates.
- Pressure demand oxygen system capable of supporting two crew members at over 40,000 feet for 5 hours, leaving a 50% reserve.
- Avionics suitable for IFR operation. Low power radio and navigation equipment installed includes a Loran C nav unit, a Becker 720-channel VHF radio, transponder beacon and an encoding altimeter with readouts to 60,000 feet.
- Several Rico variometers to aid pilots in determining when they are in a rising air mass.

THE PILOT'S CREED

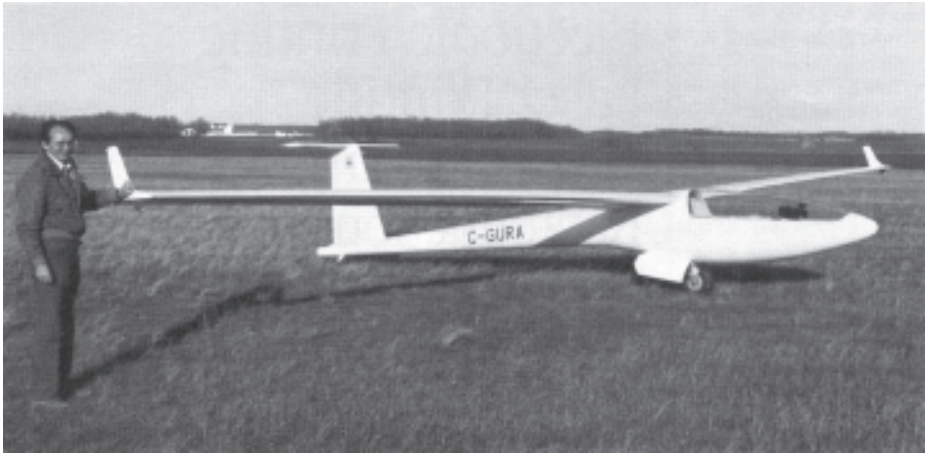
I will not drink
But if I do
I will not get drunk
But if I do
I will not get drunk in public
But if I do
I will not stagger or fall down
But if I do
I will fall face down so
that no one sees my wings.

from the Grande Prairie "Hangar Rash"

STRENGTH OF MATERIALS



A comparison of different structural materials. Dividing the ultimate strength of the material (expressed in psi) by its density (expressed in lb/in^3) gives an indication of the suitability of the material in aircraft construction. Each line represents the length of material (expressed in miles in the above graph) required to break in tension because of its own weight.



Dave Marsden shows off the new "Spectre" variable geometry 15m sailplane prior to its maiden flight at the Edmonton Soaring Club field at Chipman. See the previous issue for details. Further flight testing will resume in Claresholm in April.

SAC/DoT WORK

Bob Carlson has prepared a SAC response to the DoT Aeronautics Act Task Force revisions to the Civil Aviation Manual, Vol. 1, Part X, relating to Aerodromes. This document, among other things, describes standards for all types of airfields: siting, physical characteristics, obstacle limitations, markers, signs, windsocks, etc. etc.

The SAC response focussed on ensuring that DoT definitions and limitations took due cognizance of glider operations, limitations, special hazards and turf runways. And Bob, being a good DuPont salesman, made specific recommendations on the best fabrics and colours to be used for windsocks.

CARBON FIBRE SHORTAGE

The increasing use of carbon fibre in the construction of military aircraft and airliners has led to a sharply growing demand for this material, which soon is expected to exceed available supplies. There was a 30% rise in the price of raw carbon fibre since the end of 1982.

Glider manufacturers, who were responsible for much of the early development work on the use of carbon fibres, will find it difficult not to pass on these increased costs to their customers since, as a labour intensive industry, they've been severely affected by wage inflation in recent years.

Schempp-Hirth sailplanes are reported to be increasing in price by between DM1000 and DM2500 solely as a result of increases in the price of carbon fibre.

MORE CLUB AWARDS

The Winnipeg Gliding Club has awarded one of its WGC Tankards to Norm Taylor "in recognition of his first involuntary radio transmission." Also, 'Proficiency in Pyrotechnology Certificate Plaques' were awarded to Jeff Tinkler for his efforts in almost destroying the campground at Pigeon Lake, and to Mike Maskell for successfully burning down a derelict barn at their new Starbuck Gliderport.

Gentlemen, that 'involuntary' in Norm's award is driving me crazy! Please tell us the story. ed.

BLUENOSE XC SCHOOL

The Bluenose Soaring Club is holding a pre-season cross-country ground school, giving material that will teach the soaring pilot how to leave his home field, and return, or land out safely. The course is extending from Jan 18 to Apr 4. Some power flight will be involved in the navigation and field recognition portion of the course. Time and costs to be decided in consultation with the participants. Some dual XC flights can be arranged with BSC instructors in the K7.

"A further attempt to keep our gliders out of the trees," says Dick Vine. Good idea.

FAI BADGES

Boris Karpoff
24-1/2 Deloraine Avenue
Toronto, ON M5M 2A7 (416) 481-0010

The following badges and badge legs were recorded in the Canadian Soaring Register during the period 28 November, 1983 to 17 January, 1984.

SILVER BADGE

672 Paul Yardy	COSA	
673 Lester Oilund	Grande Prairie	

DIAMOND ALTITUDE

Ronald Lien	Regina	5121 m	1-23H	Cowley, AB

GOLD ALTITUDE

Ulo Okapuu	Gatineau	3444 m	1-35	Sugarbush, VT
Fred Wollrad	Edmonton	3125 m	K-45	Cowley, AB
Jacques Baudu	Gatineau	3347 m	Skylark 3B	Sugarbush, VT
Ronald Lien	Regina	5121 m	1-23H	Cowley, AB

SILVER ALTITUDE

Paul Yardy	COSA	1160 m	Jantar Std.	Chemong, ON
Peter Ramm	Rideau	2042 m	2-32	Gananoque, ON
David Paterson	Cold Lake	1737 m	1-26	Cold Lake, AB
Harold Knox	SOSA	1737 m	Blanik	Rockton, ON
Morvyn Patterson	Edmonton	1200 m	Ka6E	Cowley, AB
Lester Oilund	Grande Prairie	1676 m	Phoebus C	Cowley, AB
Lee Johnson	Grande Prairie	1463 m	Phoebus C	Cowley, AB
Ronald Lien	Regina	1521 m	1-23H	Cowley, AB

SILVER DISTANCE

Grenville Yuill	Winnipeg	178 km	SZD-30	Pigeon Lake, MB
Lester Oilund	Grande Prairie	159 km	Phoebus C	Cowley, AB
Lee Johnson	Grande Prairie	233 km	Phoebus C	Cowley, AB

SILVER DURATION

Pierre Pepin	Champlain	7:39	SZD-30	St-Antoine, PQ
Harold Knox	SOSA	5:11	Blanik	Rockton, ON
Peter Elms	N. Okanagan	5:10	Monerai	Grand Forks, BC
Ingolf Asche	London	5:20	Skylark 3	London, ON

C BADGES

David Montgomery	York	1:05	1-26	Arthur, ON
Robert Lacombe	Quebec	1:37	1-26	St-Raymond, PQ
William Krosney	Winnipeg	1:03	1-26	Pigeon Lake, MB
David Paterson	Cold Lake	2:20	1-26	Cold Lake, AB
David Fowlow	Cu Nim	1:12	1-26	Black Diamond, AB
Jacques Baudu	Gatineau			(in France)
Clive Kydd	York	1:04	1-26	Arthur, ON
James Feyerer	Edmonton	1:29	1-23	Chipman, AB
Peter Elms	N. Okanagan	5:10	Monerai	Grand Forks, BC
Gary Blanchett	York	1:02	1-26	Arthur, ON
Ingolf Asche	London	5:02	Skylark 3	London, ON

The second year as your FAI Awards chairman is coming to an end and, unless the Board of Directors decides otherwise, I am volunteering for at least another term. A great deal of improvement has been achieved in the paperwork and the presentation of the application form, mainly due to the "hawkeyes" of different Senior Official Observers. My sincere thanks to all of them for a job well done.

Nevertheless, there are days when I am frustrated by the lack of seriousness on the pilot's part and, moreover, by the indifference on the part of Official Observers. Without hesitation I can say that more than 30 per cent of the OOs **do not know the rules and regulations** of the SAC Sporting Code and almost 50 per cent of glider pilots (as well as the OOs) **do not properly read** the Application form and the back page of **free flight** for SAC Supplies. This attitude of *"laissez-faire"* or let's bend the rule towards badge flight documentation is not acceptable. YOU MUST MIND THE RULES.

A new soaring season is fast approaching and many of you, I am sure, are thinking about badges and badge legs attempts. But the approval of any achievement will depend on the documentation of your flight attempt. Senior Official Observers and OOs, you must know the rules, the procedures and the Sporting Code. Read carefully all applications submitted through you, correct them if necessary and please, **do not just sign here and there** as if it was a production line.

I am really surprised by the amount of errors and mostly the omissions appearing on application forms, and quite often from "old timers" who should know better.

Another area of disbelief on my part is: Why are you, glider pilots, waiting as long as five months and 29 days to submit your application? Are you not anxious to apply for a badge and be proud of the achievement and share your accomplishment? This past year alone, I refused three applications for late arrival and just last month five applications were posted a few days before the six month deadline. Incredible!

Writing of your cheque, oh la! what a mess!!! Please read the last page of **free flight**: "SAC Supplies". In summary, a processing fee of $6.00 is required per application form submitted. On the same form you may have one or two flights good for one or more badge legs. Those requesting a Gliding Certificate, the cost of which is $6.00, this cost must be added to the total and do not forget your two passport-type photographs!

I keep in stock items No. 3, 4, 5, 7, 8, 9 and 10. For items 11 and 12 a letter of authority will be issued. Requests for all other supplies should be addressed to the National Office in Ottawa. All applications for badges and badge legs should be addressed to the Awards chairman, not to SAC National Office and cheques must be made payable to Soaring Association of Canada.

Before the soaring season starts this coming spring, a new updated Application Form, Revision 5 (1984) will be available for all the clubs. Please use it and **destroy all the old ones**.

The lack of concern towards badge flights, and the indifference on the part of both pilots and Official Observers, is just not acceptable. It is not acceptable because any badge flight earned in Canada or elsewhere is an international level of achievement and to bend the rules will only be a disservice to all glider pilots.

I will reinforce the rule to send back to the presiding Official Observer all applications with incomplete information, and if this situation becomes common with any one OO, I will request from the Board of Directors that the privilege of being an Official Observer be withdrawn from that person.

To all glider pilots: fly, glide, soar, follow the rules and earn your next badge with pride. To all of you, my best wishes for a safe and soaring 1984 season. □

SAC DIRECTORS & OFFICERS

PRESIDENT & DIRECTOR-AT-LARGE
Bob Carlson
57 Anglesey Boulevard
Islington, ON M9A 3B6
(416) 239-4735 (H)
(416) 365-3558 (B)

VICE-PRESIDENT & PACIFIC ZONE
Harald Tilgner
90 Warrick Street
Coquitlam, BC V3K 5L4
(604) 521-4321 (H)
(604) 263-3630 (VSA)

ALBERTA ZONE
Tony Burton
Box 1916
Claresholm, AB T0L 0T0
(403) 625-4563 (H)(B)

PRAIRIE ZONE
Dave Hennigar
404 Moray Street
Winnipeg, MB R3J 3A5
(204) 837-1585 (H)

EXEC DIRECTOR
Jean Matheson
485 Bank St.
Ottawa, ON K2P 1Z2
(613) 232-1243

SECRETARY
Linda Essex
15 Laurie Court
Kanata, ON K2L 1S2
(613) 836-1815

ONTARIO ZONE
Al Schreiter
3298 Lone Feather Cres.
Mississaugua, ON L4Y3G5
(416) 625-0400 (H)
(416) 926-1225 (B)

QUEBEC ZONE
Alexandre W. Krieger
1450 Oak Avenue
Quebec, PQ G1T 1Z9
(418) 681-3638 (H)
(418) 656-2207 (B)

MARITIME ZONE
Dick Vine
11 Garnett Street
Dartmouth, NS B2W 2N9
(902) 434-1573 (H)
(902) 426-3476 (B)

DIRECTOR-AT-LARGE
Gordon Bruce
154 Shannon Park
Beaconsfield, PQ H9W 2B8
(514) 697-1442 (H)

PAST-PRESIDENT
Russ Flint
96 Harvard Avenue
Winnipeg, MB R3M 0K4
(204) 284-5941 (H)

TREASURER
Don Dunn
28 Glenmanor Drive
Nepean, ON K2G 3G1
(613) 224-1110 (H)
(613) 996-9033 (B)

COMMITTEES

AIRSPACE
Dave Tustin
581 Lodge Avenue
Winnipeg, MB R3J 0S7

FLIGHT TRAINING & SAFETY
Ian Oldaker
135 Mountainview Road N
Georgetown, ON L7G 3P8
Mbrs: G. Eckschmiedt
John Firth
Bob Gage
Alex Krieger
Chris Purcell
Manfred Radius
Al Sunley
Ed Sliwinski

FREE FLIGHT
Tony Burton
Box 1916
Claresholm, AB T0L 0T0

FINANCIAL
Gordon Bruce
Bob Carlson
Jean Matheson

HISTORICAL
Christine Firth
542 Coronation Avenue
Ottawa, ON K1G 0M4

INSURANCE
Al Schreiter
3298 Lone Feather Cres.
Mississauga, ON L4Y 3G5
Mbr: Bryce Stout
Bill Mather

MEDICAL
Dr. Wolf Leers
4-4889 Dundas Sreet W
Islington, ON M9A 1B2

METEOROLOGY
Sepp Froeschl
1845 Brookdale Avenue
Dorval, PQ H9P 1X5

PUBLICITY
vacant

SPORTING
Dave Marsden
3920 Aspen Drive West
Edmonton, AB T6J 2B3
Mbrs: Jim Carpenter
Karl Doetsch
Jim Oke
Al Sunley

• FAI AWARDS
Boris Karpoff
24-1/2 Deloraine Avenue
Toronto, ON M5M 2A7

• FAI RECORDS
Russell & Hazel Flint
96 Harvard Avenue
Winnipeg, MB R3M 0K4

TECHNICAL
George Adams
12 Hiawatha Parkway
Mississauga, ON L5G 3R8

TROPHIES & CLAIMS
George Dunbar
1419 Chardie Place SW
Calgary, AB T2V 2T7

WORLD CONTEST
Al Schreiter
3298 Lone Feather Cres.
Mississauga, ON L4Y3G5

COMING EVENTS

Mar 10-11, SAC AGM, Ottawa, Delta Hotel. Contact National Office or your club exec for details.

May 13-18, Eastern Basic Instructors Course. Gatineau Gliding Club, Wolfgang Weichert, (613) 836-1318 (H), (613) 993-0582 (B)

May 19-21, Innisfail May Meet (Alberta Provincials) Sponsor: Alberta Soaring Council. Contact: Hal Werneburg (403) 238-1916 (H).

May 28-June 1, ESC Flying Week (the best XC flying week of the year). Andrew Jackson (403) 435-3328 (H).

Jun 25-Jul 1, 1984 National Soaring Week

Jul 3-12, Combined Nationals at Virden, Manitoba. Host: Manitoba Soaring Council. Contact: Dave Hennigar, (204) 837-1585 (H). Details to follow.

Jun 23-Jul 2, Winnipeg Gliding Club soaring week at Starbuck Gliderport. Contact club phone (204) 895-0481.

July 28-Aug 6, Cowley Summer Camp. Host Alberta Soaring Council. Contact Ken Palmer, 23 Baker Cres NW, Calgary AB T2L 1R3 (403) 284-1396 H.

Aug 11, 4th Annual Kawartha Pig Roast, It's getting famous. Room for tie-downs and camping. Come and enjoy our hospitality. Jim Beattie, 644 Percival Court, Oshawa, ON (416) 728-6886.

Aug 25-Sept 3, Winnipeg Gliding Club soaring week at Starbuck Gliderport. Contact club phone (204) 895-0481.

Aug 25, ECS Extravaganza. Flying, incredible party & BBQ, prizes, music, raffles, etc. Stranger welcome. Chipman airfield. Andrew Jackson (403) 435-3328 (H).

Sept 4-14, Western Basic Instructors Course, Cu Nim Gliding Club, contact: Kevin Bennett, (403) 253-0063 (H), (403) 298-6875 (B).

Oct 6-8, Cowley Wave Camp. Host: Alberta Soaring Council, facilities usually open a few days before the "official" weekend date. Contact Ken Palmer (403) 284-1396 (H).

RCFCA NEWS

At the recent AGM of the Royal Canadian Flying Clubs Association (the national aero club representing Canada internationally in aerosport matters), their FAI Committee placed a motion that the FAI adopt the national eligibility standards of the IOC for all FAI sanctioned World championships. This motion will be put before the FAI council meeting in Paris early this year. It may or may not reach the plenary session of the FAI in New Delhi this fall.

The effect of using "national eligibility standards" would be to limit South African participation at international aerosport events. The motion was put to the RCFCA by the Canadian Sport Parachuting Association, which was also severely affected by the South African "problem" last year.

SUPPLIERS

AIRCRAFT/AIRPORT SUPPLIES
All Ontario Canvas & Vinyl Products Ltd. 232 Lawrence Avenue, Kitchener, Ontario N2M 1Y4. Contact Gary and Carole Frankow for wing covers and wind socks (519) 578-5520.

Leavens Aviation Inc. 2556 Derry Road East, Mississauga, Ontario (416) 678-1234; Edmonton, Alberta (403) 477-5568.

Ian McCall Sales Inc. 12 Bromley Crescent, Islington, Ontario M9A 3X3 (416) 233-1871. Specialised resin (epoxy and polyester) in small quantities. Kevlar and glass fabric.

INSTRUMENTS
Firmal Electronics 542 Coronation Ave., Ottawa, Ont. K1G OM4. Contact John Firth (613) 731-6997. Cambridge instruments sales and service, and other accessories.

REPAIR & MAINTENANCE
XU Aviation Ltd, Box 6124 Station D, London, Ontario. Contact C. W. Eaves (519) 452-1240.

Leavens Aviation Inc. 2556 Derry Road East, Mississauga, Ontario (416) 678-1234; Edmonton, Alberta (403) 477-5568.

Sunaero Aviation Co. Ltd. Box 1928, Claresholm Industrial Airport, Claresholm, Alberta T0L 0T0. Contact Jerry Vesely (403) 625-3155 B, (403) 625-3871.

PARACHUTES
Niagara Parachutes Limited, 8407 Stanley Avenue, Box 927, Niagara Falls, Ontario L2E 6V8. Contact Ed Grimm (416) 358-5211.

SAILPLANE DEALERS
Jim Carpenter (LS-4 Dealer) 20 Scollard Street, Toronto, Ontario M5R 1E9, (416)923-7150.

Monark Sports Ltd/Ltee, (DG dealer), 10555 Henri Bourassa West, St. Laurent, Que. H4S 1A1.

George Couser (PIK-20IIF Dealer), 735 Rivière aux Pins, Boucherville, Que. J4B 3A8, (519)655-1801.

CROCODILE CORNER