free flight

2/83 **Mar-Apr**

vol libre

PRESIDENT'S MESSAGE

Looking back over my two years as president of the Soaring Association of Canada, I am aware that my time and energy has not always been directed by my own choices; from time to time issues have arisen which spurred our members to write and express their feelings – most frequently feelings about things they didn't like (people rarely write to let you know when they approve of something!). And of course their feelings must be heard and respected too. Often, a single letter or phone call is all that is required to provide additional information, clear up some misconceptions, or apologize for an oversight or error. However, one topic has recurred more frequently than any other – competitions.

Competition is a vital part of any sport; it is fun, it brings people together, it challenges piloting abilities and improves one's skills. But do some of us get carried away with the idea that this is all there is? The pilots who fly in competitions constitute a relatively small fraction of our total membership, something like five percent. However, the time and effort spent on contest-related matters by myself and by the SAC Board is vastly out of proportion, when compared to time put into other activities involving the welfare of the SAC as a whole.

I look back at the letters and long-distance phone calls made over transporting the World Contest Team to Germany in 1981. Should the team fly Lufthansa for convenience, or the Air Force for free? And the problems over dates for the 1982 Nationals – should they be held according to the SAC Standard Procedures Manual, or to suit the convenience of the organizers? What about the new proposal to run "Class" Nationals instead of Regionals on alternate years? Should we accept the recommendation from the Sporting committee as adopted by the Board or change horses in mid-stream (gliders in mid-thermal?) and switch to "combined" Nationals every year as desired by a small, but vocal group of contest pilots? Should we send a team to the upcoming World contest to compete against South Africa and thereby lose all government funding and support, or is it in the membership's best interest to deny our six top pilots this privilege of competing against the world's best this year in order to assure ourselves of a more secure funding base?

Some of these questions might seem rather trivial compared to others. But all have eaten up hours of long-distance phone calls, pages of letter writing, and hours of agenda time at board meetings; much thought and soul-searching has gone into some of the questions; fundamental values have been addressed and assessed. In some instances, thousands of dollars have been involved, in others matters of principle. In the 1983 World contest issue, politics, ethics, pride, pragmatism, and tens of thousands of dollars are involved.

Certainly, other controversial matters have come, and passed by – membership fees, insurance problems, licensing standards, by-law changes, but there always seems to have been an issue around involving some aspect or other of competitions.

Does the time, effort, and expense, which goes into the competitive aspects of our sport reflect the values of the membership at large? Is competition **so** important that it justifies all of the thinking, phoning and writing done on its behalf? (I note that this is the fifth of my twelve "Messages" in which competitions have been part of the subject matter!)

I don't really have answers to those questions. But it **would** be a relief if everyone could agree on something to do for competitions, just for once.

free flight

2/83 **Mar-Apr**

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Le Journal de l'Association Canadienne de Vol à Voile

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COVER
A sunset tow at Hope, BC. Photo by T. Ryan

DIRECTORS' WINTER MEETING

Harald Tilgner
Pacific Zone Director

The SAC Board of Directors winter meeting was held in Ottawa on January 8 and 9, 1983.

PROVINCIAL COUNCILS MEETING
A meeting of representatives of provincial councils has been planned to precede the SAC AGM on Friday, 4 March, at 0900 hrs at the Delta Bow Valley Inn, Calgary, to co-ordinate provincial and SAC activities and develop programs of mutual interest and benefit.

SAC CALENDARS
Calendars have been well-received this year, but a little late however for commercial sales potential. It was contemplated to end this program, but the publicity value was deemed to be good, and members should be encouraged to provide good quality photographs for next year's calendar effort. Because of the potential for sales outside the SAC, releases from persons recognizable in those pictures should, if possible, accompany the submissions.

CANAEROSPORTS
Canaerosports is to take over the liaison role of "national aero club" between SAC and FAI from the Royal Canadian Flying Clubs Association, and represent all forms of sport in the air. The SAC per capita assessment for FAI dues has been set by RCFCA this year at $0.70 from $0.66.

FINANCIAL REPORT AND BUDGET
Karl Doetsch, the Secretary-Treasurer, presented the financial report for 82/83 and a budget for 83/84. The budget was reviewed and some items amended. It was proposed to establish trust funds for World Contests, Youth Programs, and SAC General Administration. In the long term, these trust funds will allow the soaring movement to pursue its aims independently of third party purse strings and interference.

WORLD CONTEST 1983
This was by far the most time-consuming and heartfelt issue raised at the meeting. After forming an ad hoc committee (required by the By-laws), the Directors had a very lively and diverse discussion period which continued into the next day. The federal government has extended its policy of "no sports contact with South Africa" to include third party countries, and this includes the World Gliding Championships at Hobbs, New Mexico in 1983. This means that, if SAC sanctions our team to this event, **all** future funding of SAC programs by the federal government will be cut off, and because many provincial programs are linked to federal funding, those programs may be in jeopardy also. As a consequence the committee recommended to the Board of Directors to present a notice of motion to the SAC AGM **not** to sanction a team to participate at Hobbs if doing so will jeopardize government funding. This motion must be ratified by the membership, and failure to adopt the motion may see our team go to Hobbs.

In light of the foregoing, it is up to every member to think about the course we may be taking, bearing in mind that if we oppose our politicians' policy, it will cost us about double our present SAC dues in the future, given that we continue with the present scope of SAC programs and projects.

PROVINCIAL CONTESTS IN 1983
Contests this year are scheduled to be held in Quebec, Ontario, Manitoba and British Columbia. SAC has sanctioned these contests provided that a minimum of five pilots compete in each.

SOARING SITE DIRECTORY
Thanks to the dedicated efforts of Ursula and Tony Burton, a Soaring Site Directory has been compiled, and an initial printing run of 500 copies has been approved by the Board. It is well put together and will sell for $3.00 a copy. It is made for a small ring binder (not supplied). The Directory is described in further detail in this issue.

MEMBERSHIP RECIPROCITY
The Board endorses the concept of SAC clubs reciprocating in "Daily Member" flying privileges for visiting SAC members, providing that the person is an 'insured' member of SAC in good standing. It is hoped that this will enable members from anywhere in the country to enjoy the cameraderie of all member clubs.

FREE FLIGHT – OUR MAGAZINE
The Board endorsed the concept of protecting the name of our fine publication by registering the name "**free flight/vol libre**". Further, it was proposed that each club try to find sponsorship for just one 1/6 page ad to run for six issues (a year) for the price of $500. The basic idea here is that each club usually has at least one member who is well enough placed in a business or corporation to make a direct appeal for such a contribution. This is more likely to be successful than a pure business approach. The plan has the potential to raise funds equivalent to a membership increase of 400 persons. The board considers the magazine well worth the effort. □

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 RCFCA has delegated to SAC the supervision of FAI-related soaring activities such as record attempts, competition sanctions, issuance of FAI badges, 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, opinion, 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 contributions to the magazine will be acknowledged on receipt. We will endeavour to say when it will be used. 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.

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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, le RCFCA 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 ne peuvent être utilisés.

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 adressée au directeur régional dont le nom apparait dans cette revue.

Pour chaque article reçu, nous retournerons un accusé de réception et donnerons la date probable de sa publication. 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.

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5

OPINIONS

FIRST CLASS AIRMEN

Our club tows with a Cessna 150D fitted with the 150 hp engine that Frank Hinteregger justly praises in his article on towpilots (free flight 6/82). While I'm a new towpilot in need of all the help I can get, I can't accept his advice to pull on flaps to keep from rolling off the end of the runway or hitting the trees ahead. This advice could cause an accident.

Except for sluggish performance caused by the drag of the glider, the towplane flies just like any other member of its species. All of the principles and techniques in Transport Canada's excellent Flight Training Manual, and in aircraft manufacturers' operating manuals apply to the operation of towplanes. Towing gliders is nothing more, and certainly nothing less, than the application of good airmanship to a flying task. Good airmanship begins with knowledge of how to achieve desired performance, information available in the airplane flight manual.

According to Cessna, flaps will reduce the ground run by up to 10%, but the advantage is lost in the subsequent climb over obstacles. If weight, density altitude, and wind conditions make runway length marginal, then climb performance will also be marginal, and flaps will make it worse.

The Cessna achieves its best takeoff and obstacle clearance performance when it is accelerated on three wheels to just under 65 mph and then lifted off smoothly and climbed at that speed. This speed is 120% of the stalling speed; it gives the most height gain for the least distance covered, and is just fine for our gliders.

If 65 mph can't be attained in the runway available, or if the subsequent climb is insufficient to clear the trees, then no pilot ingenuity or cunning will help. Some slack in the rope to reduce the drag might improve things, but releasing the glider would be the surest way to get out of a dangerous situation. Persisting in the face of hopeless odds will only lead to a high-speed crash.

The Cessna can be stopped in 500 feet. Thus, if that distance remains, the glider can be released and the towplane stopped safely. If at that point, there is at least 60 mph on the clock and the tow is going well, the towpilot can continue the take off. If not, he should release the glider and either stop the towplane or fly it out of danger. While any help and understanding from the glider pilot would be appreciated, the decision to release the glider belongs to the captain of the towplane, whose first concern is the safety of his aircraft.

Mr Hinteregger's comments about getting back to the field are useful, but there is more to it than saving nickels and dimes for the club. The limiting speed in descent is not the red line never-exceed speed or even anywhere in the yellow cautionary range, but Va, the maneuvering speed. I just don't feel comfortable about diving our ancient and tired machine through rough air and traffic at 110 mph. A steep, slipping turn at 80 mph works well, but the wing and engine interfere with lookout downward and into the turn. I prefer to use up to full flap at 80 mph, well within the flap limiting speed, and to arrange the descent so as to join the downwind leg at circuit height, complying with arrival procedures at uncontrolled airports. The flap can be adjusted to regulate the subsequent descent and power reduced only on the final approach.

It's tempting to fly non-standard patterns and to hurry things to save a few seconds in the tow, but there is no reason why glider towing should be slipshod and monotonous. Done properly, it requires personal fitness, knowledge of flying, thorough preparation, attention to detail, systematic routines, careful planning and smooth and accurate flying – all attributes and skills of the professional aviator. Towpilots might be second class citizens in the eyes of some of their clients, but they can be first class airmen.

Len Johnson
Rideau Gliding Club

PILOT SAFETY

In the centre of this issue of ***free flight*** *you will find a very thorough discussion by Bruce Nicmans of everything a good towpilot should consider in the performance of this type of flying. I asked him to explain why he wrote the article. Ursula.*

Why did I write the article? Well, after having done over 2000 tows on this end of the rope, plus having instructed at both ends, I have seen even the most experienced (and inexperienced) pilots making fundamental errors. Thus I am covering the basics, which many pilots tend to forget with time. Since towing can be a very routine, repetitive, and sometimes boring task, it is easy to fly by reflex and not reason. As such, a stimulus is required to get the towpilots to think about their roles within the various clubs, and to give them some personal goals to attain this season. I definitely do not intend to talk down to anyone, nor to insult the intelligence of the towpilots across the country.

continued on next page

OPINIONS .....

Another aspect of being a towpilot is pride. If the pilot is proud of the job being done, then he will also take better care of the aircraft. When each pilot realizes the mechanical implications of each action done at the controls of a towplane, it can only help to reduce the cost of routine maintenance, and to prolong the service life of the aircraft. Treat the towplane as if you owned it (which you, as a club member, do), and not as a "rental" aircraft!

However, this same aspect, pride, can also be misplaced with serious consequences. There are two scenarios which come to mind.

The first case is that of a pilot who considers himself too good to require a thorough checkout, or one who overestimates his skills during the checkout procedure. (One pilot requested a checkout with a gusty 35 knots cross-wind while the operation had been temporarily suspended!) These pilots are in general too proud to ask operational questions, as this could tarnish the image that has taken so long to establish. These pilots could end up by damaging an aircraft, their morale, and possibly themselves. In this case, what about all of the other club members that knew it was going to happen?...What did they do to prevent it?

The second case is equally as serious. Imagine a pilot making a mistake, say a very hard landing, and not reporting it. Some time later another pilot experiences a landing gear collapse during a take-off or landing. Through no fault of his own, this pilot now has an accident on his record, if he is lucky enough to escape uninjured. And what for? The pride of a **fellow** pilot.....

Many actions are possible to increase the safety of your club's operations. Do you take advantage of the nearest Flight Service Station? By having them broadcast an advisory to the effect that soaring activities are in progress, all pilots will be aware of the glider activity. By having responsible, authorized club members visit local Air Traffic Control centres, flying clubs, and any other local aviation oriented groups, you can only enhance their understanding of your sport. The increased cooperation and communication will benefit all concerned.

These contacts may also point out some shortcomings in your own operations, requiring the implementation of new procedures, some of which may require a bit of extra time during each tow. Thus calls may be heard for faster tows, more rapid descents and more direct approaches, plus overall criticism of these new procedures. How much is safety worth to your club? How much is safety worth to YOU?

Since obtaining my licence in 1972, I have flown with various clubs, and with the Air Cadets on several camps. As such I have seen quite a cross-section of ideas and procedures. As is the case with all pilots, I try to retain the positive aspects of each operation, and strive to improve myself and my skills with each new situation. This article is based on personal experiences and observations while flying from various sites across the country, from the mountains of British Columbia, through the Prairies, Ontario, and in Quebec. I hope that it is of benefit to all concerned enough to spend the time and read it.

I have asked many questions, yet provided very few answers. These answers must come from the individual pilots, and from the clubs, as there can be no possible answers that will accommodate the various conditions across the country.

GOODBY INSTRUCTORS COURSE

Once again another course has come and gone, Gatineau as usual provided excellent support and all of the course members pitched in willingly to make the course a success. A particular thanks to John Charleton for his comments and all the running around he did for us. A special thanks is on tap to Debbie Holt who really did an outstanding job for us on the flightline. This young lady will definitely be an asset to any of our clubs.

The course critique was very informative and suggestions made will be incorporated in future courses.

As travel arrangements for me to get over from Europe are becoming more and more difficult, it looks like I will be ending my tenure. This is with some regret as I have come in contact with a bunch of very nice people and I will close by stating, there is no such thing as a poor glider pilot, some are just better than others.

AUF WIEDERSEHEN,
TOM BELL

Articles on both Instructors courses were to be printed together last year, but delays made them obsolete. Ursula

DO YOU PAY AIRPORT PARKING FEES?

We have been sent our first invoice from Transport Canada for parking fees for our Super Cub, B4 and Blanik at the Smithers airport. We are being asked to pay $40 per month ($250 per year) per aircraft.

We would very much like to know how other clubs have handled this. Have any clubs negotiated with Transport Canada for an annual fee? If so, how much? We would be very grateful for any input from other clubs who have been in a similar situation.

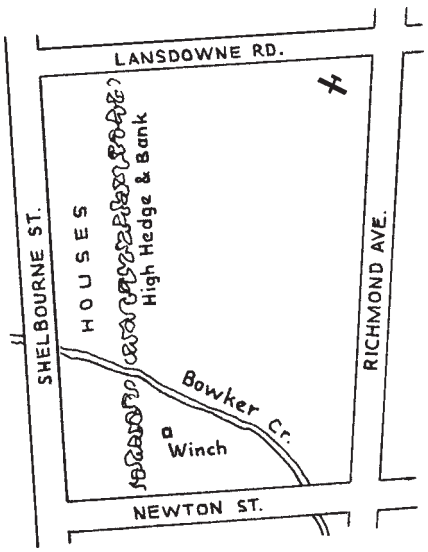
Alan Pickard, President
Bulkley Valley Soaring Club

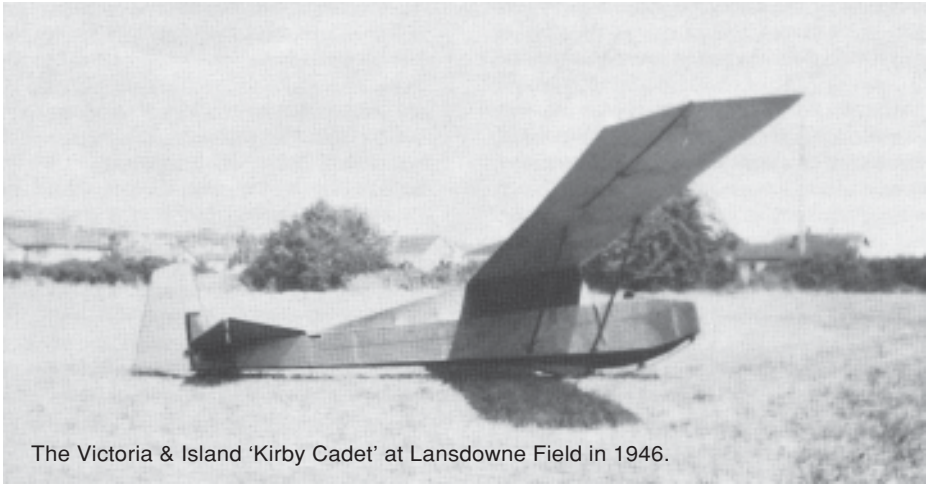
EARNING MY "B" 1946 STYLE

Des Cavin

Des Cavin was a member of the Victoria and Island Gliding and Soaring Club which was formed in 1942 and incorporated in 1943. Club members constructed three gliders in the period 1942-46; a home-designed primary, which was made from the wings of a power plane, the tail of a different power plane and a truss-type fuselage of their own design – a Dagling primary and a Kirby Cadet utility glider. All these machines were single seaters and you learned to fly without the benefits of dual instruction. The home designed primary, referred to as the "Model T", made a few flights in 1943 but was not a success; the Dagling flew in 1945 and lasted most of the season before suffering an "unfortunate happening" more severe than most (accidents were common but more usually of a minor hard landing with damage) variety. The Kirby Cadet was used in 1946, and survived most of the season before it too fell victim of a major "unfortunate happening."

Having lost the use of their workshop, and being somewhat fatigued by the effort of building three gliders in four years, the remaining members discussed the possibility of obtaining a two-seater from the USA but these efforts came to naught and the club withered away. L.M. Bungey





The Victoria & Island 'Kirby Cadet' at Lansdowne Field in 1946.

It was either July or August of 1946 when I qualified for my "B" certificate by successfully completing a circuit of the field. By this time some of the older members were making quite extensive flights they may have lasted less than 2 minutes but they were complete circuits from 500+ feet.

We were operating from Lansdowne Field, the old Victoria airport of the 1920s, about 4 miles northeast of downtown Victoria (it's completely built over today). The winch was placed south of Bowker Creek and the glider in the northeast corner where the school stands today. The distance is over half a mile so the Cadet would be launched in a steep arc, at times achieving 600 feet before release. There was plenty of room for a left turn towards the northeast corner, a straight glide in that direction followed by another left turn, leaving the whole landing field for landing. Except for the creek it was an ideal situation (whenever I walk by that bridge over the creek I remember those days of 36 years ago).

I had successfully passed through the ground slide stage, onto low straight flights and then to "S" turns. Now it was time for me to attempt my first circuit.

As it was an especially warm summer's day, the breeze was blowing from the north, over the Saanich Peninsula. The winch was set at the north end of the field and the glider down by the creek, the reverse of our normal procedure. Even after 36 years, I can still remember strapping myself in and feeling rather apprehensive – quite apprehensive. At that time of life the closest comparison to the sensation I could think of was sitting in a dentist's chair.

A few final instructions were given. "Remember to pull the release!" It would work automatically over the winch but that would be too late for efficient operation. "Remember to put your nose down before you release and DON'T STALL!" Our "scientific" method of establishing a release point was to have a young spectator (about 10 years of age) stand about two-thirds of the way up the field. When I passed him it would be time to release. (Did anyone tell him not to get hit by the metal fitting on the tow rope? I wonder). This meant I had to look over the side (horrors!) and not climb too steeply. When I look back to my age of 16, I marvel that everything worked as well as it did. Things were by no means perfect, however.

I remember a great feeling of exhilaration about the time of release (I wonder where that human marker is today!), but I was thinking about a successful flight rather than enjoying the view. I may have even called out "Don't stall", I was concentrating so hard. At any rate, I put the nose down, watched the rate of descent ball, and stepped firmly on the left rudder pedal. Luckily for me, I decided to have at least one glance at the scenery. If I hadn't I would have probably died on Lansdowne Field instead of living on it and raising a family there. *(Des has a house built on the old airfield site. LMB).* The glance took in the roofs of the houses along Shelbourne Street towards which I had started my turn. As I had released at about 150 feet I expected the roofs to appear a certain size – but they were too big; far, far too big. I had made sure of not stalling but I was plunging down at a very steep angle and at a high speed. It was probably fortunate that I had only time to react and not time to think.

I passed over the hedgerow brush at about 20 to 30 feet and kept on with the turn as I pulled the stick back, just pulling out of the dive in time to meet the ground without hardly a bump. When I disappeared behind the bush, the other members said the wind was whistling through the struts and wires (an estimated 50+ mph). They expected a mighty, splintering crash and were really surprised when there wasn't one.

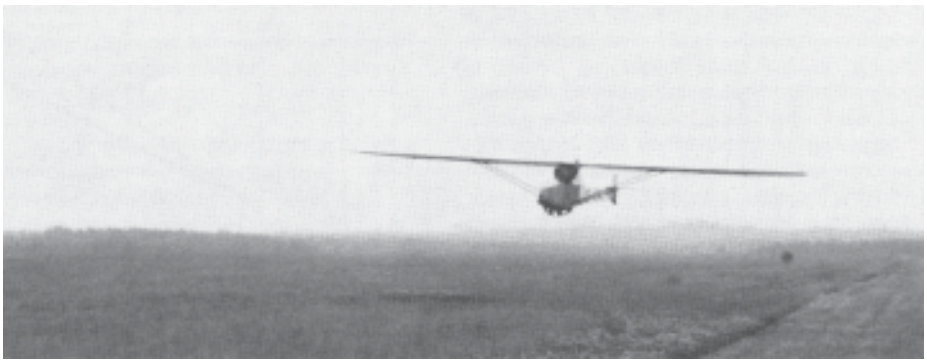
Though I had missed the woods, I was headed downwind for the creek at a high rate of speed so I kept the left pedal down and came to a sliding, sideways stop without dragging a wing or doing any damage. I wasn't too close to the creek, but I wasn't too far from it either. If I had known what I was doing it would have been called a skilful landing.

As everything was in one piece, it was decided I should have a second attempt at my circuit. I do not remember if the boy stood in the centre of the field for this attempt but I released in time and looked at the altimeter as I began my turn. As I came out of the turn I found I was about 50 feet higher than when I started because of the warm breeze from the north. What a relief! Things were smaller instead of bigger. It was really not difficult to fly on an even keel but as I was only at 150 to 200 feet I couldn't make the second turn and landed downwind, instead. It didn't cause any great difficulty, but the bottom slapped a great amount of grass before it would finally settle.

All I can remember of the next flight (my third attempt at a circuit) is that I had enough height to start the second turn, but had to land across the field. Luckily the breeze was gentle.

These "almost circuits" still weren't enough to qualify for the "B" certificate, so up I went for yet a fourth try. This time I released at about 300 feet but gained close to another 100 feet in the first turn. This gave me enough height to successfully complete the second turn with at least 50 feet to spare as I straightened out for the landing. The skid brushed the grass and I was down without a jolt. It was a real feeling of accomplishment as I qualified for my "B". As a 16 year old I thought that it was pretty good that I had landed on a Hurricane wheel while my hand was on a Kittyhawk pistol grip. □

(LMB note: these are reference to some scrounged parts used in the Cadet).



This "Cadet" is landing on the other side of the country, at the Stanley, N.S. field of the Gull Gliding Club, also in the mid-40s.

MY DIAMOND ADVENTURE

THE LONGEST FLIGHT

GILLES BOILY

from Le Pengouin
Translation by Ursula

Last winter after investing energy, time and money, I completed the construction of a trailer for my Jantar in two months. This was the main thing missing for XC flying, as having to stay within gliding distance of the airfield had been quite annoying last season. For me, XC flying was the ultimate in soaring.

I was determined to fly many kilometres in 1982 with my Jantar, as I had done with the club's B4 and the Ka6 in previous years. In addition to the trailer, I designed a final glide calculator for the Jantar's performance. I was also looking forward to trying my new vario (now installed and precisely calibrated). To complete the preparations, I had spent a lot of time figuring out all the little details essential to success.

The above scenario gave me a most satisfying and enriching season, together with the acquired experience. Yet, without having completed the ever-so-much wanted 500 km I did several runs, summing up to 2500 km which allowed me to learn a lot and to practise the necessary skills for long flights. So I should be well prepared now for my next flights in 1983.

Last 4 July, my efforts were rewarded with a 490 km flight, giving me much satisfaction: it was a personal high, and the club's record. My flight plan was St-Raymond, a turn at New Glasgow (a village just outside of the Mirabel control zone) and return eastwards for free distance. To complete the 500 km I had to land either at L'Islet on the south shore of the St. Lawrence River or, if I chose the north shore, I had to sneak somewhat over the Laurentian Park. I selected the first option. This track also allowed me (if flying near Quebec City) to either pursue my task further, or if the conditions were unfavourable, to return to St-Raymond, thus eliminating a long wait "aux vaches" (with the cows). The choice of the track might have looked excellent at first, but this was my first mistake that hindered me from my 500 km.

The day before my flight (3 July) the weather was quite mediocre because overdevelopment began around 1000 hrs and covered the sky all day, discouraging any distance flight. The next day, 4 July, at 0800 hrs the sky was clear. "This should be good", I said to myself. The equipment was ready (glider, camera, trailer, barograph, etc.) as the hangar doors opened, but the pilot is not yet convinced that it will be a good day. I wait. At 0930 there are many puffs. "Too many", I think. "They develop quickly into big cu, this resembles yesterday, it will overbuild in half an hour." I wait again. At 1000 the first glider takes off. It's Daniel Lizotte in the Lark. The sky becomes more and more covered. I have no more confidence in the weather. I had no idea what the conditions would be. I neglected to obtain a weather report the evening before, and also this morning. I believe Maurice Laviolette thinks like me because he also wants the Diamond: he takes off at 1015, not with his Cirrus, but with the L-13 on an instructional flight.

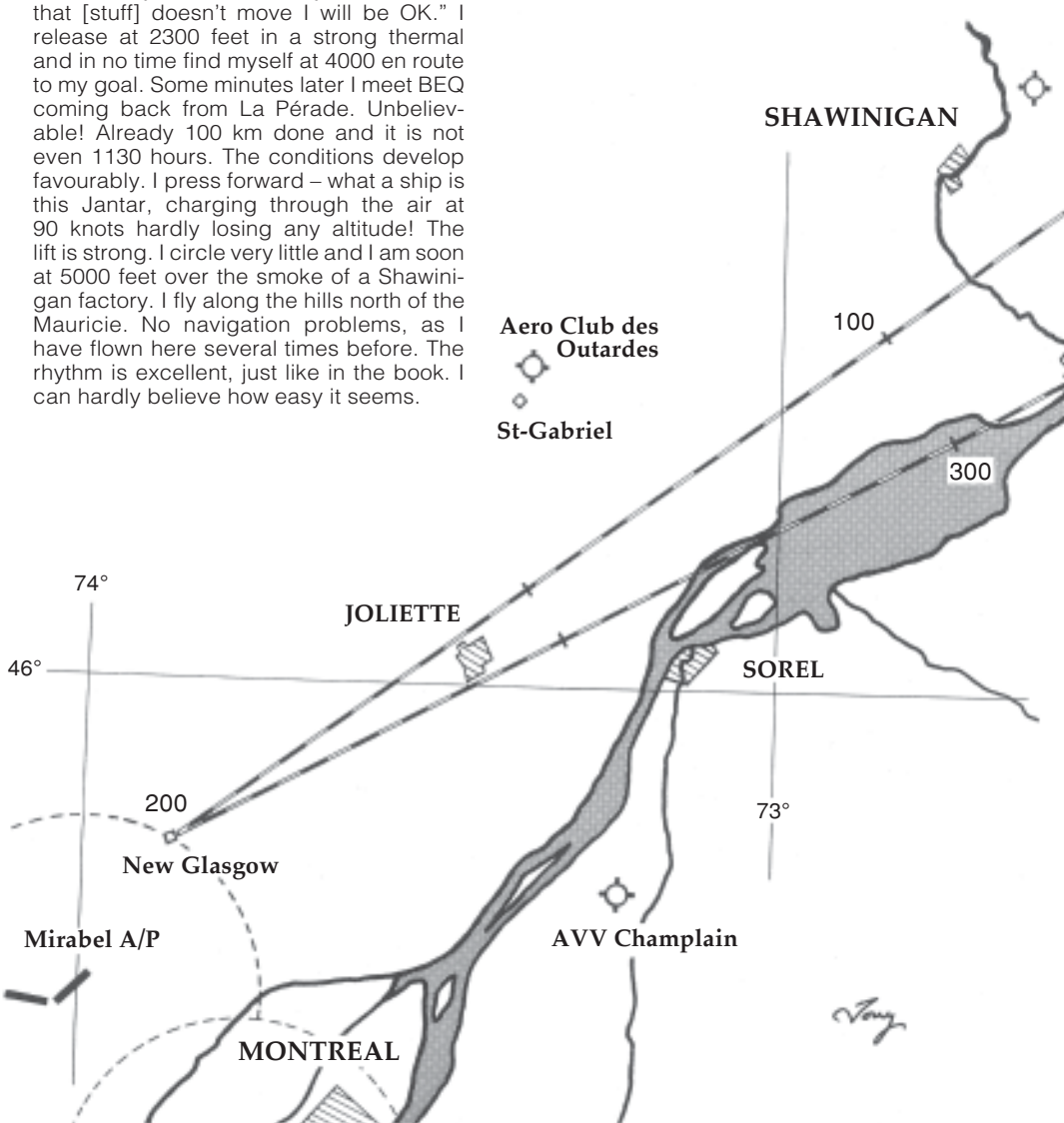
Don't trust another person, because he also can make bad decisions or his action could lead you to errors.

At 1030, BEQ has been up for 30 minutes, and there are blue holes still – so I say, "perhaps." No more chances, then in two moves I am on the grid. Photos, declaration, barograph "on", and at 1100 I am ready to take off. When I am about to close my side window, Maurice, just coming back from a 45 minute flight, shouts at me, "What are you doing, haven't you gone yet?" He seems disappointed (upset?) that his Cirrus is still in the trailer. He is not ready, and for him it's too late.

BRP is ready for take off. I think deep down "It's the day and I've already lost 1 hour. If that [stuff] doesn't move I will be OK." I release at 2300 feet in a strong thermal and in no time find myself at 4000 en route to my goal. Some minutes later I meet BEQ coming back from La Pérade. Unbelievable! Already 100 km done and it is not even 1130 hours. The conditions develop favourably. I press forward – what a ship is this Jantar, charging through the air at 90 knots hardly losing any altitude! The lift is strong. I circle very little and I am soon at 5000 feet over the smoke of a Shawinigan factory. I fly along the hills north of the Mauricie. No navigation problems, as I have flown here several times before. The rhythm is excellent, just like in the book. I can hardly believe how easy it seems.

I already see the runways of Mirabel on the horizon. Suddenly, near Joliette between two cu, a huge DC-8 appears at my left and at the same altitude on direct approach for Mirabel. He seems to be very close, too close, he seems to be stationary. I suddenly think that I may meet one of the air giants even closer. I don't like this feeling. Some minutes later, I see another one, just as big. I get nervous and impress myself with selecting a course more north of the runways, avoid cloud base, because I am intercepting their descent corridor at this altitude. Naturally, this disturbs my concentration quite a lot.

At 1330 I take my TP photo, 125 miles in 2:30 hours, 50 mph average (about 85 km/ h) is good and I am encouraged. I call Montreal Terminal; some minutes later they spot me on the radar 8 miles from Mirabel. The controller is very impressed when learning of the type of machine I am flying, of my undertaking, and especially my destination. He wishes me luck. It's unbelievable how much this radio contact gives me renewed confidence. Again, some minutes later, they reassure themselves of my position and they announce some traffic at 3000 feet at my 2 o'clock position. I look down and see an all-white 747 of the Air France. What a sensation to watch the back of a 747 from a sailplane. Enough of this distraction. I should concentrate on my flight because there is still a lot of land to cover. It seems that I don't find lift



for quite a while. I have been used to flying quite high since my departure without really noticing it; now I find myself suddenly at 2500 feet in front of a huge blue hole. I look ahead. Oh, those cu seem so far away! For the first time since I started I find myself in difficulty. I think I am flying badly, and can no longer find the thermals or use them well. I become anxious to climb back to a more comfortable altitude. I don't dare move forward, I am now at 1800 feet. I yell at myself, "Don't panic, there will be lift." Minutes seem like hours. Finally I find some lift and I hang on to it like mad, up to 6000 feet. I now realize that I have lost a lot of time and that my cruising speed also dropped. I have to speed up. While cruising I have a bite and some juice and I soon feel better. Another error... I have been distracted and let myself drift with the wind. I had been hypnotized, no longer wanting to make any decisions. The old habits of flying aimlessly around St-Raymond resurfaced. Had I suspected that I would miss by only 10 km...

With a slower average speed, I reach the Trois Rivières area without great difficulty around 1630. As always, with the advancing day, the lift becomes more spaced and weaker. I have to be careful. Near La Pérade I must make the decision about which course to fly. Toward the south shore to Ste-Croix? It's not very encouraging, there are no cu except far to the south, while the mountains to the north are bulging with beautiful clouds. I have the idea that with the NW wind, the river is having a catastrophic effect on the surrounding airmass, especially on the south shore. Important decisions are to be made: I am now within gliding distance of St-Raymond (how comfortable to know that). I have no great hope of completing 500 km because the time flies quickly and there is still a lot of country to cover in flight. The conditions to the south are next to nothing, even with a long detour southwards, I would gain nothing.

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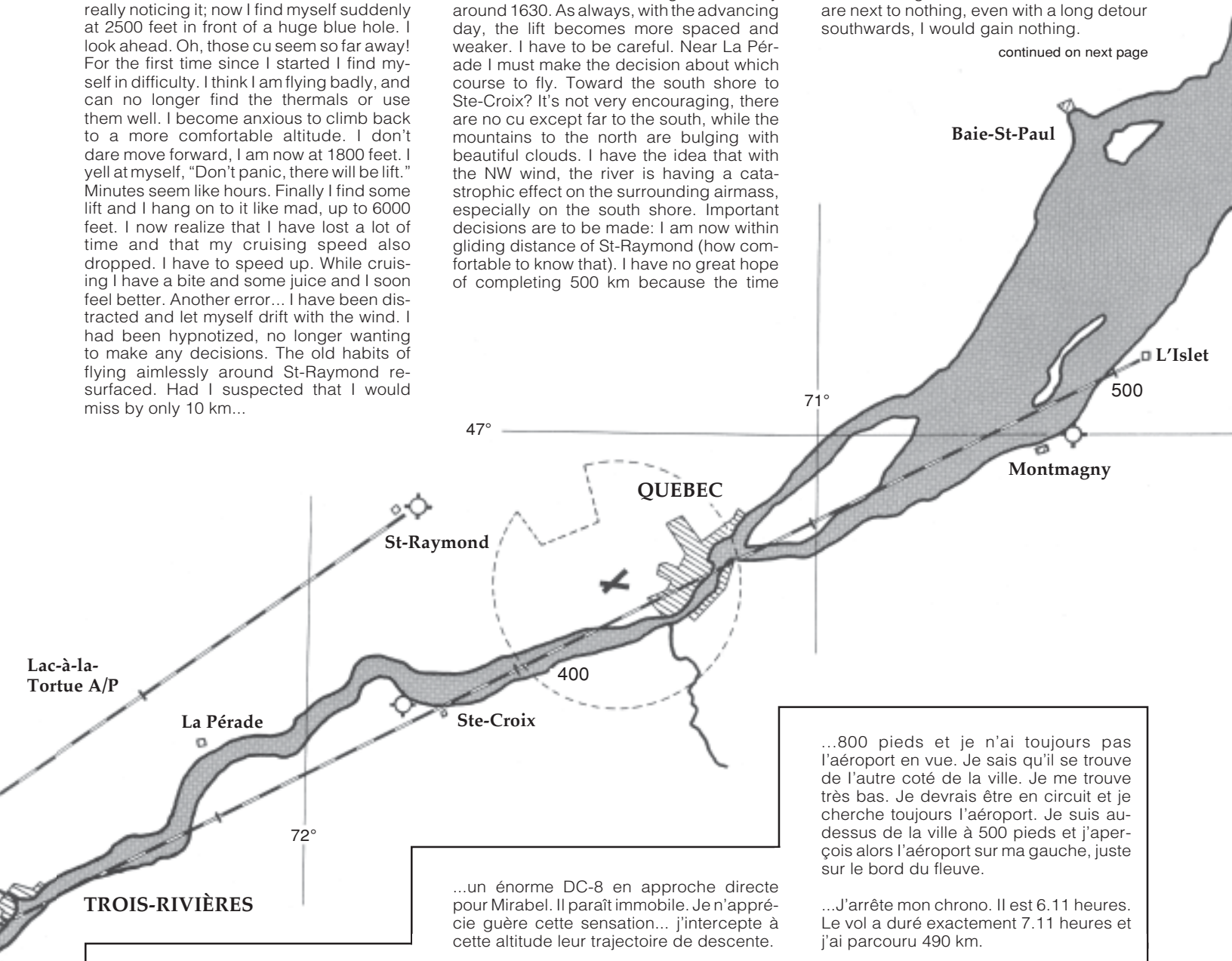


Parcours: départ de St-Raymond, virage à New Glasgow (village en bordure de la zone de contrôle de Mirabel) avec retour vers l'est en distance libre. Pour compléter le 500 km il me fallait donc atterrir soit à l'Islet sur la rive sud [du St-Laurent] ou je choisissais la rive nord, "chasher" quelque part dans le parc des Laurentides. J'optais pour la première solution. Ce trajet me permettait également, en passant au niveau de Québec, de décider de poursuivre l'épreuve ou si les conditions n'étaient pas favorables, de rentrer à St-Raymond, évitant ainsi un long dépannage "aux vaches". Le choix du parcours peut sembler excellent à première vue, mais ce fut ma première erreur m'empêchant de compléter le 500.

..."Ça peut être bon". Je n'ai aucune idée des conditions qu'il fera, d'ou mon incertitude. J'ai négligé la veille d'obtenir un rapport météo ainsi que le matin même.

...un énorme DC-8 en approche directe pour Mirabel. Il paraît immobile. Je n'apprécie guère cette sensation... j'intercepte à cette altitude leur trajectoire de descente.

...J'appelle le terminal de Montréal sur 125.4 MHz... C'est incroyable comme ce contact radio me réconforte et me stimule.

...J'étais distrait et me laissais aller au gré du vent... Les vieilles habitudes prisent à tourner sans but autour de St-Raymond refaisaient surface.

...les ascendances, à mesure que la journée avance, deviennent plus espacées et de plus en plus faibles.

...Le fleuve, par vent nord-ouest, a un effet catastrophique sur la masse environnante et tout particulièrement sur la rive sud.

...Il y a toujours des cumulus au nord et aussi à 20 milles plus au sud dans les montagnes. 1,500 pieds toujours rien. Montmagny à 10 milles semble très loin, mais je fais confiance aux performances du Jantar.

...800 pieds et je n'ai toujours pas l'aéroport en vue. Je sais qu'il se trouve de l'autre coté de la ville. Je me trouve très bas. Je devrais être en circuit et je cherche toujours l'aéroport. Je suis au-dessus de la ville à 500 pieds et j'aperçois alors l'aéroport sur ma gauche, juste sur le bord du fleuve.

...J'arrête mon chrono. Il est 6.11 heures. Le vol a duré exactement 7.11 heures et j'ai parcouru 490 km.

En conclusion, même si je n'ai pas réussi à ajouter un deuxième diamant sur mon insigne d'or, je ne suis pas déçu. Ce vol, comme tous les autres d'ailleurs, m'a permis d'apprendre beaucoup de choses et de perfectionner ma technique de pilotage. Les erreurs de décision commises lors de ce vol m'ont empêché de compléter l'épreuve mais j'ai la certitude qu'avec des conditions similaires, je pourrais parcourir bien au-delà de 500 km. De toute façon, la distance parcourue n'a pas trop d'importance en vol à voile. Certains vols vous procurent autant de satisfaction sinon plus, même s'ils sont plus courts. Qui ne se rappelle pas des émotions que procurent le premier atterrissage à l'extérieur? Le premier 50 km?... C'est la satisfaction sans cesse renouvelée que l'on retire après chaque vol de distance qui fait du vol à voile un sport si passionnant et enrichissant. □

INTERACTING WITH INSTRUCTORS

Adapted from an article by Kris McLean in Australian Gliding, August 82.

Two and a half years ago I climbed into the front seat of a K13 for my first taste of instruction. The bod in the back was a natural. I took to the sport immediately. I read widely and in depth on the many facets of the hobby and felt confident that my skill as a pilot would come with the same easy grace with which I had mastered the mechanics of driving a car (an aging Rover 90 with no synchromesh) a decade before.

Two hundred and twenty-five flights later, and with a Silver C under my belt, I look back on that chimera with chagrin.

The causes of the comparatively high attrition rate amongst neophyte pilots are many: poor body motor skills, a lack of that particular brand of perspicuity needed for gliding, monetary difficulties, and (very occasionally) vapid instruction all take their toll of the dilettante.

Since I earn my living as a teacher I would like to comment on the last of these agents of natural selection. The problem with most club instructors is that they are rarely chosen on the basis of their ability to communicate ideas. If excellence as a pilot is the bread of instructing, then articulateness is the butter.

The non-experienced communicator in the back seat of a trainer is a menace. This instructor is likely to have the mid-nineteenth century view of the teaching/learning process in that you, the student, is perceived as an empty tank to be filled to the brim with information during the flight. Any ideas flowing the other way are seen as dangerous backwash and are actively discouraged. Characteristic of this midair refueling attitude to instructing is a heavy reliance on drill and rote learning that promotes conditioned responses dangerous in the event of the unexpected.

Other signs of poor instructing are:

- The assignment of flying tasks beyond the student's current mastery level. Ask the next instructor that demands you roll around a point to demonstrate it first!
- Continuous negative reinforcement. Constant criticism rapidly wilts all but the most robust student personalities and drains pupil confidence.
- Lots of "rights" and "wrongs" in the conversation but not many "whys".
- Failure to intersperse active instructing time with short rest periods. (US Navy studies suggest 10 minutes as the maximum unbroken period spent on any one hand/eye coordination type task for the average adult).
- Failure to understand and consequent inability to deal with flat spots in your learning curve, often characterized by half-joking suggestions that you consider another sport. Prolonged plateaus at a particular skill level are often traceable to poor teaching groundwork.
- Lack of originality. Every flight the same. The same answers to the same repertoire of questions. No innovation or change of pace in response to the students progress or lack of it.
- The inability to treat you as an equal. Talking down to the student is part and parcel of the old school of thought that views the teacher as the superior being.

Student Survival Hints

How do you cope with a difficult instructor (for you)? If the club is big enough, simply avoid the individual. If not, show some tolerance and try framing your criticisms interrogatively. Remember that your instructor is an unpaid and overworked volunteer trying to do his/her bit for the club. Strive to maintain a dialogue – don't just resign yourself to another wasted flight. Know what to expect before you get launched, insist on preflight and post-flight briefings.

Above all, beware the dreaded "self-fulfilling expectations" syndrome. This Catch-22 situation can develop in any student/teacher relationship, and the symptoms go something like this:

- You have a couple of off-days and get a few snide remarks in the remarks column of your logbook.
- The next instructor notes these cracks in your virtuosity and in his discussion with you conveys his almost subconscious apprehensions to you.
- This sets the mood for the flight, and anxious to correct past mistakes, you make more, and so on. Such a process is a vicious circle, and your own confidence, learning abilities, and credibility with the instructing fraternity will fade.

If you sense this form developing, you must act decisively. Break the circle by flying with a friend for awhile, or "lose" your logbook and then go fly with a complete stranger for an instructor, and clearly discuss the rut that seems to be developing. Communicate.

As I said earlier, there are numerous processes at work that may act to eclipse your vision of yourself with wings. I have touched briefly on some of them. Nevertheless, if you can hurdle the training barriers, the chances are you can survive to specialize in whatever aspects of the sport that strike your fancy. Notwithstanding all the seriousness this entails, try to enjoy yourself in the process! □

MY DIAMOND ADVENTURE .....

If I go back to St-Raymond, I will equal the club's record of 405 km, established by Maurice Laviolette last week. The decision is easy to make. A landing at Quebec City assures me of a club record, so I decide for Quebec. I tune to 128.3 to get the ATIS information, and call Quebec Tower to tell them my intentions. A lot of traffic is in the zone, the controller seems overloaded. On initial contact I announce: "Quebec tower, glider Golf Bravo Romeo Papa, outbound from Mirabel, over Newville, with intention to land." They reply: "Report on left downwind for 30." I answer that this would depend on my altitude. He then asked me whether I was motorized. I answer, "negative, monsieur." With his exclamation, "Ah, bon," he seems surprised and he requests that I keep him informed regularly of my position and altitude.

[Note for glider pilots who fly through control zones: the controllers, through professional idiosyncrasy or ignorance, tend to give you instructions as if you were flying a powered aircraft. It's difficult for them to imagine that you are at 2000 feet with a minimum of lift and you can stay in the air for 30 to 45 minutes...]

Back to soaring. Flying at best L/D, I descend slowly towards the airport. Sometimes, I slow down in weak lift to conserve as much altitude as possible which allows me to reach the airport at 2000 feet over runway 24.

I notice hundreds of cars around the airport. I am puzzled and ask myself what might have happened. An accident... or perhaps that all the people are there to welcome me as hero! Or suddenly somebody from the club had the idea to announce my arrival over the local radio station, you never know! "That can't be", I mumble to myself. The controller brings me back to earth, ...pardon, to reality. I learn now that all this hoop-la is for the arrival of the first 747 Wardair flight at Quebec arriving at 1720. Definitely, it's the day for great sensations. The controller seems to be in a hurry to get me down while at the same time I find a very good 4 knots up. I let him know of my decision and that I would appreciate a delay. He doesn't seem to be pleased but he gives me authorization. I am quickly at 4000 feet, I leave the tower frequency with relief and change to 119.5 MHz. Quebec terminal is not busy except for the 747 on long final. I still hang on and reach 5500 feet. Another decision has to be made. I could easily reach St-Raymond again or continue east, because the 500 km idea has come back.

A glimmer of hope. Another 50 miles and it would be in the bag. I turn east and inform Quebec Terminal.

continued on next page

A GLIDING AVIARY

Eric Newsome

For almost two years, Eric has blessed the pages of our magazine with his observations of the various sub-species of glider pilot one finds within range of the common airfield. Today, the "mad-polisher" above is the last on the list. It is an excellent collection, and Gil Parcell's illustrations perfectly outline the characters you have seen. Ursula

'Polishiticus' has an immaculate glider which he seldom flies. He is the mortal enemy of small boys with dirty, sticky fingers.

'Aeronauticus Polishiticus' has the finest and most modern glider that it is possible to buy and this being one of the major investment of his life he considers it worthy of tender, loving care. The stark white fibreglass gleams from constant polishing; no speck of dust or blade of grass is to be found in the spotless cockpit, which has been tastefully cushioned and carpeted by Mrs. Polishiticus.

On the panel an expensive and complicated range of dials and instruments gleam mysteriously. However with so many instruments there is so much to go wrong. It is for this reason that many club members know 'Polishiticus' only by his posterior, the only view of him they have ever had as he investigates the rat's nest of wires and tubes which, theoretically, keeps his instruments telling the truth.

His glider trailer is likewise immaculate. Wing and fuselage cradles are lined with the finest of carpet, naturally matching that of the cockpit. All equipment is neatly painted and labelled. On sunny cumulus dappled days he can be found hiding from the scene as he assiduously cleans rust spots from the trailer axle.

'Polishiticus' has been known to fly on days when there is not too much dust blowing and when there is no chance of rain. He is, of course, properly dressed for flying and always wears gloves. His flying is proper and sedate and he never strays more than a few miles from "mother" airfield.

Here's to 'Aeronauticus Polishiticus'. May he one day inadvertently go cross-country and have to land in a swamp. □

I cross Quebec City and fly over the Plains of Abraham. What a scene, what a sensation to fly over Quebec City in a sailplane. It's 1730 and I am now above the Golden Eagle refinery at St-Romuald. I find some very weak lift there and regain altitude lost since my departure from the airport. I make a quick calculation, 5500 feet altitude and 38 miles to make the airport at Montmagny. The Jantar's best L/D is 38, so I could glide into Montmagny airport. All I need is a very little updraft on my way for 500 km, if not, I will land at Montmagny. For the first time since take off I realize the possibility of reaching my goal. I can hardly believe it. This excites me. Fantastic!

I listen on 123.3; Claude de St-Riquier is on tow out of Lac à la Tortue. He just made his 50 km. I congratulate him. How content he sounds. I let him know that there is a strong possibility that I will reach my goal of 500 km. He wishes me luck.

The altimeter unwinds slowly but regularly. The vario needle oscillates between 1/2 knot and 1 knot down ...still nothing. There are still cu to the north and also 20 miles to the south in the hills. 1500 feet, still nothing. Montmagny, 10 miles ahead, seems very distant. At this height I cannot see the airport but I have confidence in the Jantar's performance. If only I can find just a little up. I need only 1000 feet or so. Nothing. Inexorably, I am subject to the laws of gravity and drag. 800 feet, still the airport not in sight. I know that it is on the other side of the town. I am very low. I should be in the circuit by now, and I am still looking for the airport. (I am telling you nothing new that I am flying now at minimum sink speed). Over the town, at 500 feet, I finally see the runways to my left, just by the riverside. A little single engine rolls for take off. I turn onto right base, line up, relieved and delighted. I stop my watch – it's 1811. Exactly 490 km after 7:11 hours in the air. The place seems deserted, but some minutes later a dozen people surround the Jantar, ask me many questions and I answer with great pleasure. I must look happy. I call St-Raymond and 45 minutes later the Citabria lands to get me back home, flying into the setting sun.

Although I didn't get my second Diamond, I am not disappointed. This flight like all the others gave me much to learn and to work on my techniques.

My mistakes at the beginning of the flight hindered me from making my goal. I am sure that with similar conditions again, I could well make over 500 km. Anyway, the distance actually is not important in soaring, some flights may be short but most satisfying. Who doesn't remember the emotions of the first outlanding? The first 50 km?

It's the never-ending satisfaction one receives after every distance flight which makes soaring such a passionate and enriching sport. □

SAFETY

WHO CARES?

Eric Newsome
Chairman Safety Committee

With one fatality and seventeen claims on the SAC insurance scheme for a total of almost $200,000 it is obvious that 1982 was not our best year.

Two features seem to stand out:
- the number of accidents occurring at the point of transition to fairly high performance gliders.
- the number of high performance gliders damaged when flown by pilots of considerable experience.

It appears possible that in both categories pilots might well have been flying at the limit of their personal capacity or far too close to the aerodynamic limits of the glider for the conditions prevailing. Why should this be so?

I propose as one possibility the advent of high performance gliders, mainly of fibreglass, which over the past ten years or more have outstripped both our training programme and the degree of personal performance exhibited by many pilots.

There can be no question that the gap between the performance and handling of basic training gliders and of sophisticated fibre glass sailplanes is enormous. It might well get even greater. In general, our training schemes have not been modified to take care of that gap. We still operate 'flying kindergartens' in which one is taught a safe level of performance, in stable, heavy and unresponsive trainers. From that point on the newly-licensed pilot is often left to improve (or regress) alone. I suggest that we need an advanced level of training as a follow-up, to be flown in between two seat gliders which demand accurate, smooth, coordinate flying of a high order. It seems the only way we can help pilots to make a safe transition to high performance sailplanes.

Let us pose a few situations of pilots flying rather near to the limits of personal or aerodynamic capabilities. Situations which might not be too far from reality and which might even have been factors in accidents.

A newly licensed pilot considered competent, but no more, takes his handful of solo hours and a hat full of dollars and buys the latest 22 metre super soarer and then turns up at the airfield and prepares to fly. What do you do? Has he not a perfect right as a licensed glider pilot to fly the glider? If you stick your nose in and express the opinion that he is likely to kill himself, what do you reply to his assertion that it is none of your business if he does so?

The lure of performance is surely that it is there to be used and flying fibreglass round the circuit is like using a Rolls to go to the supermarket. Joe, who is a good pilot but has never in his life left the field, decides it is time that he set out to get some of that performance he paid for. You know he has never landed out, his approaches are invariably like the proverbial bat out of hell, and you have never seen him get in any precision landing practice. Furthermore, he makes a great fuss about his enormous financial investment in the glider and he is deathly afraid of even the hint of damage; the betting is that if it comes to an off-field landing he will delay so long trying to fly away from the problem that he is hardly likely to have time to pick a decent field. You fear the worst, but should you express concern about him flying along the ridge, close in at 40 knots, in extremely turbulent conditions he who shows such a concern for the wind when landing on a flat airfield?

Why should I care? Someone (me, I think) said: "other people's freedoms end an inch from my nose". I care because the events mentioned above are likely to come nearer than an inch from the end of my nose. If an incompetent or unsafe pilot has an 'accident', I am deeply concerned if by assisting at his launch I assisted him to do so; if his actions bring "knee-jerk" regulations from on high I am concerned; if his foolishness brings glider pilots generally into disrepute I am concerned; at the lowest but most measurable level, if he makes an insurance claim which helps to increase my next year's premium I am concerned. I care.

What has all this got to do with glider clubs and accidents? Simply that they should consider what controls they should, can and, possibly, must place upon their members in the interests of flying safety. They cannot tell people what to do but they can deny launch facilities to those pilots believed to be unsafe or incompetent at any level of flying or for any specific task.

It's a glorious can of worms with many more questions than answers. However, if clubs fail to apply internal control, we might well be more rigidly controlled from outside. □

SAFE RESIN USE

David Reece

from the Sailplane Homebuilders Association magazine "SHAp TALK".

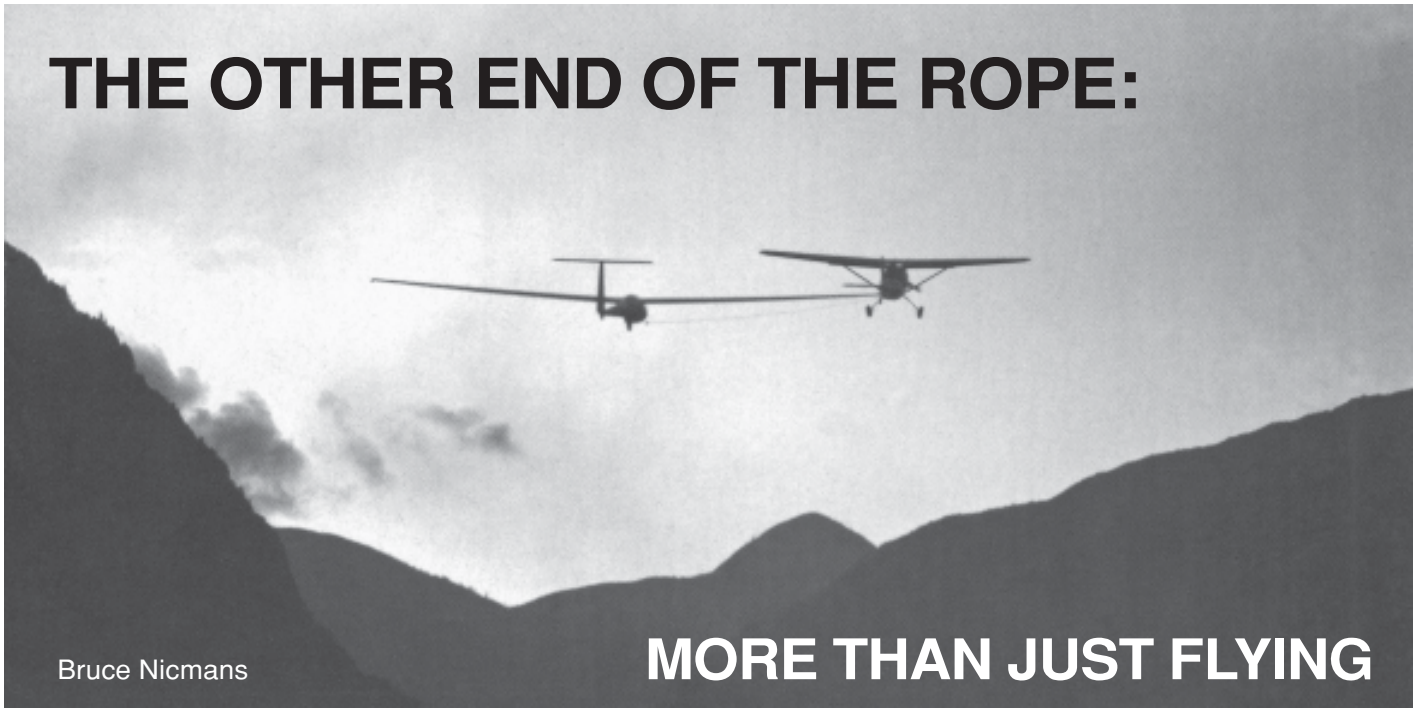
During a summer spent working with George Applebay in his "Zuni" sailplane manufacturing plant in Albuquerque, I became familiar with some of the epoxies and catalytic agents used with fibreglass. Epoxy resins are not, in themselves, acutely irritating to the human skin. Inhalation of resin vapours is not considered to cause problems either – unless the resin is heated. Ingestion of resin should not occur, but if it does happen, the toxicity is low. Eye contact should be avoided. The curing agents (catalysts) are the materials to be treated with the utmost respect and caution!! Some of these are extremely toxic and can cause deep burns, or at least rashes and blistering of the skin. Continued exposure may produce asthmatic symptoms and "sensitization" that in certain individuals may mean that the use of epoxies must be discontinued permanently. Cured resin may be considered "inert" and non-allergenic.

Some handling precautions for those of you who work with epoxies are:

- Strict cleanliness of person and work area.
- Suitable protective clothing to prevent contact.
- Use high quality surgeons gloves, or similar. These are available in lengths which extend up the arm and are comfortable to wear. Disposable gloves are no good. The surgeons gloves can be re-used.
- Be sure that good ventilation is maintained.
- Safety goggles must be worn. A drop of catalyst splashed into the eye during mixing of the resin will cause rapid and irreversible damage to eye tissues.
- Use a resin removing cleanser, not acetone, for clean-up.
- Use generous amounts of good hand cream (Nivea cream) as a skin barrier.

The author has done a great deal of research into materials that will enable us to build sailplanes that are better and quicker to complete than "conventional" methods will give us. You may write to him in care of the editor of SHAp TALK, Don Santee, 4510 N 13th Ave. Phoenix, AZ, 85013. □

THE OTHER END OF THE ROPE:



Bruce Nicmans

MORE THAN JUST FLYING

Bruce Nicmans has been active with the Vancouver Soaring Association for the past years, and Chief Towpilot for the past two seasons. Prior to that time, he has been a member of the Quebec City club, and has worked on several Air Cadet glider camps. He currently holds a Senior Commercial pilot licence, and has a Silver C with one diamond. Bruce certainly prefers to take off on the tail end of the rope.

THE TOW PILOT

Being a towpilot is easy, being a good towpilot is another story. It is hoped that the following will assist you in improving your skills at the other end of the rope.

You will be operating one of the most valuable pieces of club equipment, without which very few people will be soaring. Why do you want to tow? Think about it. Seriously. Are you willing to put in the time and effort required to remain current, or are you on the towpilot roster for other reasons? If you get checked out, and then only tow once every two or three months, are you really proficient? Are you an asset or a liability to the club?

The following can be technical in certain areas, so if you as a glider pilot do not understand, why not open the avenues of communication with the towpilot in your club and learn about the other end of the rope. A good understanding of what the towpilot is facing can only help you to become a better pilot.

Late winter is the best time to analyze the previous season's towing operation and identify its shortcomings. Once identified, they can now be corrected for the upcoming season. A high standard must be set now, and conscientiously maintained throughout the year. The chief towpilot, and his or her instructor/check pilots, must be in total agreement on all aspects of the towing operation before the checkouts begin.

ATTITUDE AND AIRMANSHIP

Two key words come into the picture at this point: "attitude" and "airmanship". Without a good appreciation of both, a safe and efficient operation is not possible. Your attitude, or the way you feel and act while towing, should be every bit as professional as if you were flying a commercial airliner. It is all too easy to slip into the "Sunday Pilot" mentality, or to assume the "who cares, that's good enough" attitude while towing. You must constantly strive to improve your own skills, even though the job that you are doing can lead to complacency, since it is one of the most tedious and repetitious on the field.

As for airmanship, or the application of common sense to flying, it is often forgotten! The towpilot must always be aware of changing conditions, everything from sun angle to wind and field conditions. Each action must be thought out, and if a safer way can be found then it should be implemented with the concurrence of the chief towpilot. Do you mentally review your emergency procedures before flight? What if you had to abort a take-off, or had an engine failure or fire? It can't happen to you... only to some other towpilot.

TOWING: A TEAM EFFORT

Towing is a team effort of pilot and machine: the pilot has human limits, and the towplane has mechanical limitations. The more restrictive of these two factors must be limiting. Even though your aircraft can handle a 20 knot crosswind component, but you only feel competent with 10 knots, then it is this 10 knot wind which becomes the limiting factor for a safe towing operation. Don't ever be afraid to shut down the towing operation if conditions are becoming unsafe. The loss of a towplane can be a problem to any club, but the loss of a towpilot is a catastrophe. Each facet of your towing operation should be examined and any deficiencies corrected prior to this year's soaring season. So in the sequence of a typical soaring day, let's look at some of these operations, and let this prompt you to look for more areas of possible improvement.

DAILY INSPECTION

Is your DI procedure complete and thorough? For some pilots, this consists of a 3-2-1 check: 3 wheels, 2 wings and 1 propeller. A good DI takes only a few minutes longer than a poor one, and is very inexpensive insurance. Those few minutes could save both you and the club some future headaches. Even as you are approaching the aircraft, you should start your DI from a distance. Loose ropes and poorly placed wheel chocks could indicate possible wind damage. An uncovered pitot tube could indicate possible water accumulation in the pitot line. Although this is not a serious problem initially, the continuous use of pitot heat from immediately after engine start should cure the problem in time for takeoff.

As with all problems revealed by the DI, don't take chances. If you are unsure, get it checked out first, even if it means a delay in the start of the soaring day. A written checklist is best, for this and all other ground operations. A good geographic check is a close second. However, in the latter case (geographic), the DI must be

continued on next page

started in the same position and follow the same sequence consistently if it is to be of any value. Also, with this type of check, be very careful of interruptions, as it is here that some items may be inadvertently overlooked when you resume your DI.

Great! The DI is done, and the aircraft is serviceable for the day's operation. So, it's time to fly. No!... not just yet! What about the DI on the other key component: the pilot. Are YOU ready to fly? Personal problems and/or a negative attitude must be left at the tiedowns, or you are setting yourself up to become a statistic. For whatever reason, and there are many, if you don't feel up to towing, then don't tow. There should be no external pressures felt, even if you are the only towpilot on the field at that time.

While on this topic, a few other points are also worth mentioning. Did you have a good breakfast, other than the cup of coffee and the chocolate bar for quick energy? This can lead to serious problems later in the day. What about the clothes that you are wearing? Are you adequately dressed to spend the night out should something untoward happen? Are you wearing anything made of nylon, as we all know how this reacts to a fire. Although these may appear to be negative thoughts, it pays to be prepared.

ENGINE START, TAXI, AND RUN-UP

Shortcuts can become very costly in this area. Improper start procedures and poor monitoring of engine instruments can cause serious long-term problems within the engine. Allow the engine to run at low RPM (700-900) until the oil pressure has stabilized and the temperatures (cylinder head and oil) are rising before you increase power. The key is to be patient while awaiting the engine to attain operating temperature. Try doing other checks (ie. controls, trim, flaps, flight instruments, etc.) while the engine is warming up. Whatever you do, do NOT close the cowl flap after engine start to help it to warm up a bit quicker and save a few minutes. This leads to very uneven heat build-ups within the engine itself.

Should you encounter a gauge that is reluctant to indicate properly, the natural reaction is to tap it until it moves. The initial action is correct, however it is of benefit to tap either the instrument casing or to tap the instrument panel beside the affected gauge. Tapping the glass face has two definite disadvantages. Firstly, should the glass break, you will probably cut yourself, plus render the gauge (and possibly the aircraft and/or the pilot) unserviceable for flight. The other reason will only become apparent under specific sun angles which will reflect light from the panel, and the gauge indication will vanish behind an accumulated mass of fingerprints on the glass face.

As you are taxiing for run-up, there are a few common mistakes that we all tend to make. The first of these is to fight power with brake while controlling taxi speed. This leads to rapid wear of the brake pads, and a heat build-up within the brake assemblies. Another often overlooked item is leaning the mixture for this and all other ground operations. Not only does this reduce spark plug fouling, but it also saves fuel. Whenever possible, try to avoid tight radius turns, especially with a wheel locked. Fast taxiing over rough ground tends to place an unnecessary strain on the landing gear fittings. By limiting the use of carb heat on the ground, you are prolonging the life of the engine, since the hot air is unfiltered for most aircraft. All of these points, and more, have obvious implications to the long-term well being of your towplane.

Now that the engine is warm, it is time to do the run-up at a carefully selected position on your airfield. Apart from pointing the nose of the aircraft into the prevailing wind, thus ensuring good engine cooling, what other factors should be considered? Try to avoid doing the run-up over water puddles, sand or gravel, as injuries to bystanders and propeller damage are very real possibilities. The area ahead of the aircraft must be clear, should the brakes slip or fail. The area behind must also be clear, as local windstorms can create havoc amongst parked gliders. Just a bit of thought is required, as you are going to fly this aircraft next.

GOING FLYING

At this stage in the VSA (Vancouver Soaring Association), the use of the written checklist ends. In its place is a 12 point geographic checklist devised for L-19 operations, which is used both before take-off and before landing. Strong arguments are possible here advocating written checklists. In the latter case (before landing), this puts the pilot "head down", looking inside the aircraft reading a checklist while in close proximity to an airport. This aspect alone greatly reduces the time spent by the pilot in looking for traffic. The geographic checklist, as devised, has two distinct breaks in it, thus ensuring that no item is missed, while allowing ample time for defensive flying. By using the same checklist for both cases, the potential for mistakes is virtually eliminated.

Before take-off is a good time to review emergency procedures. Where is the fire extinguisher in the aircraft, and how does it release from its mounts? You should have checked this, plus its state of charge during your DI. What if you had an engine failure at 100 feet? At 500 feet? Or, what if you had to abort a take-off for whatever reason (and there are many, ranging from poor acceleration and engine problems, to obstacles, and gusty winds causing loss of control)? What if...? Having reviewed these emergencies mentally will only serve to put you in much better stead should something adverse happen.

From the aspect of good airmanship there are a few points to review also. Your throttle movements should be smooth and gentle at all times. Do you know the temperatures and pressure limitations of your engine, or just rely on whatever coloured band markings that are present on the engine instruments? What about the shoulder harness system in your aircraft? It is there for your protection, and not using it for whatever reason is more than poor judgement, it is negligent.

Another controversial issue is wearing a parachute while towing. In some countries this is mandatory, but there are strong arguments for both sides of the issue. Here are a few questions you can decide for yourself if the parachute is an asset or a liability in the towplane. How often do you have sufficient altitude to get out of the aircraft, and still have enough height left for the canopy to deploy fully? Is your aircraft equipped with a quick-release door or window? Is the safety harness in the aircraft easy to get out of? If your tow aircraft is aerobatic, what are the chances that it has been used (or abused) for this type of flight? What about the ever present possibility of a mid-air collision? How well will the parachute be taken care of? Will it be left out in the open, or stored in a damp corner? Will you ensure that it is properly taken care of, and repacked at the correct intervals? These are just a few of the possible questions, the decision is yours.

Since most glider operations are flown from uncontrolled airports, certain procedures must be followed. The AIP (Aeronautical Information Publication) addresses the correct operational procedures to be followed at uncontrolled airports. In the interest of safety, these must be adhered to. If your club has a special circuit for the towplanes, or the gliders, then get it published in the VFR Supplement so that everybody knows what to expect. Transient pilots can be easily confused when both left-hand and right-hand circuits are being flown at the same airport for the same runway, or even worse, for two intersecting runways. Add to this some towplanes flying straight-in approaches from their release points, and a radio frequency known only to club members, and you really do have a safety problem. Saving a bit of time with nonstandard flying procedures jeopardizes everyone's safety.

What about your radio calls? Are your transmissions clear, concise, and at the correct point in the circuit? By letting everyone on the frequency know your position and intentions, you can really enhance the professionalism and safety of your operation. Never assume anything, be prepared for the mistakes of the other pilot.

TOWING

You are now in a highly fatigue inducing environment. The noise, heat, vibration, and pressure of doing good tows, coupled with good airmanship and proper engine care, tend to take its toll at a rapid rate. Pilot fatigue is a major concern, no matter what type of aircraft you are flying. Even dehydration is a contributing factor to fatigue, yet this is often overlooked by pilots flying the other end of the rope. Proficiency on the aircraft also has a bearing on pilot fatigue. You are not as proficient now as you were at the end of last season, and as such you

cannot expect to do as many tows before you become fatigued.

There are many identifiable symptoms of fatigue, and you must see them for yourself so that you know when to quit, either for a break or for the day. Forgotten checklists, poor traffic lookout, poor airpeed control, deteriorating landings, becoming more aggressive or irritable, and even daydreaming while towing are all symptoms of the problem, and there are many more!

Two classic examples have been brought to my attention, and these are definitely worth mentioning here. There was the case of a pilot on a routine training tow that called the engine instruments "normal" during the descent, and they were, almost... there was just one minor discrepancy: the oil pressure was zero...

to continue towing as long as there are gliders waiting to fly. Try to take regular breaks, every hour or hour and a half. Also limit yourself to a certain number of tows per day, say 20, which is a respectable quota. My personal high is 45 tows, plus a fuel flight. From the safety standpoint I was really pushing my luck. Was this really safe? There is always the temptation to do "just one more tow", but you have to learn when to quit. It is easy to become a statistic, and it can ruin your whole day...

You have already reviewed your emergency procedures for the aircraft, but what about the potential on-tow emergencies? How can you abort a towing take-off successfully? What if you were to experience a power loss at, say 200 feet? If neither of you could release, what are the signals to use, and how would you then fly the approach and landing? If you had to abort a

One of the VSA L-19's in the circuit at Hope.

The other case is of one pilot flying until the gas tank was empty, and due to the float type of fuel gauge, the indication had gone below "E"mpty and now read "F"ull. The fact that he had done ten tows on that tank and that it was still full did not register. Fortunately, this "oversight" was caught on a pilot change. So, on your checks, are you seeing what you **want and expect** to see, or what is actually being indicated on the instruments and gauges?

There are some temporary solutions, but no cures other than rest. Ensure that you have eaten prior to flying. Good, comfortable seat cushions, plus a noise-cancelling headset, or even ear plugs, can delay the onset of fatigue. When you get tired, get out of the towplane for a break and a drink (non-alcoholic, of course, if you still intend to fly that day). Whatever you do, don't push yourself or your luck beyond safe reasonable limits. It is very tempting

landing from a low altitude, would you drop the towrope? Why? These are just a few questions that should be reviewed. Since each field has its own procedures and peculiarities, some of the answers may vary. Nevertheless, a good discussion with your CFI and chief towpilot would be in order if you have any doubts as to the correct actions to take, for these and other possible scenarios that you may encounter this season.

In your pre-tow preparations, do you ever monitor the experience level of the pilot that you are about to launch? This factor has a definite impact on the tow itself, affecting bank angles that you can use, to how close you can take that pilot to the mountains or to other gliders before their actions could endanger you. Even experienced pilots can forget to lock the spoilers shut, and then have them open shortly after liftoff. What are your limits for **this** take-off? Do you have a point beyond which you will abort the tow? How far will you let **this** glider drift out of position before you do something? An often forgotten safety feature of the towplane is its release! Can you reach it quickly, without looking for it? How much effort is required to jettison the glider when the tow rope is under tension? Should the glider lose directional control during the take-off roll, **you may be the only one** able to release.

Are you, as towpilot, constantly evaluating changing conditions? You are in the best position to monitor what is happening on and around the field. If you are not looking for these changes, but just towing, you could be becoming complacent and falling into a possibly unsafe routine. Here are seven basic factors for you to assess;

wind: Crosswind or downwind? Gusty? How strong? Speed increasing?

visibility: Improving or deteriorating?

field condition: Ruts or holes? Soft after a rainstorm? Any gliders parked incorrectly and encroaching on the landing area?

precipitation: How well can you see? How well can the glider pilots see? Any approaching weather systems or squall lines? Any risk of freezing precipitation on the ground or at circuit height? Are you using pitot heat?

clouds: Risk of CB or fog?

sun angle: A factor? Landing or taking off into it in hazy conditions?

traffic: Where and how many? Nordo aircraft? Any transient aircraft unfamiliar with your operation?

These are the basic factors, and you are in the best position to evaluate their actual, and impending, impact on your soaring operation. You must also tailor your flying to suit the existing conditions. In all of these aspects there is one vital aspect: **flight safety**. Peer pressure is no reason to compromise yourself or the operation. As such, the towpilot must be ready to stop towing if the conditions are becoming unsafe for flight. Are you?

PILOT CHANGES

During the course of the soaring day the time will come to change towpilots. Since the engine will be shut down, you will have the time to be briefed by the towpilot going off duty. What other actions should be accomplished? The fuel and oil levels should be visually checked, and while so doing, you will also be able to inspect the engine, upper wing surfaces, and the fuel caps for condition and security. A full cockpit check should be carried out, and the controls checked for freedom of movement and for complete unrestricted travel. Other items, such as brake pads could also be checked, at the discretion of the individual pilot. However, if damage is suspected or evident, a more thorough check by qualified personnel must be made. cont. on next page

REFUELLING

As with all refuelling operations, certain precautions must be taken. Whenever possible, approach the gas pumps into wind, thus preventing the aircraft from shifting and also preventing wind damage to the control surfaces. The aircraft must be "grounded" to prevent the static electricity built-up on the aircraft from causing a spark between it and the fuel nozzle, with potentially disastrous results. If your club does not have a grounding wire, then get one installed before you refuel another towplane! Also, while connecting the ground wire to the aircraft, connect it to an unpainted point on the fuselage. Why? Well, paint usually is an insulator, and thus defeats the purpose of grounding the aircraft. Another reason is the fact that most aircraft have rubber engine mounts which, if the grounding strap between the engine and fuselage is broken, renders the ground wire useless when connected to the exhaust stack.

As an economy measure, do not fill the tanks to the top, but leave about 1 inch (or 2.5 cm) below the top to prevent fuel loss through the vent system. An alternative to this is to refuel the aircraft with the quantity that you will require to finish the day. A light towplane will climb better than a heavy one. Try not to move the aircraft for a few minutes prior to draining the sumps, thus allowing any impurities to settle.

The oil should be checked, but remember to allow for the oil still in the engine and valve covers that has not yet drained into the oil tank. Whenever adding oil, ensure that you have the correct type of oil, either mineral or detergent. A recent incident occurred where the pilot thought that 80W meant 80 weight, and added 80 grade mineral oil to the engine. This is an important item to monitor, especially if you have help while refuelling. This is an easy mistake to make, but 80W means 80 weight DETERGENT oil. Do not rely on the colour of the can either, but read the label, preferably before you add it to the engine! Once this is finished, it is important to ensure that the oil cap is securely closed, and that the dipstick is properly seated. A bit of oil escaping can make quite a mess on the side and/or windshield of your aircraft.

The last thing to do is to ensure that the windshield is cleaned after **every** fuel stop, and more often if necessary. Most glider operations are in heavy traffic areas (self-generated), and a clean windshield is a must for safety. Once again, a minute or two well spent.

TIE DOWN

The day is finally over, and you are tired. The tendency is to throw on the ropes and call it a day. Unfortunately there is more to it than that. The aircraft must be refuelled, and unless you are putting your aircraft into a hangar, there are several precautions to be taken to ensure that the aircraft will be just as you left it for the next flying day. The wheel chocks must be snug against the tires, not just placed on either side. The ropes (not old and weathered) must be tight, and secured with knots that will not slip as the aircraft shifts in gusty winds. The controls must be secured, preferably with external locks to prevent the control cables from stretching.

Another item, although small and often forgotten, is the pitot cover. This must be put on correctly, as there are some that may be inadvertently installed upside down, thus trapping water inside the cover itself.

Before leaving the field, try listening on 121.5 MHz (the emergency frequency) for any active ELT (emergency locator transmitter) on your field. Since the installation of the ELT is now mandatory, this is a good precaution to take, especially if a towplane has done a few hard landings towards the end of the day. Some clubs leave the ELT off the towing operations, and arm it for cross-country flights. (Also remember to file a flight plan, very inexpensive insurance). However, when arming the ELT it is important to listen on 121.5 MHz in case it is activated by this selection. If it does activate, it is just a matter of resetting it. While on this topic, there is another point: does your towplane have a survival kit, or at least a good first aid kit on board? When was the last time it was checked?

SAFETY

Towing is done in a see-and-be-seen environment, and as such there are a few things that can be done to improve the conspicuousness of towplanes. Flying with the landing light, and the strobe light(s) on at all times, goes a long way in helping others to see you, and also reduces the bird strike hazard. Another asset is a brightly painted, conspicuous towplane, and not one that tends to be camouflaged against its surroundings.

The era of the dawn-to-dusk towpilot is over. The towpilot should have time for a good breakfast at the start of the day, as well as several breaks during their shift. Since the towpilot is a volunteer, there to enjoy the day also, no glider pilot should try to lay a "guilt trip" on the towpilot when they take a break, or even quit for the day when they are tired. It is always unfortunate if there is no other towpilot to continue, but remember your towpilot is not a robot. The request for "Just one more tow, please!" can be very tempting to accommodate, but just where do you draw the line as your proficiency decreases during the day? You must set your own limits.

While flying, strive for precision. Several areas come to mind: speed control, circuits and approaches, as well as touchdown points, just to name a few. Since you are approaching with the rope attached to the aircraft, a steep approach is required, but not to the detriment of good airmanship by throttling back to idle and having the engine backfire until you flare out for landing. If your club advocates dropping the rope on landing, is this done at a safe height, so that you are not looking for the release while in the flare? In order to expedite the operation by dropping the rope close to the flightline, are you jeopardizing your own safety?

Carrying passengers in the towplane should be discouraged, for several reasons of which safety is first and foremost. Passengers, no matter how well briefed, can be a distraction at times. The aircraft itself will handle differently, due to centre of gravity shift (if tandem seating), and its performance will be diminished with the extra weight. Is the passenger seat itself hazard-proof? Are all controls, cables, and switches guarded or rendered inoperable? What about the insurance aspect? Does your passenger know how to use a seat belt/shoulder harness system properly, and know how to get out of it? Even though it may be good public relations, carrying passengers in the towplane is an unnecessary risk.

One safety aspect that is sometimes overlooked is the pre-season checkout. The "once around the patch" checkout does very little good, and can even instill a false sense of security. Why not practise some of the emergency procedures. Engine failures, and simulated power-off approaches are good training exercises. Why not try some steep turns, stalls (both with and without flap), slow flight, and if the aircraft is certified for spins, then these also. When was the last time you tried a full-flap go-around? It is up to you, as a towpilot, to get a good checkout. Feeling comfortable with the aircraft goes a long way towards safe flying.

Some pilots feel that they don't need all of the exercises during the checkout. Others know it all, and take constructive criticism as an insult to their flying prowess. There are too many accidents looking for a place to happen, a lackadaisical attitude can become fatal.

All of these points are addressed to you as a towpilot, yet may also apply to the glider pilot. To improve your skills will require a conscientious effort, no matter which end of the rope you happen to be on. Being a towpilot is easy, being a good towpilot is quite a bit harder than it may appear. Are you a good towpilot? □

A letter from Ursula

"CANADIAN SOARING"
sites, records, diamonds and more

This first-time guide to our Canadian soaring clubs has finally made it through the printer's press and is available at $3.00.

The little book (pre-punched to fit into the AIP or a standard small ring binder not supplied by SAC) presents the 1982 SAC-registered clubs with an almost accurate (not to scale) map, all Canadian records and all current Canadian Diamond pilots, the national Champions in each class since registry, and basic information on SAC awards and trophies. I hope this guide is a useful tool at your airfield and on your travels.

A few personal words on how this booklet came to be made:

Walter Piercy had worked on the project already in the early 70s, publishing gliding fields in free flight as they became available from clubs. Walter had to drop his fine idea due to lack of input by all clubs. He restarted the project in 1980 for the SAC Procedures Manual. I was unaware of Walter's initiatives and effort and began in April 1982 to solicit input myself (how well I remember getting those frequent long distance telephone calls where I tried to briefly explain the location of the Cu Nim and Cowley airfields ...and what was to be a short description became a long conversation. Something had to be done!). I was convinced that all clubs would rush the questionnaire back to me, happy to get this soaring field guide off the ground. To mention a July cut-off date almost seemed unnecessary to me...

It proved to be worse! About one-third replied, thereafter dead silence. Another reminder, one-third of those replied; a third reminder was still necessary, which got us into October 1982, when I finally drew the line (quite disappointed for the missing responses).

It's a lot of fun working together with a fine team of free flight correspondents whose priority is to answer by return mail! More pilots have offered their support recently. Thank you all – this way we really get somewhere (and it's more economical also)!

Thank you all for your help to make up for time lost, but also to help making the booklet, CANADIAN SOARING, a "best seller (I'm sure). It will be introduced at the AGM in Calgary, more copies will be available from the National Office. Updates will be accepted any time; please mail them to the National Office. We intend to print updated pages to insert in this directory every year. I invite everyone to send in corrections and suggestions to keep it topical. Don't wait for some other club member to do it – you do it!

So far the costs of paper and postage for soliciting your input have risen to $80 – it could have cost $20, and much fewer working hours. I can't help saying one last word to many of you – please recognize deadlines as given. Your answers are the beginning of a project, any delays or ignorance move us backwards. If you don't agree, please say so, but let's move forward!

2/83
DERNIÈRE PARUTION / LAST ISSUE

This free flight (2/83) is the last issue for your 1982/83 SAC membership subscription. You will receive 3/83 only after renewal; so make sure that your club registers your name with the National Office as soon as you have paid your fees! This resolution had been published by the Board of Directors in 6/81 (Directors meeting report). Club membership secretaries: do not dilly-dally sending SAC membership fees to the National Office. There were some people who missed important SAC events last summer (as well as free flight) as a result of late registration.

free flight is not only a recording book on past flights, theories, humour and armchair reading, it's also a working document; containing valuable information on prices, price changes, addresses, telephone numbers, SAC policy changes, and much more. If you will read the "fine print" in free flight, you will find the answer immediately, usually saving paper, postage and time for inquiry at the National Office.

MAKING FREE FLIGHT

After 2 years of some effort to get the magazine to you in the first half of the month of issue (see 1/81), I thought "the battle was over" with the magazine typesetting and layout now in Claresholm. I was dreaming when the camera-ready copy of the Jan/Feb issue (deadline 5 Dec) arrived in Ottawa on 22 Dec 1982. So, add another week for the printing job (plus some extra days for the season's holidays) and 1 /83 will be ready for mailing on 12 January 1983, according to my master plan. And it was ready!

But the great plans for improvement were fouled up by the necessity to include a lot of important inserts following the Directors meeting, which caused frustrating last minute delays. That, and a problem with the mailing labels, resulted in a two week lag in my dream.

At the time of writing, all the text for this issue (with a very few exceptions) is typeset; one more week to honour the deadline, for layout and art work (yes, it takes that long), and off the copy flies to Ottawa.

The ability to typeset material so well in advance is a great time-saver. I hope that this issue has finally come to you on my long-promised date! Thank you for sending your articles or classified ads well ahead of the deadline.

31 January 1983

SOARING ACROSS CANADA
LE VOL À VOILE Brochure

This handy leaflet is available in English and French, explaining in a few words the many questions a visitor to your club may have; it is a welcomed hand-out at any soaring event, and a publicity aid to our goal to broaden soaring knowledge in this country.

The National Office has them in stock. Of course, they are better in your hands than on our shelf. There is ample space on the back for your club's name. In order to get them used, they are now available at the low price of 10¢ each – but you must buy at least a hundred.

SAC 6-YEAR PLAN

The SAC 6-Year Plan was circulated to all clubs in Sept 1981 with the purpose to allow for better planning for SAC sponsored events. Some clubs participated in the program and their names now fill the blanks. Bids for these events must still be submitted for approval, but ALL CLUBS are still invited to bid for ANY event they wish to host the following year. Bids must be received by the National Office prior to any October Directors meeting for approval! All Directors meetings are announced in free flight under COMING EVENTS. □

NOTE

The towplane article on the centrefold pages (11-14) may be removed from the magazine for reference.

WANTED

for an historical article – information about the activities of the Kelowna Gliding Club (active in the mid-50s). Would anybody know anything about this group or knowing anyone who was a member of this group, please contact Lloyd Bungey, General Delivery, Port Mellon, BC VON 2SO.

PRICE CHANGES

Note in the SAC SUPPLIES list, there have been several price changes and corrections, and item numbering has been changed to make insertions easier. ALWAYS use the latest issue of free flight for current prices.

INSTRUCTING AND LEARNING
FLYING THE CIRCUIT

Ian Oldaker
Chairman Instructors Committee

Teaching student pilots how to fly the circuit involves two processes. First the pilot must learn how to **handle** the aircraft, and second how to **judge** the circuit. Both these processes take time to learn.

1. Aircraft Handling

Handling of the aircraft is learned from Day One when we show the student the effects of controls, and he or she then tries them on their own. From then on the student increasingly is flying the aircraft, learning how to control speed (plus use of trim), how to enter and exit from a turn with minimum slip or skid, how to stay in a turn again with no slip or skid, and all the time how to keep a good lookout.

Learning how to handle the aircraft at this time includes how to recognize and recover from a stall, through an introduction to sideslips and steep turns. Next may come handling the spoilers or dive brakes. The student should be shown, and be able to show you, the effect on trim of opening the spoilers at different airspeeds so that, when they use them on the approach, they will **know** how to compensate for the trim change. Practise at maintaining a given airspeed while using the spoilers is best done first at height when the student does not need to concentrate on the impending landing; it helps to have a bit of lift around too, so that you can climb and practise the lesson again.

2. Circuit Planning

During some of these later lessons the first instruction on planning the circuit can be given. I say **planning** the circuit because this must be done just before flying it. As it is flown, the pilot must judge when to adjust the pattern. We should plan to arrive over the end of the runway at a desired height, and the student will be learning how to judge the current position in relation **to the runway**, after all, the runway is where we want to arrive.

3. Flying Ability

How well should our student be able to handle the aircraft before flying the circuit? My answer is that they should be flying as much as possible at all times, and if flying in the circuit is warranted, then by all means keep your cotton-pickin' hands off the controls! Circuit flying requires more than gentle turns, and students should be able to crisply and accurately enter, stay in and exit from medium turns when flying the circuit. Do I have to mention over-ruddering? The answer is yes, because I see many pilots trying to tighten their final turns by incorrectly using a bootful of rudder.

4. Using the Rudder

Think for a moment why we tend to overuse the rudder especially on that final turn. Several reasons. First, as small kids some of us rode soapbox go-carts and we got an early experience that we can "steer" with our feet. I know the rudder sense is opposite, but our brains learned to steer with our feet. As you may know, one of the laws of learning (the Law of Primacy) is that the first thing or method that we learn or our first experience of something new is almost indelible. It is very difficult to erase that learning experience (which really means that we have to teach everything right the first time!).

5. Illusions Created by Drift

Another reason for over-ruddering is drift, and the illusion that this creates in the pilot's subconscious is that the aircraft is skidding, "therefore it needs more rudder". When close to the ground, on base leg, in a wind, the aircraft will appear to be skidding whereas it could be flying perfectly with no slip or skid (ie. the yaw string is straight back). There is then a great tendency for many pilots to use too much rudder, especially if they are unaware of the phenomenon of the illusion created by drift, and have not had it shown to them. The illusion is difficult to appreciate high up, but when close to the ground, on base leg, take the opportunity to teach your student this important lesson by getting him to recognize the drift.

6. First Things Learned

If we have been teaching the aerotow incorrectly by using of the rudder to "point the nose" at the towplane, the student has now indelibly learned (even in the absence of the go-cart experience) that he or she can "steer" with the rudder. Yes, I know you will be teaching correct turn entries and to remove all but a tiny bit of rudder once turning, but alas, the brain tends to revert to first things learned when it is under extra pressure. In other words we fly more by instinct than by conscious thought processes in stressful or emergency situations. How many accidents have been caused by an incipient spin low down brought on by over-use of the rudder? Too many, I'm afraid. On a cross-country ..."too low for comfort, bit of a wind – oops, I need to tighten my turn onto final wind gradient..." Extra stress? – you bet! Flying is now very much by instinct, by what was learned first. We need to keep those long wings flying, folks! In a wind gradient the lower wing is already at a disadvantage; adding too much rudder slows it down even more – then stall – incipient spin – crunch. Difficult to demonstrate in a 2-33 at altitude where there is no wind gradient, but it is easily done low down. Let us leave others to do the demonstration!

7. Downwind Checks

When we start teaching the student "the circuit", we should allow a downwind leg sufficiently long that the student has ample time for the pre-landing check, **SWAFTS.** Some clubs will alter this slightly due to local considerations (for example, CVV Quebec). However, the student should do the checks, you will be telling the student that they are not important, and yet most of us know of incidents caused, for example, by failure to check that the wheel is down. If the student takes a long time on his first checks, persevere; they will do the checks faster next time, and fast enough very soon. They need to practise to learn it!

The mnemonic SWAFTS includes all the items that should be covered prior to landing. **S**traps should be checked tight, the **W**heel needs to be lowered, and **W**ater ballast dumped. In a trainer these are often inapplicable, however in devising the check list, the Instructors committee felt that a basic list of all vital actions should be learnt from day one. Very soon your student pilot could be converting to higher performance ships. During training some of us find it useful for the student to call out the items as they check them; this helps the instructor to "monitor" that all items are done. It also helps imprinting the checklist in the student's memory.

8. Speed in the Circuit

The **A**irspeed item in the checklist is not a check of the current speed. It should be a conscious calculation of the **approach** speed according to the formula: $V_{approach} = 1.3\,V_{stall} + V_{wind}$. This is the formula read by all students in our Soaring Instruction Manual, SIM. This is also the formula used in basic power flying instruction. There are other formulae in use based on best L/D speed, cruising speed, etc. We do not recommend these though, because if a pilot does not know the best L/D speed, he can't find out in the air! He can stall the machine though. Remember too that this

formula is a basic formula to be used by the ab initio or beginning pilot – it will stand him or her in good stead for several years to come. When changing to a "Super Mini-Stratus", the flying manual for that machine should of course be well learnt before flying it, and in this case experience and knowledge will allow the pilot to choose his approach speed appropriately. Nevertheless the above formula is still valid and safe if he has no other guidelines.

9. Speed Adjustments in the Circuit

The speed to fly the downwind is recommended in the SIM as 45 knots (50 mph). This allows a reasonably relaxed downwind, and one in which the ground speed is still reasonable. This means that pilots will not "burn up" the circuit with little time to go through the checklist, especially on windy days. Before turning onto base leg we recommend increasing speed and retrimming for Vapproach. This is now the technique taught at the SAC instructor courses. As the SIM now calls for the speed increase to Vapproach while in the base leg, it will be amended at the next printing to show this change. All instructors please note! The balance of the downwind, base, and final legs are now flown at the chosen approach speed.

10. Completing the Checks

Traffic of course is checked: any obstructions on the runway? Any aircraft in the air on a long final (towplane?), or doing an opposite handed circuit? – it does happen. In other words, keep a good lookout.

Spoilers are unlocked, cracked open and checked for freedom of movement. If the pilot now wants to remove his hand from the spoiler lever, he should be taught to close and lock it, rather than to have the spoilers suck open; this does happen. Common sense – yes, but many of us forget to lock them again!

Let's reiterate. The downwind is flown at a minimum of 45 knots, the aircraft being correctly trimmed, and SWAFTS is started and completed. Before turning onto base leg, the speed is increased to Vapproach and the glider is retrimmed. The turn onto base is made and the speed and trim rechecked.

I have covered quite a few points in this article and have not even covered how to teach "judging" the circuit. Some students find it hard to learn this part of flying, yet it is of vital importance that all pilots become good at it. It is not good enough that all circuits are "perfect", few of us would learn how to handle the unusual circuit (low entry, lift on downwind, and other reasons) if all circuits were the same. Throw in some variety, make your students think. If they mess up a circuit, thoroughly discuss it after you land, then go up again and give the student a different circuit or problem the next time – keep them thinking and learning and I'll discuss circuit judgement in another article. □

OKANAGAN WAVES

Brian Macdonnell

In August 1982, Brian observed thermal activity at 1330 hours before wave conditions developed, approximately 1 1/2 to 2 hours later. The wind prevailed from the SW (215 degrees to 234 degrees), cloud base was estimated to 6500 to 7500 feet.

The Okanagan Valley is the northernmost finger of the Great American Desert. The climate is pleasant in the winter, and hot in the summer. But for the irrigation from the lakes, the valley would resemble desert country with its arid mountain sides and rattlesnakes, cacti, and sage brush.

The 5000 foot mountains west of the lake produce exciting wave conditions, still little explored. Brian Macdonnell obviously has more opportunities to take awe-inspiring photographs from the ground, yet wishing to be up there in his Mü-13d3 (C-FZPO) "one of the best machines I have flown over the past 25 years", and to tell us more about Okanagan wave adventures. An entire series of wave clouds over a one year period has been photographed, one of them is shown here. Brian says:

"I am very fortunate that my home in Kelowna is situated under the secondary wave, which makes observation and photography of wave conditions in the Okanagan Valley easy.

In most cases, wave systems are generated by SW winds in the range of 197° to 240°; lower winds range from 15-40 mph, 1500 to 6000 feet, and winds at 6000 to 11,000 feet are 30-60 mph.

I have made wave contact five times in the Okanagan. The first time was over the Silver Star Mountain, Vernon, BC, where I was able to reach 13,500 feet agl. I did not have oxygen aboard, therefore felt it prudent to explore no further.

The next occasion was at Oliver, BC. The wave at Oliver is interesting. It can be picked up at 700 feet or so and worked to about 9000 feet. Lift was about 3.5 to 5 knots up.

The next three occasions were in the Salmon Arm area. The wave there is irregular. You find yourself over the lake in smooth, weak lift, about 250 to 350 fpm. The highest I have reached in this area is 8700 feet agl. I believe higher altitudes can be reached with further exploring." □

Sub-Gravity Sensations & Gliding Accidents

Part 2

Derek Piggott

The author is the internationally known Chief Flying Instructor at the Lasham Gliding Centre England. In the concluding part of his article, he discusses how the instructor may teach the student to deal with sub-gravity sensations.

First flights

The beginner on his first few flights usually experiences very vivid sensations because, even in clear air, he cannot interpret what he sees quickly enough for his eyesight to suppress his sensations. The humped-back bridges in the air are not signposted and therefore the sensation occurs with no obvious cause. It may be the result of a small forward movement on the stick lowering the nose, or it may be the glider flying into sinking air or turbulence and starting to sink. Naturally the beginner fears the worst and momentarily thinks the aircraft is falling out of control. His lack of experience reinforces his momentary panic.

If the sensation continues and he does not know how or why it occurs, it is likely to cause a state of panic in which he is unable to think or act. The average student feels quite alarmed by these sensations, and this is perfectly normal but a few are extremely disturbed and find these feelings absolutely terrifying. Usually after a few flights the average student has learned to see the pitching movements as they occur so that once again his eyesight results in the suppression of the unpleasant sensations. He also learns to accept and identify the effects of turbulence and confirm by watching ahead that the aircraft has not been seriously disturbed.

Most beginners also experience disturbing sensations as they put the glider into a turn. Unless the rudder is used correctly in coordination with the ailerons as the bank is applied, a momentary sideslip occurs. The student receives a vivid sensation as if the glider is rolling over out of control although, in fact, the bank may be quite moderate and scarcely increasing at all. In a sideslip the student has the feeling that he is going to fall out of the aircraft and this can be very frightening at first. This feeling is soon eliminated by learning to use the rudder correctly and also by looking ahead as the bank is applied so that the angle of bank may be seen against the horizon.

The first few flights can be traumatic unless the instructor explains these feelings and why they occur. The instructor probably is unaware of them and normally makes no comment or reference to them in flight and it seems to a beginner that all the other students are unaffected, since they all look so calm and enthusiastic on the ground! Often being embarrassed to show fear or talk about being frightened on these first few flights makes matters worse. Many beginners genuinely believe that they are the only person who suffers like this.

It should by now be clear how important it is to choose ideal weather for the student's first few flights. Turbulent conditions with poor visibility will often result in such frightening feelings that even a keen beginner may be put off flying for life. An understanding of why the sensations occur and why they are so vivid can be a great help if only to reassure the beginner that he is normal and that most of these unpleasant feelings will disappear after a few flights.

Introductory flights should always be kept to a maximum of 20-30 minutes and should involve a minimum of circling and no stalling or even mildly aerobatic maneuvers.

Degrees of Sensitivity

Almost every beginner experiences bad sensations during his first few flights, until he has learned to interpret visually what the aircraft is doing. Poor visibility and turbulent conditions will accentuate these sensations, and at this stage the student should be taught to look ahead rather than attempt to use the instruments. Looking ahead, the visual sense reduces the sensations produced by the inner ear and other balance mechanisms, and without a visual reference these sensations are much stronger and can be very frightening. Later in his training during stalling and winch or car launch cable break exercises, the student should be taught to look ahead and to avoid watching the instruments while the nose is being lowered.

People who are very sensitive to low 'g' are totally incapacitated by the sensations during even gentle stalls and recoveries. Usually they appear to lose consciousness for a few seconds and they look as though they are having spasms or an epileptic fit. During this time they throw their head and shoulders back and push the stick hard forward and hold it there. Fortunately most of these hypersensitive people give up flying, but some persist and these present a real problem to the instructor.

About 2 to 5% of beginners will require special care and some extra training to overcome low 'g' problems, and about 1/4-1/2% are hypersensitive. Pilots who are unaffected may also have problems flying in broken cloud or poor visibility where there is no proper visual reference. On these occasions they also feel alarming sensations reducing their ability to regain control from any unexpected or unusual attitude.

First flights on unfamiliar types of glider

Accidents often occur on the first few flights when converting onto a new type of glider. The very light elevator and aileron forces on many new ships make overcontrolling easy, and may start a pilot induced pitching oscillation. Once again the disturbing sensation helps to induce a state of panic.

This, I believe, was the most likely cause of an accident at Lasham in which the pilot on a first flight in a Swallow went into a series of violent pitching motions before diving into the ground in a steep attitude. The pilot in a similar incident was able to confirm that, after releasing the winch cable half way up the launch; because of the excessive launching speed, she found that although she moved the stick back to reduce the speed, it did not seem to respond. This alarmed her and she became unable to control the glider and stop it pitching up and down. The sensations at this time had been so frightening that she had been unable to do anything. The glider flew into the ground and was badly damaged but fortunately without serious injury to the pilot.

In this particular case there were various causes. The glider was being flown with the C of G on the aft limit so that there was a minimum of stability, and the stick forces were therefore abnormally low. The pilot was under-confident and had probably been sent off solo prematurely by an over-enthusiastic instructor who had hoped that sending her solo would have the effect of increasing her confidence. Subsequent changes of instructor had resulted in her being converted to the new type of glider while still in an under-confident state and possibly still sensitive to low 'g'. This accident involved an Olympia 2b (Meise), but there is a much greater hazard flying some of the modern machines which have virtually no stick force because of their low stability. A pilot converting from a training machine could run into serious problems in poor visibility or at times when there is no definite hori-

zon for reference. Already there have been several unexplained structural failures at height involving relatively inexperienced pilots on their first flights in such an aircraft, and these may well be caused by the pilot becoming unnerved during pitching oscillations.

The pilot who has been allowed to overconcentrate on the ASI readings is particularly vulnerable on a new machine, and in looking at the instruments instead of the attitude, he exposes himself to the extra mental stress of vivid sensations of low 'g'.

The importance of routine testing of all student pilots

It may be difficult to believe that many people reach solo standard still in a state where they are seriously disturbed by these sensations and dislike them so much that they would be unable to bring themselves to practise even gentle stalls when they were flying solo. The above average student is particularly likely to slip through unnoticed and the accident records seem to show rather a preponderance of younger people and girls involved. Probably these students do exactly as instructed during stalling exercises with the result that the recoveries are made with little or no reduced 'g'. Their performance pleases the instructor so that he is satisfied they are safe, although perhaps they express their dislike for the feeling of stalling. Often their progress is so rapid that they are off solo with only a fraction of the normal amount of training and, of course, their post-solo dual is also likely to be less than average.

Experience has shown that the affected students have an uncanny knack of getting through to solo standard without their problem becoming apparent. It is almost as though the instructors are unconsciously persuaded into accepting the student's competence at stalling and spinning. If a student is told that he will be practising stalls on a particular flight he will usually have a rather poor winch launch so that very little stalling can be carried out. He will often avoid making the glider stall completely and will recover prematurely, or else he will suggest that his turns need more practice or divert the instructor's attention to some other aspect of his training. In every other respect his flying may be above average and it is only too easy for another instructor who is unaware of the problem to send him off solo.

Even when the student has only one instructor there is a tendency for him to become convinced that he has solved the problem, forgetting that the student must be proof against a sudden and unexpected low 'g' situation – a very different matter from being able to control his emotions during a practice stall at a safe height. Unless each student is given a specific exercise involving low 'g', it is likely that some will still reach solo without having experienced the feeling and being able to recognize it for what it is.

The dangers of morale building

Many instructors do not realize the power and influence which they have over their student pilots. Quite often their best intentions backfire and cause problems which can lead to serious accidents.

During initial training, most beginners need verbal encouragement. If their morale is poor they make very little progress, and most instructors understand this and do their best to bolster it. However, as the student progresses towards solo, this artificial confidence boosting becomes dangerous. This kind of confidence only remains while everything goes well. It is no security against an emergency or the unexpected. On such occasions it is the student's experience, understanding and ability which alone can maintain their confidence. This can only be developed by the student learning to deal with such situations and by them proving to themselves that they can do this without assistance.

There is a danger, particularly with young people and female students, for the student to rely on their instructor and to base their confidence quite unwittingly on his presence. Without him, even with another instructor, they become under-confident again and quite incapable of a satisfactory performance. Frequently, this kind of student will try only to please the instructor and do what they think the instructor would like them to do rather than make rational assessment and decision. It is not safe to allow this kind of relationship to develop or continue. Either a complete change of instructor should be made half way through the training toward first solo, or the instructor must quite deliberately change his attitude and stop any further boosting of morale.

Under-confidence is a danger sign which must never be ignored. There is only one real cure for it, and that is further experience and a better understanding. It is unwise if not extremely dangerous to assume that a few solo flights will cure underconfidence. The nervous or highly strung student should not be forced ahead but needs extra time and instruction to gain confidence. This particularly applies to the student who is sensitive to low 'g'.

Testing for sensitivity

A suitable exercise to add to the introduction to stalling and later for the routine test before solo is as follows:

With the student following through on the controls, the instructor demonstrates a gentle pitching movement from normal flight into a 20° to 30° dive pointing out the sensation. From this position a further gentle movement is made into a 45° dive. Finally the glider is pulled up into a steep climb and is pitched back into normal flight. From this series of maneuvers it is quite obvious that the sensation is not a symptom of stalling, although it may occasionally occur during a stall and recovery and always if the recovery action is overdone.

Just pre-solo, every student should be tested by making him carry out these maneuvers himself. A pilot who is still seriously disturbed by the sensations will be reluctant to do this exercise and will not be able to conceal his nervousness. In addition, students who have apparently overcome a problem of this nature, should be given a series of unusual attitudes to deal with. After a suitable warning the instructor upsets the aircraft suddenly and puts it into an unexpected position. A very rapid spin entry, a very steep stall, a low 'g' maneuver and a steeply banked sideslip presented suddenly will test the student's reaction under stress. This exercise will also help his confidence by showing him that he can handle the most unexpected and extreme situations without assistance.

Conclusions

The sensations of low 'g' seem to be the main course of panic and freezing on the controls with inexperienced pilots. Insufficient or inadequate training and a lack of understanding of stalling and of pitching sensations leave a pilot exposed to the risk of panic when this sensation occurs unexpectedly.

Most beginners dislike or are frightened by the sensation of reduced 'g' but quickly overcome this with experience. Some are more sensitive, and react instinctively by pushing forward on the stick while throwing their head back. In gliders this can result in a violent nose-down pitch movement which accentuates the sensation and increases the risk of the pilot panicing and freezing the stick in the forward position. This can be very dangerous to both the instructor and the student. Many beginners are frightened away from the sport by the thoughtlessness of the pilot or instructor on their introductory flights. When possible select a smooth clear day.

During the introduction to stalling, it is vital to demonstrate that the feeling of low 'g' is not a symptom of the stall but merely of pitching nose down or of the aircraft sinking. Students who are disturbed by these sensations will avoid further instruction and practise at stalling whenever they can. Unless there is a routine test incorporated in the pre-solo checks for every student, there is a serious risk that some students will reach an otherwise satisfactory standard and be sent solo without the instructor being aware of the true situation. These students may be at risk at a later date unless they are given additional refresher training.

It seems probable that there are hundreds of glider and power pilots flying regularly who are susceptible to the effects of low 'g' sensations. Too many flying instructors are prepared to disregard the signs that their students are frightened by stalling and the sensations of reduced 'g'. A pilot who actively dislikes the sensations involved in stall recoveries and who does not practise stalling regularly should realize that he is a serious risk to himself and his passengers. □

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CURRENT CANADIAN RECORDS

RECORD TYPE	OPEN			FEMININE			MULTIPLACE (OPEN)			MULTIPLACE (FEM)		
DISTANCE (km)												
4.3.2.1 Straight distance	RM Cook	724 (C)	1971	A Williams	305 (C)	1975	J Proudfoot/G Fitzhugh	304 (C)	1981	not claimed		
	DJ Marsden	676 (T)	1968	A Williams	209 (T)	1973	L Bungey / D Lovick	253 (T)	1981			
4.3.2.2 Str. Dist. to goal	DJ Marsden	676	1968	A Williams	305 (C)	1975	J Proudfoot/G Fitzhugh	304 (C)	1981	A Williams/E Bell	76	1979
							R Shirley / J Juurlink	153 (T)	1959			
4.3.2.3 O & R distance	M Apps-DMarsden	615 (T)	1983	B Histed	315	1981	D Marsden/E Dumas	422	1979	not claimed		
4.3.2.4 Dist on a Δ Course	H Werneburg	804	1982	not claimed			not claimed			not claimed		
SPEED, Δ (km/h)												
4.3.2.5a 100 km	RM Cook	113.4 (C)	1970	A Williams	54.5	1976	D Marsden/M Jones	98.1	1975	A Williams/M Stone	31.0 (C)	1970
	D Marsden	111.3 (T)	1982									
200 km (not FAI)	R Mamini	91.6	1973	M Barritt	68.7 (C)	1970	M Jones/E Dumas	60.2	1982	not claimed		
4.3.2.5b 300 km	R Mamini	110.1	1973	not claimed			D Marsden/E Dumas	69.9	1975	not claimed		
400 km (not FAI)	J Firth	77.9	1974	not claimed			not claimed			not claimed		
4.3.2.5c 500km	R Mamini	101.8 (T)	1973	not claimed			not claimed			not claimed		
4.3.2.5d 750 km	W Krug	108.8	1982	not claimed			not claimed			not claimed		
4.3.2.5e 1000 km	not claimed			not claimed			not claimed			not claimed		
ALTITUDE (m)												
4.3.2.6 Gain of Altitude	W Chmela	8321 (C)	1974	A Williams	5898 (C)	1969	R Shirley/ P Campbell	7100	1961	Williams/Kossuth	2987.(C)	1970
	J Beattie	8153 (T)	1983	U Wiese	5720 (T)	1982						
4.3.2.7 Absolute Altitude	W Chmela	12449 (C)	1974	A Williams	9772 (C)	1969	Chmela/VanMaurik	10390 (C)	1975	Williams/Kossuth	4206.(C)	1970
	B Hea	10485 (T)	1981	U Wiese	8035 (T)	1982	R Shirley/P Campbell	9085 (T)	1961			
SPEED, O & R (km/h)												
4.3.2.8a 300 km	B Milner	139.5 (C)	1982	not claimed			Chmela (Rominger)	65.0 (C)	1976	not claimed		
	J Firth	70.0 (T)	1970									
4.3.2.8b 500 km	J Firth	88.8	1976	not claimed			not claimed			not claimed		
SPEED, GOAL (km/h)												
100 km (not FAI)	D Band	59.4	1975	not claimed			W Chmela/R Zimm	47.0	1971	not claimed		
200 km (not FAI)	J Firth	70.0	1970	not claimed			not claimed			not claimed		
300 km (not FAI)	W Mix	108.6	1966	not claimed			J Proudfoot/G Fitzhugh	70.2 (C)	1981	not claimed		
400 km (not FAI)	not claimed			not claimed			not claimed			not claimed		
500 km (not FAI)	D Marsden	97.1	1970	not claimed			not claimed			not claimed		

C indicates a record was set by a Canadian citizen in some country outside Canada.
T indicates the corresponding territorial record set by a Canadian citizen within Canada. Territorial records are only noted as such when there is a greater "C" record.

RECORDS UPDATE

Russ Flint

1988 Annual Report

1982 stands out as a record year, better still than 1981, which was good also. Of the record setting flights, four were made in one spectacular weekend in Alberta. The fifth established two feminine altitude records (one in a previously unclaimed category).

At the time of writing, a sixth record flight is awaiting homologation. The flight was made in Pennsylvania and the documentation submitted to SSA for approval. This has introduced long and unnecessary delays in the approval process. Unless there is good reason for doing so (claiming a US State record, for example), it is recommended that claim documentation be submitted directly to the SAC Records Chairman for processing.

Comparison of the 1982 record flights:

	76	77	78	79	80	81	82
Number of records	5	4	0	2	0	7	6 + 1
flights	3	3	0	2	0	4	5 + 1

These are the new records:

804 km — Distance over a Δ course
Hal Werneburg, 12 June 1982
FAI 4.6.4 Open

111.3 km/h — 100 km Speed over a Δ course
David Marsden, 13 June 1982
FAI 4.6.5a
Open (Territorial)

108.8 km/h — 750 km Speed over a Δ course
Willi Krug, 12 June 1982
FAI 4.6.5d Open

60.2 km/h — 200 km Speed over a Δ course. **Malcolm Jones with Dan Pandur**, 12 Jun 1982
not FAI, Open multiplace

5720 m — Gain of Height
FAI 4.6.6. Feminine
(Territorial)

8035 m — Absolute Altitude
FAI 4.6.7 Feminine
(Territorial)
Ursula Wiese (Burton)
23 October 1982

139.5 km/h — 300 km Speed over an Out & Return course
Brian Milner, 14 Nov 1982
FAI 4.6.8a Open
(Citizens)

MULTIPLACE DISTANCE

1012 km from Alexandra to Gisborne was claimed by Dick Georgeson and his wife Helen (see 1/83) on 31 Oct 1982. Now that documentation has been checked by FAI, 994 km was approved for this new world record for multi-seat gliders for distance in a straight line and straight distance to goal.

These two new world records supersede the 970.4 km flown by Ingo Renner/H. Geissler (Australia) in a Caproni A-21 on 27 Jan 1975, and the 864.86 km by I. Gorokhova/Z. Koslova (USSR) flown in a Blanik on 3 Jun 1967.

WORLD 100 KM RECORD

Yet another world speed record (a triangular course of 100 km) has been earned in Australia: Ingo Renner, flying a Nimbus 3 from Tocumwal, New South Wales, on 14 Dec 1982. Approved speed, 195.18 km/h !

This supersedes Kenneth Brieglieb's world record, flown with a Kestrel 17 on 18 July 1974; speed 165.35 km/h.

EXPERIENCE IS SOMETHING YOU DON'T GET UNTIL JUST AFTER YOU NEED IT!

CLUB NEWS

REGINA PIONEERS

Two of our pioneer glider enthusiasts, Bob Cheston and Julien Audette, were recently honoured with life memberships in the Regina Gliding and Soaring Club in recognition of their contribution to the development of the sport.

JULIEN AUDETTE was one of the founding members of the club. Having a long and varied background in aviation, he became intrigued with soaring in the early 50s. He gained first hand knowledge at a gliding meet in Swift Current in 1953. Following the meet, Julien and two other enthusiasts, Walt Fryers and Max McConnell, purchased a Cinema sailplane and organized the Regina Gliding and Soaring Club, with Julien as the first CFI.

Julien has continuously been a director of the club since then and was president for several years. He has also assisted the club in various capacities over the years, for example, as a towpilot, organizer and contest director of national and regional meets in Regina in 1957, 1959, and 1962, as the club's chief adviser in financial matters and equipment purchases, as a SAC director and FAI awards chairman. He provided a strong liaison with the Regina Flying Club and with MOT, enabling us to operate as respected pilots on the Regina airport when, in most places, glider pilots had long been banished. Julien was instrumental in fostering gliding in the Air Cadet movement, long before it gained the popularity it has today. Many, many cadets were trained within the club to the mutual benefit of the soaring movement as well as the cadets.

Julien's interest in competitive soaring is well known across the country, and he also holds Canadian Diamond badge No. 1. In accomplishing this "first", he also broke the existing records in all three categories [see **free flight** 2/81 p 12]. He has owned three gliders, starting with a partnership in a 1-26, then a 1-23 and finally an HP-11. He entered and placed well in many contests in Canada and the USA, but is best known for the many Canadian records he held after wresting this monopoly from the easterners. Julien was also prominent in the early exploitation of the Cowley wave. One outcome of this interest was his best known record flight of 395 miles in 1962 which began at Cowley and ended east of Moose Jaw, Saskatchewan in 1962. When corrected for height loss, an official 374.5 miles became the new Canadian record which stood for several years. Julien also promoted Saskatchewan soaring and won the Saskatchewan Soaring Trophy no less than eight times. His contributions to the soaring movement were recognized in 1977 when he was inducted into the Saskatchewan Sports Hall of Fame.

Julien continues as an active member today, providing passenger flights or towing when needed. For all his support and encouragement over the years, the club has been honoured to present him with life membership.

BOB CHESTON joined the club within a few weeks of its beginning and has been an active member until recently. He was a director of the club for many years and has always been an avid supporter.

Bob was an enthusiastic pilot and competed in all the soaring meets held in this area. In 1954 he bought a Grunau Baby which he leased to the club for a modest fee, and then rebated the fee when the club was able to buy the sailplane. It was usual to see Bob dressed in his warmest winter clothes to make a flight in this open cockpit glider in mid-summer! Apparently he'd had to come down more than once due to extreme cold and did not want to have that happen again. He made many good flights in the Grunau and used it to become the first winner of the Saskatchewan Soaring Trophy in 1952. He later owned a Fauvel AV36 flying wing in which he obtained his Gold badge and was one of the first people to experience wave soaring in the Pincher Creek area.

Bob was most interested in the technical side of soaring and could discuss aircraft polars and drag buckets with the best of them. He even considered rebuilding his Fauvel wings to a more modern airfoil but gave up the idea as too time consuming. He did, however, smooth the wing profile with microballoons to improve the performance. He also tinkered with restrictors and compensators to make his variometer work better, and even built his own barograph, which incidentally he loaned to me when I made my Diamond height.

Bob has now retired from active soaring, and spends some of his time studying computer science at the University and in developing programs for the computer which he built for himself. The club's best wishes go to Bob.

H.A. Eley

GRANDE PRAIRIE

1982 was quieter than the previous year for our club. Briefly, our statistics for 1982 were as follows:

Total number of club flights	565
Number of passenger flights	127
Air Cadet flights (approx.)	200
Number of club members	23
Number of family members	3
Number of students soloed	3
Number of instructors	6
Number of towpilots	7

The number of flights represents about a 25% decrease in both training and passenger flights from 1981. The reasons for the decline are probably due to the spotty weather we had last summer, and to some extent the state of the economy.

Somebody, however, forget to tell several members about the poor state of the economy. Last year our privately owned fleet ballooned from one 1-23 to four ships: 1-23, Ka6E, and two Phoebus C. The interesting thing was that the three new ships were all bought after the middle of August.

The club also committed to purchase 1/4 of the Scout towplane that a syndicate of five club members had set up several years ago in order for the club to be able to function. This is a first step toward the club eventually buying the towplane. Our Blanik is now almost paid for, so the new financial commitment should not be unduly hard on the club.

Although last year's puzzling weather reduced our flying statistics, our club grew in other ways. We became more involved in the Alberta Soaring Council and attended soaring meets or camps more than previously: ASC meetings in Edmonton and Calgary, Innisfail May Meet, Western Instructors Course at Chipman, Cowley Summer Camp, High Altitude Indoctrination Course, and Peace River Air Show.

We were also fortunate that Paul Pentek has moved up to God's country (or is it "God's forsaken" country?), and Steve Weinhold (both from Cu Nim) spent some of the year flying his Kestrel with us. Unfortunately, Steve's work will be finished before next spring so we will be losing an addict soon.

For this year there are about 8 private owners and other club members who are currently plotting all kinds of cross-country flying activity. Heaven help the weatherman if he doesn't produce this year!

Marty Slater

[GPSS started in 1977 with 6 members, one Blanik and the Scout towplane. I guess pure enthusiasm of the some 20 members today is the key to the club's success. Ed]

CVV QUEBEC

The arrival of the new Grob Twin II generated new enthusiasm and new ideas within CVVQ and they are busy now upgrading their present fleet. The club owns 8 gliders (3 single seaters, 5 two-seaters) for 75 members. Of course, the question arises whether this number of members justifies this number of ships and whether the single-seater/two-seater ratio is comparable with regard to their use. A good ratio would be one glider for ten members. Also, a flying school should favour two-seaters because most of the flights are instruction flights or intro flights.

Towplanes are the main source of income, thus their maintenance should receive priority to keep them in top flying condition. However, no towpilot, no tow. I think we all have to recognize and appreciate the excellent work given by all towpilots. We sometimes forget that towpilots also enjoy flying, and very often prefer to be on the other end of the rope. They are indeed the engine of the club. We should thank them very, very much because without them, man would live like a crawling animal.

How do we make new members feel at home? An older member is assigned to a new member to explain to them the club environment, to introduce them to the various duties and activities, show them the facilities (hangar, camping, etc.), tell them of the club rules and their personal duties such as time-keeper, field manager, etc), safety regulations etc; in short, to make them aware of all necessary information so they can enjoy this new environment and feel welcomed. As well, they are also encouraged to ask any question regarding the club operation. What a good idea!

from Le Pingouin
Translation

PUBLICITY – THE ONLY WAY

The Editor of "Silently Noted" says:

The more I think about it, the more I'm convinced that 1983 will be a turnaround season for ESS. We have survived some hard time and built a sturdy foundation for our club. In terms of security, strength of purpose, and general enthusiasm, I can't recall a more healthy environment. The economy appears to have straightened out after some wild aerobatics, so we should be able to attract new members. With good organization and determination we will be able to build Erin Soaring into the "number one place to be" in summer.

Our basic building blocks are our members – you, I and especially that person out there who would love to fly with us, but doesn't know it yet. Publicity is the name of the game. You've heard it before and you'll keep hearing it, because it's the only way those poor souls will find true happiness. We must get our ideas and name in front of as many people as possible for this to happen. You are Erin Soaring's best promoter. You have access to places and sources that no other member will think of or be able to get to. This is essentially free advertising that only you can do. The more members we have, the more fun we can have, and the smaller the load each must carry.

Of course, this message applies to every club in our land. So how about it, you club membership secretaries? Ursula.

WINNIPEG SOO

At their AGM in Dec 1982 the Winnipeg club executive has named their first Senior Official Observer (SOO), Frits C. Stevens, following the introduction of the new 00 program in free flight 6/82. Here is Frits' proposal: "With a little cooperation on everyone's part, we should be able to have our club's staff of 00s reappointed and functioning by the start of the season. All of the 00 appointments will expire 31 March 1983, unless the individuals concerned notify me by February 15, 1983 [followed by a complete list of present 00 names at WGC]. If you wish to have your appointment continued, call me. You are required to have in your possession current copies of the FAI Sporting Code (Section 3, Class D for gliders, 1981 edition) and the SAC Procedures Booklet for FAI Badges and Records (Edition 3). All appointments will be for three years."

"Others who may wish to become 00s should also contact me for new application forms. ALL APPLICANTS SHOULD BE CURRENT SAC MEMBERS, and holders of a Silver C Badge, or a current SAC Instructor, or have been continuously involved as an active glider pilot for the past three years. You will also have to purchase the Sporting Code and SAC Procedures booklet if you do not already have copies." A training session will follow in March to discuss how the new procedures will effect the handling of badge applications, and review certain badge requirements. "I hope that this program can be smoothly implemented and that no badge claims will be denied because of delays in the implementation. I expect to hear from most of you soon."

Fritz C. Stevens, SOO"
from Sock Talk

[This appeal sounds very promising. How about your club?]

MONTREAL SOARING COUNCIL

All MSC members will soon receive lottery tickets (for internal use only). A pair of tickets will be sent to each member of MSC, each will cost $15.00. A single prize, maximum value of $1312.50 will be raffled. This represents 25% of the total maximum gross revenue obtained should all of the 350 tickets be sold.

COMING EVENTS

Mar 24-27, 1983 SSA National Convention, Reno, Nevada. MGM Grand Hotel. Host Pacific Soaring Council. Contact Nancy Davis, 3576 Altamont Way, Redwood City, Calif. 94062 (415) 364-3237.

Apr 13, 1983 Aviation Medicine and Parachute Seminar. Basic Science Building, University of Manitoba.

May 20-23, 1983 **Provinciale '83** (4th Quebec Provincial Soaring Competition) Bromont A/P, Bromont, Quebec. Open class (L/D 35:1+) and Sports class. Contact: Robert Di Pietro, 14 Place de Bohème Cr. Candiac, Que. J5R 3N1, (514) 659-6482

May 20-23, 1983 Innisfail May Meet. Hosted by ESC, sponsored by Alberta Soaring Council.

Jun 11 -18,1983 **Eastern Basic Instructors School**. Host SOSA, Rockton, Ontario.

Jun 20-Jul 10, 1983 18th World Gliding Championships, Hobbs, New Mexico.

Jun 25-Jul 2, 1983 Flying Week, Pigeon Lake G/P

Jun 27-Jul 3, 1983 **National Soaring Week**. Watch for direct correspondence to clubs and other publicity material.

Jul 9-16, 1983, **Western Basic Instructors School**. Host Winnipeg Gliding Club.

Jul 12-21,1983 **15M/Open Class Nationals**, Claresholm, Alberta. Host Alberta Soaring Council/ Cu Nim.

Jul 19-28, 1983 **Std. Class Nationals**, Hawkesbury, Ontario. Host Montreal Soaring Council.

Jul 24-Aug 1, 1983 Cowley Summer Camp, Cowley airfield, Alberta. Host Alberta Soaring Council. Contact Ken Palmer, 23 Baker Cres. NW, Calgary, Alberta T2L 1R3 (403) 284-1396 H.

Jul 30-Aug 7, 1983 Flying Week, Pigeon Lake G/P

Oct 1-2, 1983 SAC Directors Meeting, Moncton, NB Host New Brunswick Soaring Association.

Oct 8-10,1983 Cowley Wave Camp, Cowley airfield, Alberta. Host Alberta Soaring Council.

The balance, 75% of the revenue (maximum $3937.50), will be sent to SAC for exclusive use toward supporting the Canadian Team being sent to the World Championships to be held in New Mexico.

The grand prize can be taken as cash or applied to the MSC account – as the winner desires. Just remember – the more tickets you buy the greater your chances of winning and the more support given to our Canadian Team.

A. Rosner
from Downwind

[Anybody else raffling for the Canadian Team? There isn't much time left.]

FAI BADGES

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

The following badges and badge legs were recorded in the Canadian Soaring Register during the period December 1,1982 to January 25, 1983.

DIAMOND BADGES

49	Peter Schwirtlich	SOSA		World Number #3299	

SILVER BADGES

644	Jean Provencher	Quebec			

DIAMOND ALTITUDE

	Peter Schwirtlich	SOSA	5547 m	Std. Libelle	North Conway, NH
	Jack C. Knowles	London	5349 m	Std. Libelle	North Conway, NH
	George Betton	SOSA	5120 m	Std. Libelle	North Conway, NH

GOLD ALTITUDE

	Ian Coristine	Montreal	4540 m	Astir	North Conway, NH
	George Betton	SOSA	See Diamond Altitude		

SILVER DISTANCE

	Bryce D. Gormley	Rideau V.	59.7 km	Std. Jantar	Pendleton, Ont.
	Kurt E. Meyer	Air Sailing	61.0 km	Ka6E	Sebring, Fla.
	Jean Provencher	Quebec	72.1 km	DG-100	St-Raymond, Que.
	Victor Priscepionka	Rideau V.	50.5 km	1-26 D	Kars, Ont.
	Gary L. Ockwell	Regina	217.0 km	1-23	Odessa, Sask.

SILVER DURATION

	Lester Oilund	Grande Prairie	5:51	1-23	Cowley, Alta.
	Gary Ockwell	Regina	5:45	1-23	Odessa, Sask.
	Janez Volcic	SOSA	5:31	1-26	Rockton, Ont.

C BADGES

	Bryce D. Gormley	Rideau V.	2:55	Std. Jantar	Pendleton, Ont.
	Peter D. Chatterton	York	5:10	1-26	Ridge Soaring, PA
	Dominique Bonnière	Cold Lake	3:24	1-26	Cold Lake, Alta.
	André Grenon	Quebec	1:08	1-26	St-Raymond, Que.
	Merrill E. Stalker	Montreal	1:05	1-26	Hawkesbury, Ont.
	Marie Ann O'Brian	York	2:59	1-26	Arthur, Ont.
	Arnold T. Meyer	Grande Prairie	3:06	Blanik	Cowley, Alta.

VOLS D'IMPORTANCE
SIGNIFICANT FLIGHTS

We have the FAI column with the official badge achievements, of course, but how often did you attempt such a flight until you reached your goal? Or when did you get "caught" in terrific thermals (blue or clouds), had a wonderful flight and you could have stayed up all afternoon, if there was no one waiting for you on the ground, or if you had a barograph on board, or you could have flown to heaven, or if ...

Let's lift the curtain on the unreported. We begin now with a column of "significant flights" (achievement, pilot, ship, club, date). If you wish, briefly describe your local environment and conditions in general (ocean, lake, rivers, irrigation, rocks, forest, dry country, mountains, hills,...) and your personal experience and type of flight (duration, distance, altitude). Feel free to tell your story and why you didn't reach your goal, who helped, and what came across your flight and retrieve.

We hope that advertising all the good non-badge flights will encourage more cross-country in your area, and also provide a basis for increased trophy interest.

I encourage club CFIs to pass information on local good flights to me for publication in free flight.

4th Quebec Soaring Competition
May 20-23, 1983

L'Association Vol à Voile Champlain is hosting the 4th Quebec Soaring Competition Provinciale '83 at Bromont Airport, Bromont, Quebec.

A soaring competition is indeed unique.
It has a special meaning for those who are experiencing it.
It carries pride and goals for those who are in the familiarization process.
It is extremely intriguing for those who are willing to taste it.
It mystifies the neophyte.

For all of the above, we invite you to the foothills of the Eastern Townships in beautiful Bromont. The facilities are enticing; the "clubhouse" is equipped with kitchen, dining room, washrooms, bar and panoramic view lounge and meeting room. The premises have the conveniences of water for ballasting, tie-down spaces, parking for cars and trailers (paved), camping, a 6000 foot runway and green grass en masse.

Tasks, with course lines over rolling hills, good thermal generating flatlands and bordering the mountains, shall range from 50 km to 300 km, and set accordingly for an Open and Sports class.

The atmosphere shall be one of comraderie, of practising, of competing, of relaxation, of learning and contemplation.

Let a May dawn reveal the proud long-winged thoroughbreds of pilots from Quebec, Ontario and neighbouring USA.

We welcome one unique breed – The Soaring Pilot.

Information: Robert Di Pietro
14 Place de Bohème Cr.
Candiac, Que. J5R 3N1 (514) 659-6482

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