



free flight • vol libre

4/96
Aug/Sept



Liaison



I am a big fan of Walter Weir. Furthermore I have to admit that I envy Walter Weir. First he is retired. Second he is a great pilot. Third, he is still very involved with SAC as he administers our badge system. Walter is also busy setting Canadian soaring records. Let me quote Dave Hennigar: "Late last month, (that was April) he completed 680 km (a longer distance to use better terrain) at a speed of 150.9 km/h to set a new Canadian speed record in 500 km O&R. The old record of 144.3 km/h set in 1985 was held by Peter Masak." The other day, I heard a guy my age saying he was too old for badge and competition flying. I figured that this chap did not know Walter.

The 1996 Nationals are now history. Of its quality, I heard the word OUTSTANDING used to describe the organization put together by our friends from Cold Lake. These folks have proven that smaller clubs can host such an event. To Randy and Dave and all of you who have worked so hard and for so long to put together this performance, our most sincere word of thanks.

It appears that membership in almost every club is lower than last year. Weather appears to be the main culprit. However, we all need to recruit more aggressively than ever for half year memberships to salvage the season and insure that the rains of '96 not take their toll on 1997. The national office has many tools such as the post card micro-posters. Jim is also busy producing a full size poster to be used to promote your club.

Like most leisure-time activities, we are committed to recruit or perish.

Fly safely and pray for dry and sunny weekends with good thermals.

Nous avons un polémiste parmi les vélivoles francophones. Vous avez sans doute lu la prestation de Jean Richard dans le précédent numéro. Il récidive ce mois-ci avec un article qui, je l'espère saura susciter réflexion et surtout de l'action. Ça été mon cas et ma réponse est aussi publiée dans ce numéro. Aurons nous le plaisir de lire vos réactions aux propos de Jean?

Le cours d'instructeur en français a été donné avec brio et compétence par Marc Lussier. Les participants, qui venaient des Outardes, de MSC et de Champlain ont pu apprécier les connaissances de l'instructeur qui lui viennent de son expérience en tant que pilote de ligne et aiguilleur de l'air.

C'est la deuxième fois que le cours est donné, non pas sur semaine comme c'est le cas au Canada anglais, mais réparti sur deux fins de semaine. Je suis convaincu, basé sur le nombre de participants au Québec (9) vs ailleurs qu'il s'agit là d'une formule d'avenir et qui répond bien aux exigences des membres.

Bons vols, en sécurité et que cesse la danse de la pluie.

Pierre Pepin president

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

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STOP PRESS! The AIC 2/95
Airspace 'grab' could seriously
affect your club. Study this AIC
for local impact and send your
input to the SAC Office. The
Board met on 31 July to dis-
cuss the problem, and the SAC
homepage (address below) will
provide info as it evolves.

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see the SAC home page - <http://www.pubnix.net/~rmacpher/sac.html>

The “sport” of soaring – editorial

Tony Burton

Several things came together at the Nationals which required a little thought from me, and now I hope from you. When I mentioned to one of the Cold Lake organizers that for all the work they were doing, it was good that the Canadian Forces at least gave them a little TD to officiate at the Nationals, I was told that the CF Regulations defined gliding as a recreation, not a sport, so no military support was available, even for some time off!

Another was the fact that the Sports class in Canada came of age in Red Deer in 1996. The class was as well represented as the 15m class, it fielded a diverse range of sailplanes (only four of which had a handicap greater than 1.00) and they were piloted by skilled cross-country pilots — none of whom could be described as new at the game. It was hotly contested, with daily winners all over the list, and there was no doubt about the best pilot — who was flying a rented two-seater! It was truly a *pilot's* class, and I hope to see it continue to prosper.

Another was the interesting discussion at the Canadian Advanced Soaring meeting one evening. The old hands at this sport noted that the average age of Nationals pilots seemed to be going up almost a year per year, clearly a sad sign for the future if it continues. The old hands said that we have to make the next generation want to compete because it will be an achievable goal for *any* pilot who develops his skills. To accomplish this, we must recognize that the present competitive system we have in place in Canada *is* broke, so what do we change to fix it? (Jörg Stieber, president of CAS, and the SAC Sporting committee are open to suggestions from all of you out there.)

Comment from the floor was that, because of the expense of new gliders, and because of our relatively short list of pilots who now vie for a place on the Canadian team, perhaps it would be appropriate to generate a single seeding list from *every* pilot who flew at a Nationals, Sports class included, with all sailplanes being handicapped. The only operational change required would be for everyone to fly the same daily task. Once such a list had been generated, the top Standard and 15m class pilots on the list would fly in those classes at the Worlds. This system would also have the long term benefit of encouraging a new generation of pilots to get into competition by the more “level playing field” of earning team seeding points even if you don't happen to own a Discus or a Ventus this year. The further “trickle-down” benefit could be more interest in cross-country flying by pilots who now see a broader competitive goal to strive for.

The old hands, a few of whom I expected to take a dim view of this sort of change, seemed to agree that there was some fine-tuning required of the concept, but there was no killer argument which would make such a change unworkable.

It was refreshing to see some really good discussion on improving the sporting aspects of this lovely means of aviating, and particularly on the awareness of all us old hands that club support for and a growth in the interest of cross-country soaring by newer pilots will keep them in the sport and keep the sport healthy. What doesn't grow, dies.

“Every once in a while, it helps to read the fine print!”



The column on the right is called the masthead, and it contains all sorts of moderately interesting stuff (admittedly in really tiny 6.5 point type). Normally, I wouldn't bother to mention this, except I regularly get calls from pilots who want to give me stuff for the magazine and ask about the **deadline**, for example. So, think about giving the masthead an annual, OK?



The SOARING ASSOCIATION of CANADA

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

free flight is the official journal of SAC.

Material published in *free flight* is contributed by individuals or clubs for the enjoyment of Canadian soaring enthusiasts. The accuracy of the material is the responsibility of the contributor. No payment is offered for submitted material. All individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest. A 3.5" disk copy of text in any common word processing format is welcome (Macintosh preferred, DOS is ok in ASCII text). All material is subject to editing to the space requirements and the quality standards of the magazine.

Prints in B&W or colour are required. No slides or negatives please.

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 whose name and address is listed in the magazine.

The contents of *free flight* may be reprinted; however, SAC requests that both the magazine and the author be given acknowledgement.

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5 January, March
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L'ASSOCIATION CANADIENNE DE VOL A VOILE

est une organisation à but non lucratif formée de personnes enthousiastes cherchant à développer et à promouvoir le vol à voile sous toutes ses formes sur une base nationale et internationale. L'association est membre de l'Aéro Club du Canada (ACC) représentant le Canada au sein de la Fédération Aéronautique Internationale (FAI), administration formée des aéro clubs nationaux responsables des sports aériens à l'échelle mondiale. Selon les normes de la FAI, l'ACC a délégué à l'Association Canadienne de Vol à Voile la supervision des activités de vol à voile telles que tentatives de records, sanctions des compétitions, délivrance des brevets de la FAI etc. ainsi que la sélection d'une équipe nationale pour les championnats mondiaux biennaux de vol à voile.

vol libre est le journal officiel de l'ACVV.

Les articles publiés dans *vol libre* sont des contributions dues à la gracieuseté d'individus ou de groupes enthousiastes du vol à voile. Le contenu des articles soumis est la responsabilité exclusive de leurs auteurs. Aucune compensation financière n'est offerte pour la fourniture d'un article. Chacun est invité à participer à la réalisation de la revue, soit par reportages, échanges d'opinions, activités dans le club, etc. Le texte peut être soumis sur disquette de format 3.5" sous n'importe quel format de traitement de texte bien que l'éditeur préfère le format Macintosh (DOS est acceptable). Les articles seront publiés selon l'espace disponible. Les textes et les photos seront soumis à la rédaction et, dépendant de leur intérêt, seront insérés dans la revue.

Les épreuves de photo en noir et blanc ou couleur sont requises; pas de diapositives ni de négatifs s'il vous plaît.

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 personne désirant faire des représentations sur un sujet précis auprès de l'ACVV devra s'adresser au directeur régional de l'ACVV dont le nom apparaît 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 (\$20 par an, EU\$22 dans les Etats Unis, et EU\$26 outre-mer) veuillez contacter le bureau national à l'adresse qui apparaît au bas de la page à gauche.

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Letters & Opinions

AERO CLUB OF CANADA - WHERE WE'RE AT -

As I'm sure you're aware, the Aero Club has gone through some turmoil. The saga continues, but I'm optimistic about the future. ACC represents Canadian aerospots to the Fédération Aéronautique Internationale (FAI), and our ACC members are:

Canadian Balloon Association
Canadian Sport Airplane Association
Canadian Sport Parachuting Association
Hang Gliding and Paragliding Association of Canada
Aerobatics Canada
Model Aeronautics Association of Canada
Soaring Association of Canada

The Board of Directors of ACC consists of a representative of each of the member associations plus the president, vice president, and FAI vice president for Canada.

In 1996 the income of the ACC is 91% member fees and 9% sporting licence fees. Expenses are 82% FAI fees and 18% administration, communication, and travel. Since 91% of ACC income comes from our member associations, any disruption with one of our associations causes us serious financial problems. We experienced this recently with MAAC, the modellers, but they are back with us now. HGPA, the hang gliders, have threatened to quit if their fee isn't lowered substantially and, as you know, SAC has made some waves also.

Each association has a large majority that participates for the sheer pleasure of it — for recreation — as opposed to the competitive aspect (personal or with others). Every sport, whether it's basketball or soaring, must foster development at all levels. Advances in the sport, whether in equipment, personal development, or publicity (external and internal), come from individuals striving for goals, and the FAI supplies those goals to aerospots.

Everyone agrees ACC is necessary if Canada is to maintain a tie with FAI for badges and records, but who is going to pay for it? Canada now pays over \$36,000 each year to FAI. FAI is reviewing their own expenses, the issue of charging fees for service, and reviewing which country should pay how much, but these issues will take time to resolve. Ultimately it comes down to the typical Canadian dilemma. We all have different interests, we all have a different view of the future — but if we don't stick together now we'll blow it!

All members of ACC, whether you fly a model, balloon, airplane, glider, parapente, or jump out of airplanes, need to stick together so we are a united group when

problems are solved. Even the thought that some group will pull out destabilizes the whole thing.

ACC is actively looking for alternate sources of income. Again this will take time to develop, but who would sponsor something that the participants are prepared to pull the rug out from under?

If you feel the ideals of ACC and FAI are worth participating in, be prepared to be part of the solution, join me in actively promoting the sporting aspect of aerospot in Canada.

Chris Eaves, president ACC

COMMUNICATIONS AT CANADIAN NATIONALS

With great fanfare, the Nationals organizers announced that they had established a contest page on the Internet which would be updated with the latest news before and during the competition — a very worthwhile undertaking, bringing SAC communications into the techno-age. A page showed up on the Internet, sure enough, and quite professional, too. There was even a connection to it on the SAC home page. But just when many of us thought the communications problems of the past were being corrected, the roof fell in.

The contest page proudly announces the last update as May 17. Evidently it was then promptly forgotten. No daily updates, no news of the contest starting, the number and identity of the contestants, nothing! When three days into the contest there was still no news to be found anywhere, I sent e-mail messages to the organizers and to the two SAC directors from Alberta. Nothing. No replies, no action, no news from the contest. I checked with Canadian Press, the Globe & Mail, and the Toronto Star. None had received anything from the contest organizers.

I would strongly suggest that in the future SAC specify exactly how contest news is to be disseminated, appoint a specific person to be responsible, and make this a condition of sanctioning the next Nationals.

Regards, Al Schreiter

FEEDBACK ON JUDGEMENT

It seems that when a bit of a change is discussed, I get some feedback, which is great! It is not too often that I get this, so I welcome it now. I was taken to task after the last *free flight* hit the clubs, which requires a response I think, and ➔ p25

Going for it

Tony Burton
Cu Nim

EVERYONE IN CANADA HAD BEEN complaining about the late, long, and cool spring which delayed the gliding season this year. Alberta hadn't been let off the hook — some pilots hadn't even done their spring checkflights by mid May! The 4–12 May planned Cu Nim cross-country week at Black Diamond, which gave a 500 and lots of 300s last year, was a total bust with temperatures not much above zero and rain and snow showers every day.

The Alberta Provincials was also a no-go. So few pilots were cross-country ready by 18 May, that our traditional Victoria Day long weekend contest couldn't reasonably be held at the central location of Red Deer. (That was too bad for the Cold Lake crew who were hoping to use this contest as a dress rehearsal for the Nationals.)

I had got lucky three weeks earlier on my first weekend of the season. After getting checked out on Saturday, I and the first good cross-country weather were at the field at the same time on Sunday, 28 April. A few of us roared off to the east at 7000 feet agl over the prairies. It was streeting with strong lift and it was fairly unstable, with virga and snow showers at altitude forming behind us as we went. Mike Glatiotis in his Standard Cirrus "Jolly Miller" and I in my RS-15 "Echo Echo" went as far as Brooks airport (a 320 kilometre out and return) before turning around. When I got to the turn, JM was about 2000 feet above me under a good cu and soon departed westward for home. By the time I got to cloudbase, I was cut off by the line of virga which had developed to the west so I flew southwest about 25 kilometres to get around it. The weather still looked good further on in that direction so I continued down to Barons, a small town east of Claresholm, before heading back to the club. The flight was 370 kilometres in five hours — but as I hadn't bothered to carry a camera, the flight couldn't count towards any Alberta or SAC trophy.

Now, the long weekend had arrived, no contest, and the weather finally looked like it might be decent for a long flight again. This time, I would load the camera and barograph to get something 'official' logged.

The forecast promised considerable instability with risk of TCU and rain showers. Saturday was a bust though, the weather was so unstable it clouded over and rained at the first breath of warm air rising from the ground.

Sunday looked like it might be a bit drier and the morning forecast was calling for NW winds 10–15 knots, more sun but still a good chance of afternoon overdevelopment. I had tied down EE the night before so was ready for the first cu of the morning and some leisure time to plan a task. The unstable airmass would give early soaring conditions north or south along the foothills, then one would have to scoot away to the east somewhere.

The foothills and Rockies 20–30 kilometres to the west are Cu Nim's morning soaring barometer. Their sun-facing slopes pop off the first cu of the day, and their morning start time, shape, and development are an excellent guide to how things are going to go over the flatland an hour or two later. Well, a little after 9 am they started forming nicely — more to the north than the south, so that's where my first leg would head.

Studying my task book, the 500 km triangle pages showed that north to Sundre airport, then Drumheller and Claresholm airports was 521 kilometres (almost an FAI triangle, the shortest second leg was 26%, not the minimum 28% of the total distance) with the home airfield being almost midway and just off the long Claresholm/Sundre leg. Another plus was that Innisfail, the location of the Central Alberta Gliding Club, was not too far off track on the second leg. Dave Mercer, the Cold Lake CFI, had challenged his club to go for the Alberta Soaring Council provincial Boomerang Trophy (earned with a flight from one club to another) as it hadn't been claimed since 1991 when Mike Apps flew a 350 kilometre O&R from Chipman to Cold Lake and back in his Nimbus 2. This was a good opportunity to throw down the gauntlet to Cold Lake.

The morning cu was building up well over to the northwest, then, just before 10 am, the first cu appeared overhead. Wow, this is starting early! It caught me off-guard and I hurried to push the glider to the line, choke down a sandwich and finish the other last minute preflight details. I launched at 10:30, second off behind the first student flight in the Blanik.

In just that half hour the character of the sky had changed dramatically. From the first puff, the sky had completely filled in over the first 15 kilometres of the rolling hills north of the field and it was beginning to shower in spots already! Off tow over the field, I immediately pressed north to get into the sun before the lift died, taking some

turns in a couple of knots here and there so as not to get too low, but I felt that every moment I wasted was going to trap me before I had barely got started in this adventure. It was a relief to get over sunny fields west of Calgary and under honest-looking cu.

There was no relaxing yet, as the area was continuing to overbuild. Flying over Springbank Airport, I let them know I was around, and pushed north until I got a reasonable climb near Cochrane, about 50 kilometres on track. The going was a little slow north-bound — it was still relatively early and the best thermals were only 3–4 knots, it was into wind, and the tendency for the sky to overdevelop followed me up the course-line. (The Rockies angle off to the northwest, making the overdevelopment occur progressively later further away from the mountains, so it always seemed to be a threat as I moved north.)

Taking stock of the situation, I must say that it didn't look too promising at this point. In addition to the immediate conditions, the sky to the east looked strange — it was still mostly blue with a single many-kilometres long line of separate, small towering cu marching NW-SE with bases a couple of thousand feet lower. I have no idea what was causing this line, but if they were already towering, it didn't say much for the future of the day.

I considered calling off the task but it was only a brief moment of weakness. First, if you wait for the perfect day to do a long flight, you'll not start too many of them. Second, you don't learn much about cross-country tactics flying only in good soaring weather, and last and more personal, some of my really memorable flights occurred under trying conditions — that's what makes them memorable, after all.

I recalled my 1993 record O&R flight of 652 kilometres straight east to Leader, SK. I had seen cirrus progressively closing off the southern sky when I was half way down the courseline and heard pilots on "local" tasks to the southeast breaking off for home, but I decided to persist and see how much distance could be done. (The embarrassment of flying a 493 km miscalculated 500 the previous day was an additional goad, I admit!) When I reached Leader and turned around for home, I was faced with a sky that was completely overcast with cirrus and spread out cu, and I was pretty much convinced that all I was going to achieve at that point was to shorten up a long retrieve over desolate country for Ursula. But there was gentle and reliable lift under all that grey, and I flew for 170 kilometres before seeing any sunshine again. Finally, some evening cu developed on course in the sun near home after a large patch of cirrus had dissipated, and the eight hour flight was completed. Everything worked out and I was quite lucky to have made it, but quitting early would have denied me *any* possibility of success and what is now a wonderful flight memory.

Back to the flight at hand, the hangar with the big "Sundre" painted on the tin roof was finally under my wingtip in a slow two hours and I headed off northeast to Innisfail. By now the sky over Highway 2 and east looked much better with fine big flat-bottomed cu. Getting there was still a bit of a problem because there was a wide band of mostly blue to cross. There was the odd cu in it but they were only giving weak and erratic lift — my best guess is that there had been a line of heavier showers through there the previous day.

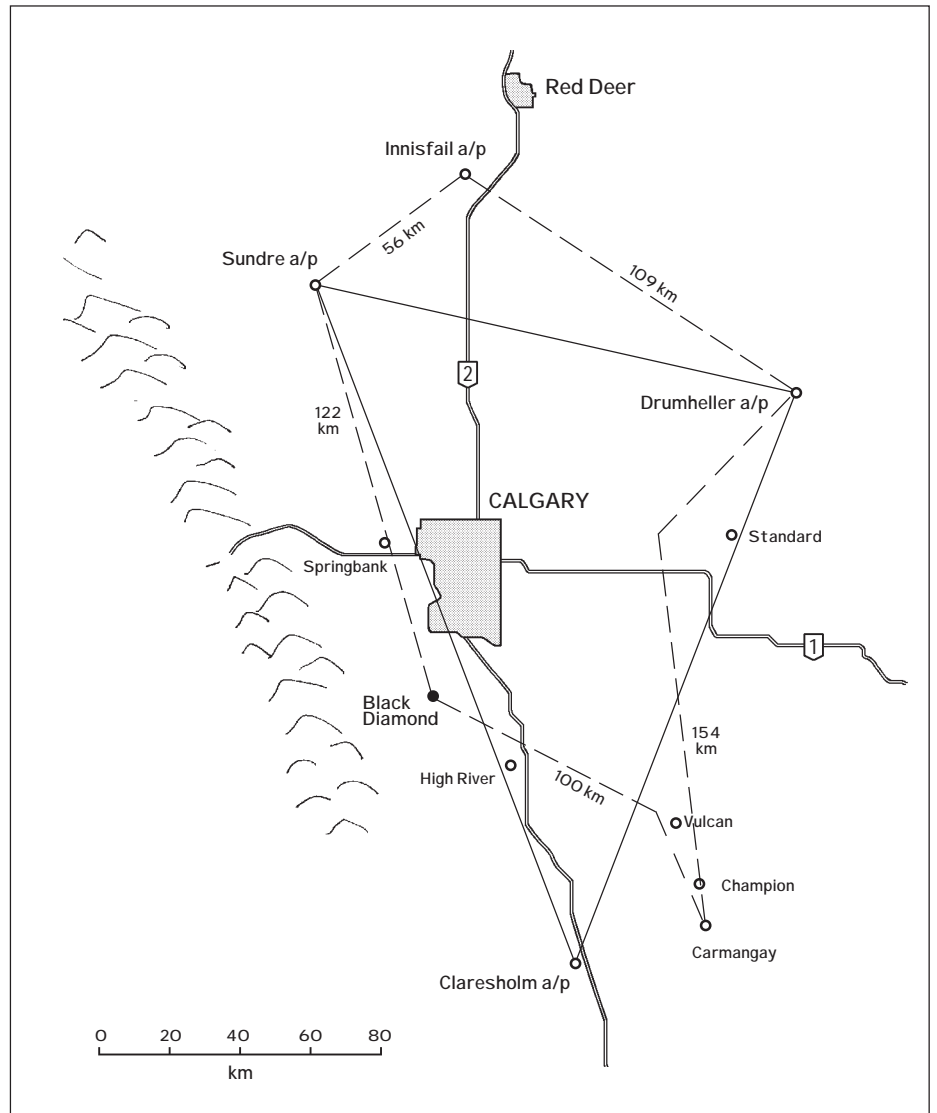
The clouds looked a whole lot more honest at Innisfail although the bases were down to about 8000 feet (5000 agl). Once over the field, I was surprised to see that it was abandoned — for some reason CAGC wasn't operating this day. I had wanted to radio down, "Hi, here I am, a stranger in your midst", and maybe do a couple of turns in a thermal with their Bergfalke and wave a little flag of cross-country encouragement to a new club. I did hear the guys operating at Chipman, 200 kilometres to the NNE, and had a short chat with Gerhard Novotny towing in their Pawnee.

The next leg to Drumheller was a hoot — a downwind run in eight knot lift that took less than an hour. Cloudbase was back to 10,000 (7000 ft agl), but once I was in the vicinity of Drumheller, it was clear that a change of pace was coming up. There was cirrus moving in, and it looked quite substantial the further southwest one peered. Also, large bands of cumulus congestus shaded the ground in areas, with heavy virga under some. I could see the occasional dust devil on sunny west edges which certainly indicated strong lift into them.

I proceeded southwest to stay on the up-wind side of the course and the no-sweat cu ended in about 40 kilometres near Standard. From there I tried to anticipate where the best lift might be when I arrived, given the available sun and the amount of time the ground saw any of it. Finally I was stuck with crossing two of the black areas but they didn't turn out to be too bad — even in the virga snow showers there was no serious sink (which can happen, so I treat virga with caution). Once on the sunny side, the lift was good and I followed the general trend of the development to the south and stayed high.

When I got southeast of Calgary I could see that a large area around Claresholm was covered with heavy cirrus and was totally dead and about half the course line back to Black Diamond looked quite ominous. Out to the east where I was, it was possible to loiter for a while so I continued to trickle south towards Vulcan in the hope that if I was patient and waited long enough, some cu might appear going into Claresholm. Then I could try to sneak in slowly, get back out to the east to the sun before going north far enough to make a final glide home.

The last of the cu was over Champion. The large band of lift I had been milking was



drifting eastwards and there was nothing substantial to the west to replace it because the broken upper cirrus was reducing the surface heating and only the occasional cu appeared. Claresholm looked even blacker, so that was out for sure. I thought that the Champion PST turnpoint would still get me my 500, particularly since the off-track trip to Innisfail added some extra distance.

For the last turnpoint I decided to go down to Carmangay (the next town north of Barons) on a straight glide to add some more insurance distance. But when I got back to Champion my lift had gone and I thought perhaps I had made a serious mistake. The dark shelf of cloud and virga was still near Vulcan so I cruised into wind towards it at best glide. It seemed to take sooooo long as the altimeter steadily unwound!

Some strong sink on approach, then the surge to six knots average up to an 11,000 foot cloudbase (7600 agl), the highest I had seen all day. There was even zero sink pressing through the virga again, and it felt great to be high west of Vulcan as I popped out the west edge of that fine lift with the non-descript sky before me to cross.

It was negotiated with a little care and by the time I was 40 kilometres out and east of High River, I had final glide in hand. The way was blocked again with another solid line of virga with one thin spot in it. I called back to the field to find out what the conditions were like on the other side and was told that there was a 15–20 knot westerly wind on the surface with rain threatening and the operation had been shut down.

On final glide I kept adding to my height margin, made my last passage through snow and some graupel and crossed the field with 1500 feet in hand after 6:40 hours. What a day it had been.

Back home, the distance calculation came to 541 kilometres at 80 km/h — I hadn't needed to go to Carmangay after all — the barograph trace was fine, and the film came back from the processor ... blank! I used some old contest film and an unknown organizer had loaded B&W film into a colour film cannister, so the 1-hour colour chemicals trashed my TP photos. Oh well, still no closer to a trophy-claiming flight, but I did have 911 "virtual" kilometres in hand so far for the season. ❖

St. Auban – training for mountain racing

A pilot's– and crew's–eye view

Nick Bonnière & Christine Futter
Gatineau Gliding Club

Christine When people ask me where I plan to spend my holidays, of course, it's always at a gliding field somewhere, and of course, gliding fields tend to be in the middle of nowhere. You fly or crew all day, and by the time the glider is put away, there's neither the time nor the energy to do much else. You certainly don't need to buy a glamorous holiday wardrobe for dining and dancing in exotic locations. To start with there usually aren't any, and even if there were, you wouldn't have the energy left to make use of them. Once, when Nick and I went to Minden, one of the young men working at the airfield asked me what we did in the evenings when Nick had finished flying. I didn't want to ruin my image by telling him that we went back to the motel, cooked supper, then sat on the bed and watched TV!

So it was that I decided to take time off to go with Nick when he went on a mountain soaring course at St. Auban in the southern French Alps. I'd seen the Alps years ago, their snowy peaks looking like a line of cu in the distance, but the idea of actually flying there seemed very exotic. And, not only were the mountains the Alps, but the countryside was Provence – one of the places I'd always dreamed of visiting. Since I doubted very much that I would even be allowed to go and retrieve Nick were he to land out, I looked forward to doing some touristy things while he and André Pepin were flying.

Nick After declining to go to Sweden and New Zealand, I again have a chance to qualify for the '97 Worlds in France; this time I might be able to afford it. I started looking into going to France to have a look around the area. I had two basic goals:

- 1 because of my lack of experience in mountain flying, to find the minimum experience required to be able to race safely, and,
- 2 to get some of this mountain flying experience and gain knowledge of the area.

The best way of training for the '97 Worlds is to participate in the '96 pre-Worlds. However, the '96 Canadian Nationals are on the very same dates. This means that you have to skip the Nationals to go to the pre-Worlds, but if you do so you cannot qualify for the '97 Worlds. Catch 22! If held the same year but at different times you are still

faced with a double expense. The problem is further complicated by the fact that if you have little or no mountain flying experience, you simply cannot start racing in these conditions at the pre-Worlds, you have to get experience before the pre-Worlds. One way to avoid the conflict between the Nationals and the pre-Worlds is to name the Canadian team two years ahead of time; you can then skip the Nationals since you've qualified the year before.

I contacted André Pepin, who indicated that he was also interested in going to France to fly in the Alps. He had a few contacts in France from previous trips, with whom we discussed where to go to get the most benefit. It was possible to go to one of many clubs in the region, but we opted for the training centre at St. Auban to get mountain flying instruction in a two-seater for one week, followed by one week of solo flying. The St. Auban high level training centre ("Centre de Formation et de Haut Niveau" – CFHN) is situated in the "Alpes de Haute-Provence" in the south of France. The grass airstrip is located in the Durance river valley and is shared by the CFHN and the French national instructors school. To the south and west are the foothills of the Alps. To the north and east, towards Italy and Switzerland, you find the snow covered peaks of the high Alps.

Every year in St. Auban, sometime between the first weeks of April and the first weeks of May, they have one week when it rains. This year it was when we were there, though the three weeks previous to our arrival had been really great, of course.

A typical day A typical day starts off with the pilot briefing at 9:30. The pilots are ordinarily split into three or four groups of pilots with similar experience. Each group attends a briefing in a separate briefing room chaired by an instructor/monitor. The briefing starts with a weather briefing in English since this is usually the common language of most of the pilots. This is followed by a review of the previous day's flying. Then gliders are assigned to everyone (unless you brought your own of course), and tasks are suggested according to the weather. Sometimes the briefing is done in French first and the French-speaking pilots can then leave, and a briefing in English follows.

The gliders available are:
Two-seaters: Nimbus 3D, Marianne, Duo-

Discus, Janus, DG-500, ASH-25
Single-seaters: Pegase, Crystal, LS-7, LS-8, LS-6, Discus, Ventus 2, Ventus 2a, ASW-24.

For first time pilots, the briefing is extended to discuss the following subjects on successive days:

- airport procedures, frequencies, radio calls, circuit patterns
- airports, frequencies, landable fields
- control zones, "don't fly over under any circumstance" zones
- typical cross-country routes along mountain ranges
- mountain flying techniques

By 10:30 you have been assigned a glider and you proceed to the hangar to get the glider prepared, get familiar with it, read the glider manual, read the flight computer manual, and get a briefing on the glider and computer. The gliders are then lined up on the field for a southerly takeoff.

By 11:45 the gliders are in position and it is time for lunch. The cafeteria provides meals for about 100 people every day.

At 12:15 it is time to fly. This may seem a little late, but this is normal for this region. Takeoff starts at 12:30, the two-seaters first, each with an instructor and a student. Each instructor is also responsible for a group of single-seaters and maintains radio contact with each one on a regular basis. Everyone goes their own way or in small groups.

It was difficult to find what principle was followed in launching the gliders. It wasn't first come, first served. It wasn't private then club ships. It wasn't locals then visitors, though it often seemed it was "launch the Canadians last". I think the worst day was when there was finally a superb gliding day after a week of rain. Everybody was out there, anxious to go. The "Equipe de France" (the national team members) were also there and it seemed fair enough that they would be launched first, except that one of the team members was duty towpilot and after a couple of tows, he jumped into his glider and left to enjoy the beautiful conditions. This left one towplane to launch about 35 gliders. There were some pretty frustrated glider pilots sitting on the ground for quite some time.

One day I flew solo in a Discus while André flew with an instructor in a Duo-Discus.

and expect you to proceed only if you have the height. Later, hopping includes landable fields. Some of these landable fields are fallow fields which the local farmers are paid to maintain in a landable state, and these will change from year to year as the crops are rotated. The club also installs windsocks on some of the fields.

Weather aspects Because of the mountains, thermal, ridge, and wave conditions can all be used on the same day. As a general rule, a “brise” wind occurs every day — a southerly wind in the morning, changing to northerly in the afternoon. At night, cold air from the mountains flows down the Durance river valley. When the sun heats the slopes, the warm air rises in the mountains and the air flows up the valley. This is why the gliders are always lined up for a southerly takeoff. Sometimes however, the brise takes longer to develop, and a downwind takeoff may be required. I witnessed a fully loaded LS-8 attempting such a takeoff, and it was a good thing that the airport is on a plateau because the glider took off just before the end of the runway. A rope break would have meant an outlanding (or crash) in the river bed at the bottom of the ridge. Thankfully by the time I took off a half hour later, the brise had finally swung the windsock in the right direction.

It doesn't take much of a wind to create serious downdrafts. Such a downdraft can turn your 40:1 glider into a 5:1 stone. When you hit the sink and have to push forward on the stick to increase speed to get away, the rocks come up at you very quickly. This happened to me a few times, but once in particular on the Lure mountain it got pretty scary because the mountain has a sharp slope on one side, but the side I was on has a very shallow slope with no quick escape. Flying with trees 200 feet below, I found lift finally and started to thermal. Yes, thermal, very carefully, with plenty of speed for aileron control and ready to make another dash down the slope if necessary.

When conditions are good, the brise on the sunniest side of the mountain is very reliable as long as the wind is not strong. This brise turns into thermals at the crest. When the wind picks up, the “upwindiest” side of the mountains must be used. Thermals get triggered at the crest by the wind. One of the first things that you learn is to fly along the very crest of the mountains where thermals trigger and stop to thermal when the lift is good. If you fall below the crest, then you have to decide whether to go for the sunniest side or the “upwindiest” side to continue... I flew dual in a Nimbus 3D one good day, and flew along the crests until we had to cross a wide valley. We headed straight for the mountain across the valley and got there 4000 feet below the peak. We ridge soared that mountain because the brise was a good 5–6 knots and thermalled once we were above the peak. This is typically what you have to do on a cross-country.

When the wind is strong, conditions get very rough, and you get tossed around a lot. I flew in a Ventus-2a on the last day, a fairly windy day. The seat belt attachment behind the seat is at shoulder height which meant that even with the belts fully tight, my shoulders could still move up enough that I hit my head on the canopy a lot. I certainly wanted to avoid cracking the canopy of Eric Napoléon's glider in which he won the New Zealand's worlds, but there was nothing I could do except keep my head back.

The first week, everybody was very busy. The second week, the conditions weren't good, and I didn't want to just fly around the airfield in the rain under a low cloud-base, so that didn't leave many days when I could fly. However, I got a two hour flight in the Duo-Discus with 20m wings. It was very different from any flying I have ever done here. In the Alps, the thermals are very strong, but very narrow. This meant circling with quite a lot steeper bank than I am accustomed to using in a Skylark, and those long slender wings looked to be very close to the mountainside when we flew along the ridges. Another thing that struck me was that if the sky was as grey and threatening here as it was there, we wouldn't be flying. However, there we were, zooming along in dark, overcast conditions at ridiculously high speeds (seeming even higher because they were in kilometres, not knots) with the instructor saying, in a relaxed sort of way, that we would pick something up along this slope — and we did, but I let him work the thermal until we were at a height that I felt a bit more comfortable with. (It's important not to let the student put you into a position you can't recover from!)

Problems I encountered a number of difficulties, the worst of which was dealing with altitude in metres. I kept trying to convert to feet, to get a feel for my actual altitude over the ground, but it was very difficult. On top of that, it takes forever for the altimeter to show an altitude change when thermalling because of the 3 to 1 ratio between metres and feet. Dealing with speed in kilometres was easier — using the factor of two between kilometres per hour and knots made it manageable.

All gliders at the site are equipped with flight computers, most of which are Zanders and a few Peschges. It took a while to get used to the Zander audio; I found its multitones very annoying. Every glider I flew, unfortunately, had a different type or model of computer which made it very difficult to become familiar with any of them.

As mentioned earlier, the map used at the site is a 1:250,000 road map, not the standard 1:500,000 air map. The map is therefore twice as long and twice as wide and folding the map in the cockpit was quite an undertaking. The problem was compounded by the fact that you needed two maps to proceed further north towards → p14

The next day he flew solo and I flew in a Nimbus 3D with an instructor. This type of team flying was very beneficial as it reduced the navigation workload a little and allowed more time for appreciating the surroundings.

Landing can be as late as 20:00 on good days. After landing, it is time for glider washing/polishing/vacuuming — everyone must clean his glider, polish the canopy, inside and out, flip the seat covers to allow for ventilation, and vacuum if necessary. The batteries are connected to a central charging system and wing, tail, and fuselage covers are put on.

When the weather doesn't cooperate, the briefing is extended to discuss various aspects of mountain flying. On one occasion, we had a great briefing on the weather patterns typical of the microclimate of the southern Alps.

Training philosophy The first thing the instructors insist on is that pilots get to know the names of all the mountains, as well as the towns, and rivers, and learn the location of all landable fields. To do this, a 1:250,000 scale road map is used instead of the usual 1:500,000 air map. This map provides a name for each small mountain and you are expected to learn all of these. The distance between mountains can be as close as three kilometres; that's lots of mountains! On top of that, you are expected to know the names of all the villages and all the rivers. On the first day, this resulted in information overload! Needless to say, even after two weeks, I still had to refer to the map for mountain names. At first this requirement to know all the names seems overdone. Later, the reason for this becomes obvious. For your own sake it forces you to navigate as you fly along. When you first fly in the mountains, they all look alike, and if you haven't kept track of where you are, you can get lost. If you get in trouble, instructors can give good advice on what to do if they know where you are exactly. They can tell you to fly around the mountain you're stuck on to find a landable field right behind. But if you don't know where you are...

“Airport hopping” is the next phase in the training as there are quite a few airports around, most of which support gliding activity. In support of airport hopping, they suggest a glide ratio of 25:1 or even 20:1



the Red Deer nationals

Tony Burton, EE

COME TO THE WEST and see thermals and cloudbases that put southern Ontario soaring conditions to shame! Well, okay, next time.

Organization The contest organization, especially considering it was done by the small Cold Lake club at a central non-club site, was simply spectacular. I think they wanted to show everyone what can be achieved with a little military planning and a lot of work (some of the key officials got a day off now and then to crash into bed). The launching with eight (8!) towplanes, under the direction of George Szukala, was a marvel of efficiency. A clockwork rotation of stopwatch timed takeoffs and a nine minutes roll-to-roll circuit saw thirty gliders off at 90 second intervals and everyone airborne in 35 minutes.

The facilities provided at the site were well up on the usual contest standards: a hangar made available by Air Spray (a water bombing outfit) had room to pack in most of the gliders, the full use of the Red Deer Flying Club building as an organizational centre (the rooftop deck was a perfect finishline observation point), a theatre-style lecture room with full audiovisual gear for the pilots meetings (compliments of the Air Cadets), and a nearby grassy and treed area for tents and campers.

Pilots and crew got cellular phones to carry and the crew got beepers (compliments of AGT Mobility) with free air time. There was a lot of practise calling done by neophytes to this technology. It was quite a treat to be able to call your crew from the middle of a field in the middle of nowhere.

Thirty-two contestants with thirty sailplanes gathered to test themselves against their compatriots and the weather. The longest on the road was Colin McKinley (AC2) from Winston-Salem, North Carolina (4000 kilo-

metres by air from home, and not far behind was Charles Yeates from Bluenose (D9) at 3688 kilometres! Nostalgia brought Colin as he had been in gliders as an Air Cadet at Claresholm many years ago.

Weather The weather for the whole week prior and continuing through the practise days was dominated by a string of cold lows producing low cloudbases and showery conditions — just more of the same lousy spring most of Canada and the States had been suffering from. Over the competition, the cumulus would be largely ill-formed weak/moderate scraps — only one day would have decent cu with actual flat bottoms.

23 June — no practise task but an introduction to the professional and no-nonsense contest organization led by CD Dave Mercer. The day was overcast with low cu, a bit showery and it cleared up in the evening.

24 June — The remainder of the contestants had arrived and been briefed, and it was a continuously rainy day with a trough stuck to the Rocky Mountains.

25 June — The morning of the first day of the competition was still solid grey but the long term prospects were finally getting brighter with a forecast of progressively warmer and dryer conditions as the jet stream shifts north and promises westerly winds (they never came!). No task for the day, but sunny breaks developed by late afternoon and the puddles began drying out. The next day promised to see everyone gridded regardless of conditions, just to get the Flight Service Station personnel, pilots, crews and organizers sorted out on how to get the operation going on the airport.

A few test launches got going about 4 pm, and it quickly became obvious that the FSS needed a quick education about glider operations, since thirty sailplanes in the area would quickly clog up “standard” radio procedures. The sunny sky at 7 pm was a

welcome precursor to potential soaring weather (Edmonton pilots had been under this grey for two weeks) and westerners hoped to prove that southern Ontario weather was *not* the norm here.

Day 1, 26 June

15m/Std – 191.5 km Elnora/Bashaw

Sports – 152.6 km Elnora/Lacombe

The task committee had a problem of the driest ground to the southeast being cirrus-covered first thing in the morning, so tasks were set easterly to try and avoid it. As it happened, the cirrus slowly cleared off and it wasn't a factor.

Being the first time everyone got gridded and launched, the process was a bit of a zoo, normal when no opportunity is available for practise. The field was launched rapidly with the eight towplanes being on line and rolling on the mark.

For most pilots, the day was a struggle in weak lift from damp ground. Two knots average was normal, although there were reports of the rare stronger ones going to four. Cloudbase was about 8000 feet (5000 agl). Thirteen of thirty landed out.

The bad news was the crash of the Ventus piloted by Uwe Kleinhempel short of the airport when he was too low and attempted a last minute diversion into a field. The ship was written off in a low level spin entry and Uwe suffered two broken ankles and other minor injuries.

Walter Weir “First day jitters took their toll from everybody and I was no exception. Shortly after takeoff I decided to dump a third of my water which would be a one minute dump. I opened the valve and started the clock. After one minute I stopped the clock but did not close the valve — lost all the water. It didn't matter, the day was too weak for water and full of “undecided” cu that maybe had lift and maybe didn't.

I started high and alone and bumped along in two knot thermals to Elnora without seeing anyone close except A1 (Ed Hollestelle) who came in above me but left after a few turns. I didn't follow because the thermal turned into three knots which was better than average. On the second leg the cu were more honest and my average speed increased. Bases were at 9300 msl (6300 agl) and that helped increase the speed. I stayed high and did not get lower than 5000 msl all the way. I saw Ed twice more during the task but was otherwise alone.

Shortly after rounding the second turnpoint 33 miles out, I climbed to 8300 msl and started my final glide against a weak headwind. Gradually the airport came into view and I knew I would make it. "Good finish 2W", the sweetest words a competition pilot can hear as I crossed the finish line at fifty feet with just enough speed for a shallow right turn and a grass strip landing.

It hadn't been such an easy day for some — thirteen of the thirty pilots did not complete the task. It was good to be home!"

The next day had a wide band of jet stream cloud and other junk overhead which caused the eventual cancellation of the day, but the prognosis was, finally, for more western-type weather to follow. There were active cells to the east and south, and High River had a tornado touch down.

Day 2, 28 June

15m/Standard/Sports – 3 hour PST

The weather prognosis looked favourable with clear air between two troughs aloft, and the sounding promised 4 knot average lift to 6000 feet agl. The morning looked great but after 8 am upper cloud from a trough completely covered the sky for a couple of hours which delayed heating.

The initial call of a four hour PST with a mandatory turnpoint of Lacombe was intended to get pilots to the north where the best lift was supposed to be. The delayed launch with none of hoped-for cu dropped the task to three hours with no mandatory turnpoint. The north stayed blue. The "least worst" conditions at 3:00 were to the southeast and most pilots headed off in the general direction of Three Hills.

The actual conditions were tough. The lift was broken and difficult to centre and only went to 4000 agl at best and few cu had anything like a normal flat base (however, Jim Carpenter swore he found a 10 knotter to 6000 agl over a large black field surrounded by greenery — it must be true, he won the day in Standard). Half the field landed out. By 19:00 the sky blew up with a truly gigantic cell brewing to the east of Red Deer. It had a classic shelf around the south and east sides and it poured.

Walter won in 15m again with Nick Bonnière only six points behind on the day and 25 in total. Gerald Ince, a relatively new cross-country pilot, had a very fast time in the Sports class, won the day on his

first Nationals competition flight and moved the team into the lead. He said the lift was so weak he didn't know what to do, so he just kept flying straight! Perhaps there is a lesson in this somewhere.

Day 3, 29 June

15m/Std/Sports – 157.1 km Big Valley O&R

"I haven't got a clue what's going to happen today!" said weatherman Todd Benko at the morning pilots meeting. Although the public forecast promised three days of "sunny with afternoon cloudiness", the morning sounding was flown under a trough passing overhead which made the airmass data useless. With the ground wet from the hard rain of the previous evening, seeing any convection at start time was also going to be problematic.

The task committee set a large primary task just in case things actually were good, but kept their options open for new tasks on the line if more of the same late scruffy lift was all that was available.

The task direction stayed blue and a two o'clock sniffer landed. A shorter task to the south and east was set when the only cu that looked like they might be formed from heat rather than moisture appeared. After a hold and a runway change, the task was backed off to an out and return to the east when the south went blue also. Launches finally got underway at 3:00 and starts were made around 4:00 pm.

Sure enough, it was quite scratchy around the airfield as only the occasional cu scrap allowed climbs to 4000 agl. There was an urgency to get going due to the late start and the cu on course was shifting slowly northwards. Most pilots got as far as the turnpoint in generally weak lift as the ground was very wet (although the rolling countryside on much of the course and some dirt fields did give a few good climbs to over 4000 agl). The way home was a different story as the remaining field of cu had moved too far north of course, the day was dying, and what lift there was, was cut further by a passing band of thin cirrus.

Seven of 29 got back — only Jörg Stieber in the Standard class which moved him into first place, none in the Sports class, and six in 15m. There was some concern about Terry Southwood (PM) as no word was received for two hours. He landed in a cell phone dead zone and had to do some walking to get to a phone connected to a wire.

Jörg Stieber "The day started late and it wasn't until 3:30 that the signaller gave the all out and JS took to the skies as one of the last gliders on the grid. That late a start in the day gave no time for start gate games and I started at 3:55 as soon as I had 4000 feet in 2–3 knot lift.

Many competitors deviated to the north where the thermals were marked by good looking cu. Since this seemed to be too much of a deviation relative to the fairly short task, I decided to proceed straight on

course where conditions were blue but the occasional wisp indicated activity. A number of other gliders were with me including A1 who was leading the Standard class by over 200 points. Down to 2500 agl, I decided to work some weak lift while keeping an eye on A1 who was pushing aggressively into hilly terrain which promised better thermals. As soon as I saw him turn in what looked like fairly good lift, I followed to join. By the time I got there A1 had gained 300 feet in the 3–4 knot lift. Since this seemed to be more a survival day, I was not too concerned about falling a bit behind. As we were getting close to the turnpoint in fairly consistent 2–3 knots, more and more gliders joined the growing gaggle and A1 steadily increased his height advantage.

Fifteen kilometres before the turnpoint a fairly ugly situation developed when somebody joined a thermal low down with a left turn after a right hand orientation had already been established by sailplanes above. As more planes joined the gaggle the space between was used up and we found ourselves in a packed gaggle of twenty or so gliders with the bottom two thirds turning left and the top third turning right. Eventually I was forced to leave to change my direction which cost 500 precious feet.

The turnpoint was reached at 5:10 and looking back towards Red Deer it was clear that with a cirrus overcast filtering the sunlight, the day was beginning to die. Coming out of the turnpoint, the gaggle climbed in reasonable 3–4 knots that had already been used on the way in. Most left when the lift weakened at 6000 (about 3500 agl). Since this looked much more like a distance day than a speed day at this point, I decided to stay in the thermal to get as high as possible — 2W, ST, LJ and some others apparently had the same idea. Much to our surprise the lift improved again past the 6000 foot level and we averaged 3–4 knots up to 7000. Flying best L/D and trying to stay as high as possible, we made very slow progress towards Red Deer as the lift weakened to 0.5–1 knot. After what seemed like a very long time we made final glide height 35 kilometres out for a flying finish at 6:40.

This day was pivotal for me in the contest since both ZZ and A1 landed out which allowed me to catch up on a 500 point lead Alpha 1 had over me stemming from my unfortunate landout on Day 1."

The best thermal generator in the contest area was the natural gas refinery complex at Joffre, 28 kilometres northwest. The large area of dirt, buildings, cooling towers, flares, and railway yards produced solid lift and was the welcome last stepping stone home for many pilots on several tasks.

The next day the heavens favoured "26" (Rod Crutcher), a Libra. His son found that the weekly horoscope in a local paper said, "Go with your inner feelings. Some unexpected luck will brighten your day. This week's odds favour a Libra winner with the luckiest number being 26."

A lot of pilots developed hacks and coughs on site, but Terry Southwood caught a bad cold and withdrew from the contest.

Day 4, 30 June, "It's a contest!"

**15m/Std – 271.9 km Forestburg/Bashaw
Sports – 202.2 km Donalda/Bashaw**

The forecast was a lot better with the only fly in the ointment being the possibility of some cirrus and altocu from BC not drying out as it crossed the Rocks. Initially, a triangle was set to the northeast to stay in the forecast clear area, but by noon it was clear that nothing was developing in that direction, however a nice field of cu had developed to the east.

The task was lengthened for the Std/15m to a Forestburg/Bashaw triangle and a Donalda/Bashaw triangle for Sports. The launches got going about 1:15 (early for the contest so far), and then the dreaded cirrus moved over from the west to spite the promise of the weatherman. By the time the last (Sports) class gate opened just before 2:00, the ground at the airfield was in shadow and pilots were quick to leave for the east while the getting was good. The cumulus field's northern edge was close to the course line for all classes and the thermals were finally decent (you could do a full circle in them) and they went to a bit over 8000 feet (5000 agl). There were few difficulties getting to Forestburg for the 15m/Std pilots, but the later start for the Sports class had the cu a bit further north for their "Tour de Buffalo Lake" task, and a long slow glide past the east side of the lake into Donalda was necessary to get to drier ground and some high scattered cu under the cirrus.

The courselines back to the west looked pretty bleak, with the cirrus completely blocking the sun, and it looked like it was going to be another mass landout day. The westerly second leg of all classes overlapped into Bashaw and did have some lingering cu streeting under the clag, so everyone slowed down and stayed high. From Bashaw the last leg southwest looked dead for a while but, just in time, the cirrus thinned out and some heat got to the ground which didn't produce any cu but did allow careful weak climbs and most got home.

Southwest of Bashaw on the last leg, I was in the same thermal as CL, XH, and 26 — all above me on the scoring list, and since I was the first to start in Sports, I had to be the first home to hope to gain any points at all. All three peeled off southwest on course while I did a couple more turns to consider the options. The lift was weak because of the cirrus and the flat terrain on course was a homogenous green which didn't look like it would kick off a decent thermal anywhere. However, straight west the ground sloped south and rolled a bit (and so would be dryer and warmer), and there were a few small dirt fields to be seen. Taking this course, I was able to move along slowly in reduced sink and a bit of lift and made considerable distance while saving a lot of the height. Finally I was able to make a 55 knot "final glide" straight to Joffre where I



The winners: l to r, Jörg Stieber (Std), Ryszard Gatkiewicz (Sports), Nick Bonnière (15m)

rolled into a 7+ knot average boomer over the refinery and after a quick 2000 foot climb was able to head home at 95 knots.

This single tactical choice got me back much faster than my friends, and won me the day by a margin which moved me up four places and put me back into possible contention after my dismal Day 2.

Nick Bonnière won the day in 15m and is now only three points shy of 2W! Jörg won again to further consolidate his lead. Only four pilots landed out and two others were unable to climb and get away after relighting due to the overcast at the field.

Day 5, 1 July

**15m/Std – 229.6 km Stettler/Three Hills
Sports – 4 hour PST**

The soaring forecast was generally good, the day was warmer and the trigger temperature higher. There was a possibility of altocu and cirrus in the contest area but not nearly as bad as the previous day.

The tasking problem was always the same — while the general soaring forecast looked good, large chunks of the contest area refused to deliver cumulus. Some higher hilly country about 20 kilometre to the east was always the first to pop them off locally. The Red Deer airport is in a blue hole every day — someone said the airfield was built on a swamp. A Stettler/Three Hills triangle to the southwest was set for the 15m/Std classes (shortened up on the grid from Stettler/Drumheller) and a four hour PST for Sports. Most got around. Some high cloud did intrude from the west after 5:00 pm, which prevented some Sports class pilots getting home from northerly turnpoints.

Bruce Friesen in *Scarlet Lady* won the day in Sports which pleased him no end after the long retrieve of the previous day. Ryszard Gatkiewicz, a former Polish competition pilot and now a millwright in Meadow Lake, SK, was flying the Cold Lake Twin Astir very consistently and was well in the lead. Several other Sports class pilots had shared

both the lead and disasters which resulted in a daily stirring of the top placings, so the evening results sheet read like a *Perils of Pauline* melodrama! Gerald Ince (54) had a potentially winning flight strategy of following as many 15m/Std ships around their course as possible — the only trouble was that he didn't realize their task had been changed on the grid after he had launched and was puzzled that he was alone at Drumheller! Nevertheless, he almost completed the task, landing about eight kilometres short. The computer said he could just barely make it back, but Gerald thought that if the computer wanted to go to Red Deer, it could, but he was landing now, in that field down there, while it was still safe.

Peter Teunisse, the Swiss pilot, won in the 15m class, but the critical result was Nick Bonnière finishing 0.7 km/h faster than Walter Weir, which gained Nick nine more points and moved him into the lead over Walter by a thin six points.

The 2 July forecast showed high cloud over the contest area and an atmospheric profile that promised cumim development soon after trigger temperature was released. A short PST was called, but eventually the day was cancelled. The main entertainment on the grid was a juvenile gopher whose mamma never told it to be wary of predators. It spent much time closely inspecting the underside of the sailplanes near its hole, having a close look up in the wheel well of 2W, nibbling or tasting the gel coat on VR, and generally having to be shooed away from things. Chester said that if it was going to come along for a ride, someone would have to get it a parachute.

The 3 July forecast was for warmer temperatures of around 26°C. The previous night at 1:30 am we were treated to an excellent thunder and lightning show and some hard rain for a short time as a front passed through. The sounding showed a very strong surface inversion that max heating was barely going to break, so the soaring possibilities didn't look good. Calling a task was

THE TROPHY WINNERS ARE

MSC Trophy – 15m class champion

4532 points of a possible 4848

Nick Bonnière (ST)

Wolf Mix Trophy – Std class champion

4497 points of a possible 5000

Jörg Stieber (JS)

CALPA Trophy – Sports class champion

4250 points of a possible 4894

Ryszard Gatkiewicz (CL)

Dow Trophies (best assigned task flown)

15m class – 271.9 km @ 88.9 km/h

Nick Bonnière (ST)

Std class – 229.6 km @ 76.8 km/h

Jörg Stieber (JS)

Sports class – 202.2 km @ 64.6 km/h

Tony Burton (EE)

SOSA Trophy – best novices

Keith Hay/Gerald Ince (54)

O’Keefe Trophy – best team

Lee Coates/Rod Crutcher (26)



A beginner’s view – Dick Vine

The grand voyage began 25 May from Dartmouth, NS to end five days later at the Cu Nim field at Black Diamond, 5100 kilometres away by road. After a brief visit and two weeks of family fun including a ride “to the Rocks” in our 17m Open Cirrus, D9, a further 90 minute drive to what was CFB Penhold (now a community called Springbrook) brought us to the contest site, Red Deer airport.

The team: Charles Yeates as P1, I as crew, and our Open Cirrus, C-GUIL (a suitable registration for a Maritimes ship), prepared for the races to come. Others have written a contest blow-by-blow, but I thought our editor would like my rather more distant view of an unambitious cross-country pilot with extensive competition experience in sailing.

Right away, I recognized the tension and excitement at the briefing for the first competition day after much waiting for the weather to behave. The gridding was described in detail and the weather forecast was presented. This was the first surprise — after record rain and cold, the thermal strength and predictability were far less encouraging than I had expected, with 2–3 knot thermals — this was not the dry, dusty Alberta I had met before on a visit to Cowley! The task was modest and I expected all those super ships to romp home, while the fact was that it was a low, sweaty struggle for most with a fair number of landouts. Here, the quality of the organization really showed — the donated beepers and cell phones soon had crews and pilots in touch. Also, a very sad accident outside the airport boundary was professionally dealt with, and at the next day’s briefing we were reminded that it is a potentially dangerous sport we do, so be careful!!

My personal view of competition was that speed triangles concentrate traffic in the least possible space at the start. There were some conflicts and complaints regarding towing direction and the dumping of water on those below, however I heard no complaints of a near miss. My feeling was that pilot selected tasks would be less risky with everyone going to different turnpoints however when

such a choice was made, finders was not keepers. A good thermal climb was noticed from miles away and the scavengers collected to share the spoils. I was assured by the committed that it was not all that scary.

I was quite new to the timing, turnpoint photography, and turnpoint descriptions. The book showing these was a marvel of editing, presentation and graphics — a memento to last a lifetime! As expected, mistakes were made by pilots, but I heard no complaints of “not fair!”.

The Cold Lake club members who bore the main responsibility, ably assisted by the local club and many others from across the province and elsewhere, may be justifiably proud of the accomplishment.

As to my own interests in this event, I saw nothing to change my mind — I have had my fill of competition with its highs and lows, and the difficulty I would have avoiding blame from my dear old D9 when I personally fouled up.

The Sports class seemed to me to be a very important factor in the competition. It was very well supported and the day results were well spread through the fleet — as were the landouts! Handicaps will not always be exactly fair to a particular sailplane depending on the weather, but the participants had a realistic attitude towards the contest and were there to enjoy the thrills, come what may. The Sports class will be an increasingly important part of the national championship from now on, and may well be the mainstay of future Canadian competition as the cost of new gliders continue to rise. One hopes to see the World class glider as an international and national competition medium, but that is several years in the future. Meanwhile, the Sports class with a fine-tuned handicap will allow new competitors to learn the business at a reasonable cost.

There was much discussion on how to get young people involved in soaring, and a welcome from the Air Cadet contributors was very interesting. Other countries subsidize young people through junior programs and scholarships, and if the older generation in Canada want younger fliers to join them, some financial incentives are a real good generous way to start.

delayed until the grid, and a second sounding at 11:30 showed the inversion being even deeper. Some cu wisps formed at 13:30 but the sniffer was barely able to maintain release height for a while and eventually could get all the way to 2600 feet. The day was cancelled at 15:00. Another cold front was supposed to pass through the next day with the airmass behind it 5 to 10 degrees cooler, so everyone hoped that it would cross early enough for a decent last day of competition.

It didn’t, and the inversion was even deeper, although 4000 agl was possible if the maximum temperature was reached. It didn’t, because one of southern Alberta’s chinook arches developed and shaded the ground, which generated a few under-wing lectures on its structure. Richard Longhurst was sent up to sniff at 14:30 to see if anything at all was happening aloft. It wasn’t, so the day was scrubbed with handshakes around the runway to victors and other near-winners.

In a fitting climax to the nature of this year’s contest, the sniffer landed out!

At the awards banquet in the hangar that evening, the biggest laugh came during Ryszard’s Sports class trophy acceptance ‘speech’, when he told of being out of gliding for seven years since being in Poland and of only getting his (Canadian) glider pilot licence two weeks prior to the contest. This is a soaring pilot who is going to have to be watched.

Well, thanks for coming, everyone. Oh, by the way, in the two weeks following the competition, there were 500 kilometre flights flown in Alberta and in southern Ontario. Perhaps the rain has finally gone for the rest of the season. ❖

1996 NATIONAL SOARING CHAMPIONSHIPS		Day 1		Day 2		Day 3		Day 4		Day 5		total		
		km/h	pts	km	km/h	pts	km/h	pts	km/h	km	km/h	pts	total	pos
15 METRE CLASS		191.5 tri		3 hr PST		157.1 tri		271.9 tri		229.6 tri				
Nick Bonnière	ASW-20	82.4	892	2	189.9	67.8	994	7	59.5	815	4	1000	4532	1
Walter Weir	ASW-20B	84.1	911	1	180.7	69.6	1000	6	60.2	826	5	967	4526	2
Peter Teunisse	Ventus BT	81.1	877	4	150.3	56.3	713	3	85.3	949	1	1000	4476	3
Wilf Krueger	LS-6b	83.1	900	5	118.3	57.5	653	4	84.9	839	2	867	4202	4
Helmut Gebenus	ASW-20CL	74.2	798	7	90.0	55.0	544	5	84.4	936	3	851	3958	5
Dave Springford	ASW-20	64.0	681	3	187.3	62.4	901	10	(114.9)	291	6	841	3182	6
Lorrie Charchian	LS-6b	(161.6)	363	8	144.3	0.0	354	3	77.7	809	8	(190.9)	2800	7
Mike Cook	K5	(126.0)	283	10	46.9	0.0	115	8	48.1	632	7	(207.1)	2151	8
Nick Pfeiffer	PIK-20	(49.7)	112	9	84.7	0.0	208	2	63.6	881	10	(148.4)	1839	9
Terry Southwood	ASW-20	72.5	778	6	134.9	53.9	636	9	(119.1)	302	12	dnc	1716	10
Buzz Burwash	ASW-20FP	(155.4)	349	11	29.3	0.0	72	11	(4.0)	10	8	73.3	1553	11
Uwe Kleinhempel	Ventus B	(182.7)	410	12	dnc	0.0	0	12	dnc	0	12	dnc	410	12
STANDARD CLASS		() values in brackets are distances in kilometres if the pilot landed out. *p* denotes the application of a photo penalty.		3 hr PST		157.1 tri		202.2 tri		4 hr PST				
Jörg Stieber	LS-4	(176.6)	513	2	134.9	56.6	984	1	58.3	1000	1	1000	4497	1
Ed Hollestelle	SZD-55	74.3	1000	3	134.9	53.4	928	3	(111.8)	435	4	937	4203	2
Jim Carpenter	Discus B	48.5	692	1	134.1	57.7	1000	2	(138.9)	540	5	874	4034	3
Kerry Kirby	Std Janjar	(162.3)	471	5	67.1	0.0	250	4	(110.7)	430	3	941	2928	4
Richard Longhurst	SZD-55	(164.7)	478	4	67.7	0.0	252	5	(101.8)	396	2	74.1	2457	5
Kevin Clifton	ASW-19	(148.1)	430	6	4.0	0.0	15	6	(87.6)	341	6	63.2	1945	6
SPORTS CLASS		152.6 tri		3 hr PST		157.1 tri		202.2 tri		4 hr PST				
Ryszard Galkiewicz	Twin Astir	42.9	782	2	142.1	47.4	827	1	(127.9)	894	2	943	4250	1
Coates/Crutchner	Ventus B	58.3	857	8	96.7	0.0	292	3	(121.5)	725	7	58.9	3472	2
Tony Burton	RS-15	49.7	856	9	62.3	0.0	211	2	(111.8)	746	1	64.6	3337	3
Hay/Ince	Mini-Nimbus	44.8	880	1	174.5	61.0	1000	4	(112.5)	707	9	281	3173	4
Mike Thompson	HP-14	50.8	822	4	76.2	41.9	426	6	(107.1)	687	6	55.5	3111	5
Chester Zwarych	DG-202/17	63.5	1000	3	175.0	0.0	546	8	(87.4)	538	8	(165.4)	2874	6
Dennis Vreeken	Mosquito	(72.9)	401	6	113.3	0.0	361	5	(112.1)	705	3	62.9	2800	7
Bruce Friesen	Std Austria	(115.5)	204	7	73.2	0.0	295	7	(85.2)	678	10	(107.2)	2644	8
Ray Richards	DG-300 Eilan	47.4	716	11	33.8	0.0	106	11	(58.5)	364	4	61.0	2216	9
Charles Yeates	Open Cirrus	58.7	p917	12	25.8	0.0	82	12	dnc	0	5	59.3	1818	10
Colin McKinley	DG-100	(0.0)	181	5	90.0	34.4	384	10	(78.3)	517	11	0.0	1427	11
Tom Coulson	Mosquito	(65.4)	181	10	53.5	0.0	170	9	(84.1)	529	11	0.0	1162	12

St. Auban

from page 9

Grenoble. The detail provided on the maps was, however, indispensable.

On the comfort side, the parachutes provided are only back packs, not seat chutes which I am used to. This resulted in serious discomfort on my first few flights until I discovered that inserting a foam back roll in the hollow of my back improved the comfort level considerably, so I strongly recommend taking your own chute to avoid this problem.

Achievements Because the weather did not cooperate, we only managed 9 days of flying out of a possible 16. Three days were very good. We were plagued by moist air and thunderstorms and hail for almost a whole week. However, on successive days, I did manage to fly south to within sight of the Mediterranean, northwest to Roman, a gliding club in the Rhône valley, and northeast through the high Alps towards Grenoble. I got a taste of flying strong, rough thermals along the crests of mountains, of ridge soaring on the side of steep escarpments, and of finding how easy it is to get into trouble in windy conditions. I therefore achieved my first goal, which was to determine the minimum experience required to be able to race safely in the mountains. I did also partially achieve my second goal, to get familiar with the area. However, just under 30 hours of mountain flying experience is really very little.

I got the chance to fly in six new glider types: a Duo-Discus, Pegase, Crystal, Discus, Nimbus 3D, and Ventus 2a. Flying a different glider every day provides a great insight on handling characteristics and gliding performance. The front cockpit area of the two-seaters, however, is too small to accommodate a water bottle, a lunch, maps, etc... only one small pocket is provided on the side which just isn't enough.

So what did I get from this trip? The chance to see the Alps, to have a small taste of what it is like to fly in the mountains, in a ship I would never fly here — I don't think we even have them. I got to spend 2-1/2 weeks in the company of glider pilots talking about gliding, the chance to meet Eric Napoléon, the World Champion in New Zealand last year, to get an idea (mainly at second hand) of how complex flying in the mountains is, and a chance to see Provence.

Conclusion Before going to the CFHN training centre, most of my cross-country experience had been gained slowly by trial and error, by reading about it, by talking about it, by landing out, and by seeing how more experienced pilots did it. I am still learning. Going to a national gliding centre and getting first hand knowledge from experienced pilots definitely shortens the learning curve. I am glad I went to St. Auban for that reason. Flying in the mountains is a memorable experience, but racing in the mountains is not to be taken lightly as it is a potentially dangerous endeavor. ❖

En parlant de vol à voile

Jean Richard
CVV Québec

Bien sur qu'on lit l'éditorial Notre président s'inquiétait: «Le lisez-vous (en parlant de notre magazine)? Je me le demande car je n'ai jamais eu de réactions sur quoi que ce soit», écrivait-il dans son éditorial du numéro 6/95. Deux numéros plus tard, comme par hasard, les vélivoles francophones ont eu droit à trois articles écrits dans leur langue maternelle. Mon cher Pierre, je te le dis devant témoins: si tu réussis à soulever l'intérêt des francophones envers l'Association canadienne de Vol à Voile, si tu réussis à créer un climat qui les incite à se rassembler afin de travailler au développement de notre sport, chapeau!

On ne peut fermer les yeux sur certains événements qui ont marqué les dix dernières années de vie vélivoles au Québec. Je pense aux clubs qui ont été rayés de la carte, je pense à ceux qui ont vu leur taille rétrécir comme peau de chagrin, et je pense surtout à la mise en veilleuse de la Fédération québécoise de Vol à Voile, organisation qu'il faudrait idéalement faire revivre. Pourquoi? Parce qu'il est urgent que les clubs sortent de leur isolement afin de remettre notre sport sur la voie du progrès.

Faire revivre la fédération? Ce n'est pas complètement utopique, mais ce ne serait sûrement pas facile. Nous sommes loin des beaux jours où l'État croyait aux vertus du sport amateur et y allait de son soutien financier. En l'absence des ressources sur lesquelles pouvait jadis compter la fédération, l'espoir d'une résurrection est mince. De plus, à cause d'incidents qui ont marqué les derniers mois de son existence, certains clubs seront difficiles à convaincre de la pertinence d'une telle renaissance.

Il y a une alternative à la fédération: l'ACVV. Mais avant que les Québécois «embarquent» dans l'ACVV, il faudra que cette dernière envisage deux changements majeurs: la régionalisation et la francisation. Pourquoi la régionalisation? Parce que dans sa structure actuelle, l'association ne fait rien pour rassembler les clubs. Parce que les vélivoles québécois n'ont aucune espèce de sentiment d'appartenance à cette association, si bien qu'on les entend de plus en plus dire qu'ils pourraient un jour la quitter. Et pourquoi la francisation? Parce que les francophones veulent travailler dans leur langue et qu'ils aimeraient que celle-ci soit traitée sur un pied d'égalité avec celle de nos confrères du reste du Canada. Parce que devant le désir de plus en plus souvent exprimé de voir l'association prendre en main la gestion complète du vol à voile au Canada, les francophones pourraient faire

opposition, s'ils n'ont pas la certitude d'être servis dans leur langue, ce qui est possible avec Transports Canada.

Savez-vous piquer? Au cours des dernières années, j'ai eu l'occasion, grâce à mon métier, de côtoyer des dizaines d'élèves pilotes venus de tous les continents. Il y en a parmi eux que je n'oublierai jamais. Ainsi ce jeune homme dans la vingtaine qui vint un jour me rencontrer en me demandant si je me souvenais de lui.

L'histoire avait commencé sept ou huit ans plus tôt, par la rencontre de deux jeunes mordus des ordinateurs et de Flight Simulator. Ils m'avaient alors demandé si je voulais bien les faire voler. Pourquoi pas? On se donne rendez-vous à l'aérodrome, je réserve un Cessna 172, et mes deux compagnons d'occasion passent de la réalité virtuelle à la «vraie chose». Je leur en mets plein l'esprit: pas de machisme, pas de m'as-tu vu, les jeunes n'en sont pas aussi friands que ne le croient certains de leurs aînés; j'essaie plutôt de leur communiquer la passion du vol, l'amour de l'aviation, celui qu'à

leur âge, je dévorais dans des livres d'aventure, de Mermoz à Saint-Exupéry, en passant par les Marabout Junior.

Sept ans plus tard, un des deux gamins, maintenant adulte, est devenu pilote privé, copropriétaire d'un avion. Sept ans plus tard, un des deux gamins est venu me remercier pour lui avoir donné «la piqure». C'est en plein ce que j'avais cherché.

J'ai rencontré de ces gens capables de vous piquer à la bonne place, capables de rendre contagieuse leur passion du vol. Lorsque j'ai commencé à voler sur planeur, la première leçon fut décisive. C'était en 1986, à Saint-Charles-de-Mandeville, à l'Aéro-club des Outardes (celui qui collectionne les trophées Roden). Lors de mon premier vol, il y avait, en place arrière du Schweizer, un type capable de me faire oublier l'atrocité de cet appareil (une personne qui préfère voler un 2-22 plutôt que de rester au sol vous a au moins prouvé qu'elle aime le ciel avant tout). Ce n'était pas un enfant, mais il savait très bien rêver. Son plus grand rêve, c'était de devenir pilote professionnel, quitte à sacrifier un enviable salaire de contrôleur aérien. En lisant le dernier numéro de notre magazine, j'ai appris avec grand plaisir qu'il faisait maintenant partie du comité de formation de l'ACVV et qu'en plus, il serait responsable du prochain cours de formation des instructeurs francophones. Bravo Marc! Je parie qu'il te reste un peu de «venin» et que tu sauras communiquer ton enthousiasme à ces futurs moniteurs. ⇨ p24

Resumé I try to explain in a few words why people in Québec are so little interested and involved in the Soaring Association of Canada. We often feel like strangers in SAC. Unfortunately, the Fédération de Vol à Voile du Québec is no longer active so there is no way for clubs to work together. SAC must go to a more regional oriented organization to better serve the soaring community and prevent clubs from getting isolated.

You can spend thousands in advertising to bring people to soaring. But passion and enthusiasm often give better results, and costs a lot less. If you have been soaring for ten or twenty years, maybe your passion and enthusiasm came from the back seat on your first instruction flight. Do you remember? In the same way, bringing enthusiastic young people to soaring by sharing your passion with them can be very profitable for you as for your club. You will never get old if you remain able to communicate with young people and your club will probably stop shrinking if you bring youth to it.

Adieu Transport Canada! Welcome to a "BGA style" SAC! No more dealing with a government agency. No more CF or CG painted on your sailplane. But will ICAO recognize a licence issued by a sporting association? Will we be able to fly in other countries without getting a full licence from those countries? Will a UFO sailplane be allowed in controlled airspace? Will we be allowed to take our friends with us for a ride? Ask the English glider pilots — some of them will tell you that you are lucky to have a "real" licence.

Environment Canada forecasters still answer the telephone. Cost of personal briefings are no longer shared by all Canadian citizens, but paid by those who get them. By calling the Environment Canada 1-900 toll line, you can talk about soaring with a forecaster. In the last few years, computer forecasting models improved in a significant way. Fed with data from the big Nec computer in Canadian Meteorological Centre, "Stratus" software can plot and display an accurate forecast tephigram for many different sites in just a few seconds. Unfortunately, it's not available for your Macintosh or your PC.

training & safety

CRITICISM IS GOOD

Criticism is the basis of instruction. Every effort of every pupil should be criticized verbally and dispassionately, unless the pupil has wantonly disobeyed his instructions or the laws of common sense.

If a pupil has done badly, he should be told how he could have done better. If a pupil has done well, he should be told how he could have done better, but in this case, he would also be told how he could have done worse. This is very important, because many hundreds of wasted hours are flown by pupils with apparent success — wasted because the pupils have unconsciously and not consciously avoided some dozen of mistakes which they might have made.

Unless a pupil knows all the possible mistakes and can give reasons in words for not doing the things which constitute those mistakes, he is liable at any time to make

one of those mistakes without warning. The instructional value of success is absolutely nil unless the pupil knows, and can say in words, why it was that he succeeded and did not fail. It is therefore a waste of machines and petrol to let solo pupils take off, fly around, and land again at their own sweet will, uncriticized, because with criticism much more value would have been obtained from the flight.

The fact that the aeroplane is intact after a solo flight is no proof that all has gone well. The pupil may have made in a small degree or shown a tendency to make several mistakes which could be stopped by criticism from an instructor watching from the ground. If he is not stopped, the pupil will some day make the same mistake in a greater degree and wreck a machine simply because he did not know that such a mistake was standing by ready to be made ...

from an early RAF training manual and reprinted in the RCAF "Roundel" in 1951.

EARLY FLIGHTS, HANDLING THE GLIDER, AND TEACHING PILOT DECISION MAKING – Ian Oldaker

We all would agree, I think, that one of the first things a person must master in flying is the handling of the glider. This is defined as the hands-on maneuvering of the glider, the 'handling' of the controls to fly accurately. At the same time the pilot should know what is involved in doing this. What I mean by this is the pilot needs knowledge to figure out what he or she is doing, for example the pilot should be able to discuss stability in at least a basic fashion, or to know why it 'helps' to speed up when approaching into a headwind when low on final approach. These abilities are acquired through having received good instruction in the basic flying skills. This is out of the control of the student of course, as learning to fly properly cannot be self taught! We recognize this by continually trying to upgrade our instructor training program.

How well can you fly? Is speed control automatic and is it done by attitude flying? Is your speed control during turns sufficiently good that you don't need a compensated vario to make use of the lift/sink? Indeed, do you realize that accurate speed control will assist in evaluating the vario's readings? What are the different types of compensated vario? And what compensation method is used in your club's two seater?

We should all have these basic capabilities and associated knowledge, of course. If we don't, then we will not be safe and we will not be able to use that lift efficiently and be able to enjoy the sport to the fullest. This is

the first area that some of us may have recently neglected, and we should examine our operations and training to ask, are we providing our students with the basic skills to become excellent pilots, able to safely and skillfully handle the glider and to know what they are doing? This, in contrast to just "flubbing around the sky"!

I well remember an instructor once saying to me, "when did you last take a dual with an experienced pilot who could show you where to improve your soaring skills, what bad habits are creeping in, etc?" Think about it. Now, where does this leave us regarding the teaching of judgement and decision making skills?

'Judgement', in UK usage, most often refers to the judgement of heights and positions in the circuit, and the making of the right decisions to fly the circuit safely to arrive at the right place and at the right height to make a safe final turn. They very often describe airmanship as lookout ability, but perhaps it might also be described as the composite ability of decision making, good lookout, safe flying (such as maintaining spacing in thermals), safety practises on the ground and in the air, and so on — in other words — all the abilities that would describe a safe and capable all-round pilot.

In North America we use the word "judgement" to describe the making of decisions, how we apply our previous experience and personality to arrive at the decisions we

make during flying. Good judgement is the application of sound principles backed up by a knowledge and realization (based on our personality) of how we, as individuals, react to situations and make decisions.

Do we make decisions all the time when flying? We sure do, and they are largely unconscious decisions, and this is where we can run into trouble because the decisions are not deliberately thought through. For example, how often do we let things deteriorate until too late, and then we are rushed into making a hasty decision?

There is now a consensus that there is a need to introduce decision making and judgement training into our operations. This started with the Judgement Training program by Transport Canada, the FAA, and the General Aviation Manufacturers Association. This program was aimed at an examination of how people react to situations, either on the ground before flying or when in the air, and how the pilot's personality traits affect their decision making.

A program was then devised for pilot training. Two manuals were produced, one for the student and the other for the instructor; this included the ground school work plus typical flying situations which could be set up for pilots with different personality traits, and so on. It was received with varying degrees of acceptance in gliding; a problem arose because we typically find each glider pilot is trained by several instructors. The instructors could not easily be expected to remember the personality of each student as they had many to deal with, or different students each time they instructed. This made it difficult to set up suitable situations to be used to train the pilot how to make the right decision when they reacted to that situation. The right decision needs the application of judgement. Judgement varies enormously between people but good judgement can be acquired and can be usefully taught during training, however I think you can see the difficulties involved. The above may sound like a mouthfull, well it is and this is where the method was difficult to apply to typical Canadian gliding clubs.

Do we instructors deliberately vary the circuit entry so as to make the pilot have to think? (The student will not then get into any habits about turning over a familiar landmark, for example.) If we don't do this, do we tell ourselves that we will not worry the student with having to make decisions about when to return to the circuit entry area, particularly during early training, because he will 'pick this up' from us as training progresses; then later in his flying he will be able to make the decisions himself?

Of course we don't have problems only with early flying — it is later when a pilot is solo that the old habits come back and, when under extra pressure, there is a distinct need to have a method for decision making because of problems leading to accidents. We have had our share of the types of accidents that clearly needed a decision to be made

early or earlier than it was eventually made... the pilot needed to have been thinking ahead more than he was. As a result, we devised the decision making technique which goes by the mnemonic, *SOAR*. It meets the need for something simple that can be assimilated into training early.

How do we infuse this into our pilots? During early flights the student will not be making decisions about the direction to fly in, or where to go; he will not be thinking ahead. (Think how often the student asks which way to make a turn if the instructor has not said, "turn left", for example?) So the student is not thinking about the windy weather and saying, "is it suitable for me today?" or not be thinking that the wind is strong, therefore I must stay upwind more, or what if I get downwind how do I handle the situation?

Have we given the student a technique to reach a good decision and to make it early? Have you listened to pilots on the flightline talking recently? It's an eye-opener, believe me! Not much about the flying and any advisories or any safety points. Where is the judgement, the airmanship, the decision making?

There is a factor in learning whereby what we learn first about something is THE way we remember. Imagine inflicting a stall on a passenger during a ride; will that person think stalling is threatening and is something to be avoided at all costs? You bet! First impressions are very difficult to unlearn. So think about those early flying lessons — if we learn that flying does not need decision making that requires a deliberate analysis of the situation from minute to minute, because the instructor is looking after this aspect, the student will be lulled into a sense that this is unimportant, they won't be thinking about it easily in their later flying. Today it is recognized that teaching this later will be most difficult. At the recent OSTIV Training and Safety Panel meeting earlier this year we assigned top priority to devising an international training scheme which may be used by countries to teach pilot decision making (PDM) to glider pilots. This is a fascinating group to work with and it involves pilots such as draftsmen, engineers, psychologists and anthropologists among others. So far we have adopted the *SOAR* technique as the basic tool to be taught. Why? Because it has a solid base in sound business decision making, and adapting it to flying situations is a natural.

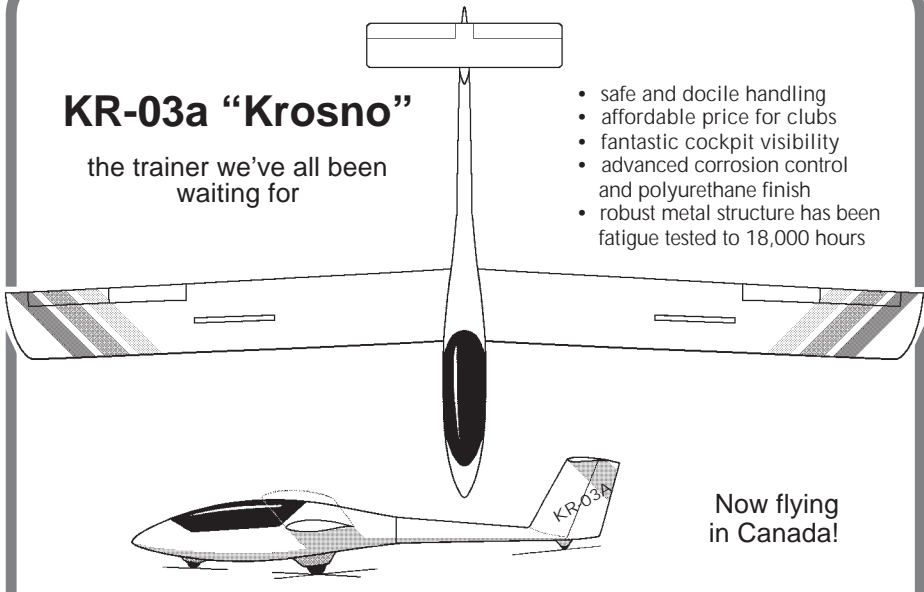
To teach PDM, we should start early in a student's training. On an initial flight, how often do we say that we are making the decision to return to the general area of the circuit, the student does not need to worry about it? By involving the student in this decision making early on, we are using the Law of Primacy to form in the minds of the future pilots the good practise of mixing decision making in all their flying activities.

So, during the first flights an explanation of the four steps is all it takes, plus a demon-

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stration from time to time that the instructor is working through the *Situation* and the *Options*, to reach a decision to take *Action*. The student can increasingly be asked to evaluate the situation and to suggest options. This does not need to take away from the basic flying exercises, and indeed should be part of them. By actually using PDM during all flying and flying preparations (most important), students will form the good habits that are needed to make them think ahead and to make good decisions in sufficient time.

As the students become familiar with the four steps, the fourth by the way for those unfamiliar with the technique is to *Repeat* the first three steps, the students should be asked to go through the steps themselves and definitely to *act* on the best or safest option. This then is the current method to introduce the topic during early flying training. During later flights any instructor should be able to check on a student's use of the

technique by setting up situations or by asking for an evaluation of the current situation. This should trigger an immediate response with an evaluation of the options and a decision to act.

Teaching the technique need not take away from a concentration on basic flying skills training, and today's wisdom would suggest we should be integrating PDM with all flying training, up to and including cross-country clinics where some pilots would be exposed to the technique for the first time! Here they would be using PDM to evaluate areas of lift, to make the right decision to optimize their speed, and so on. Later in the flight the pilots would use PDM to evaluate how best to select a field and circuit for an off-field landing. Hence Pilot Decision Making is not only for the neophyte pilot, but for all of us. Incorporate it into your routine so that it becomes routine, part of your everyday flying habits, and you will be a safer and happier pilot! ❖

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When are you most at risk?

Part 3 – Low Altitude Turns

Tom Knauff

PART ONE identified the three most common phases of flight where fatal glider accidents occur. These accidents most often involve stalls and spins from low altitude turns. Launch emergencies, low altitude thermalling, and landing accidents account for the majority of all fatal stall/spin glider accidents. Part Two investigated early launch emergencies, and concluded with the importance of having plans of action for each phase of the launch. The following are important factors when reviewing glider operations and accidents:

- The Pilot
- The Environment
- The Aircraft

The Pilot If we took a pilot to a high altitude and asked for a stall demonstration, the maneuver would probably be performed satisfactorily. The same would be true for flying a constant airspeed and keeping the yaw string straight during straight and turning flight.

Those same maneuvers at low altitude are a problem for most pilots. Most pilots, when very low, fly slower than desired. Most pilots, when low, will fly a turn with the yaw string crooked because they are pressing on the rudder in the direction of the turn. Many pilots make these same errors at high altitudes while trying to climb quickly in a thermal, or when attempting a quick turn. Common reasons for these errors in flying skills are due to intuition, knowledge, and habits. These errors are easily observed by astute flight instructors during checkrides, flight reviews and flight tests.

Before learning to fly, most people believe the elevator of an aircraft makes it go up and down, and the rudder turns the aircraft. Also, there is a subconscious belief the glider will follow its nose, so raising the nose of the glider when low gives the illusion of a flatter glide. This is the incorrect mechanical reasoning (intuitive or learned) we all bring as mental baggage when we begin to learn to fly. A pilot may be 30 years old and have a hundred flying hours. The score card for this pilot looks like this:

- (Incorrect) Believing the elevator is the up and down control and the rudder turns an aircraft – 30 years.

- (Correct) Understanding the elevator controls angle of attack and the rudder counteracts aileron drag – 100 hours.

Under stress, there is a part of our brain that causes us to fly incorrectly. Professor Thorndyke's "Law of Primacy" states that when under stress, we are likely to revert to first-learned knowledge. Reverting to first learned responses, especially in the case of flying, can be entirely and dangerously wrong. Every pilot is susceptible to this problem.

Pay close attention and evaluate yourself when you fly. If you happen to enter the landing pattern a little low, is the airspeed just a little slow? If you are in a thermal trying to climb quickly, are you flying a little slower than minimum sink speed for this angle of bank? In each case, a part of your brain is erroneously trying to prevent the glider from going down by pulling back on the control stick.

If you are on final approach to a landing and are a little high, is the airspeed a little fast? It is the same part of your brain incorrectly trying to make the glider go down with the elevator.

In the landing pattern, is the yaw string a little off because you are pressing on the rudder in the direction of the turn? This might be the most common error in all glider flying. Almost every pilot will make this error when under stress.

There is a natural fear of steep turns when at low altitudes. Pilots will resist making a steep bank. A shallow bank angle will not turn the glider quickly enough, so most pilots will press on the rudder in a futile, subconscious attempt to make the glider turn quicker. It is a natural response that can be overcome with thorough training, understanding of how an aircraft works, practise, and attention to correct habit formation.

Most pilots will fly with precision at altitude, but when at low altitude or some other stressful situation, it is common for the yaw string to be crooked and the airspeed low. If there are severe stresses because of some emergency or other distraction, the tendency for the pilot to fly incorrectly is even more common. (Some call this being "ground shy".)

The Environment Making a turn at a low altitude is different than high altitude because of possible low altitude turbulence, wind shear, and wind gradient. Severe conditions may cause one wing to be affected by a gust which may cause the glider to suddenly bank more steeply or even stall. The pilot may be flying very slowly (high

angle of attack) when a relatively small gust causes a stall.

During steep turns at high altitude, the ground beyond the wing tip appears to move forward, with the wing tip appearing to move backwards over the ground. At very low altitudes, the ground appears to move backwards, with the wing tip moving forward over the ground. (You might try noticing this effect the next time you fly.) A pilot making a low altitude turn probably will notice the ground moving rapidly beyond the wing tip. This gives an illusion of extra speed, which reinforces the instinctive, and incorrect reaction of pulling back on the control stick to maintain altitude.

The Aircraft Have you ever wondered why the elevator is the size it is? Could it be bigger? Smaller?

Aircraft design parameters differ from one type of aircraft to another. An aircraft designed to do aerobatics, for example, will have a more effective elevator so the pilot can intentionally perform high performance maneuvers such as vertical snap rolls.

An aircraft licensed in the normal category has an elevator designed to be limited in power because it is desirable to make the aircraft stall resistant. The elevator's up limit is usually based upon the need to perform a normal, tail low, low speed landing. No other normal maneuver requires more up elevator authority than during landing. This important design limit makes the normally certificated aircraft less likely to stall as long as it is within weight and balance limits.

A stall, by definition, occurs when an airfoil reaches or exceeds its critical angle of attack. The angle of attack of the wing is controlled by the elevator. Let's perform a steep turn together ...

Roll into a turn and keep increasing the angle of bank until you are turning as steeply as possible. This requires the control stick to be held fully back. We are now in a steep turn. The bank angle is nearly 60 degrees. The airspeed is steady, perhaps 60 knots or so. The yaw string is straight. The control stick is in the full aft position.

Now, stall the glider. You will see it is not possible. The angle of attack control, the elevator, is all used up. There is not enough elevator authority to increase the angle of attack of the wing to the stalling angle (moving the rudder only causes a side slip.)

Now, let's try a stall with a less steep angle of bank... roll into a 30 degree bank angle. Bring the nose of the glider well above the horizon. Bring the control stick fully aft. Keep it fully aft and watch what happens.

If both wings were to stall, there would be a pitching motion at the stall. If only one wing stalled, there would be a rolling motion or there could be a combination of rolling and pitching ... if the wing stalled. But, neither will happen.

In this demonstration, you will notice the nose of the glider yawing through the horizon. There is no pitching, there is no rolling. The wing does not stall.

What happened? As the nose was raised above the horizon, the airspeed began to dissipate. As the speed decreased, less and less lift was produced by the wing. (Lift is a function of angle of attack and the speed of the relative airflow.)

Before the stalling angle of attack was reached, the airspeed decreased and the wing produced less and less lift until the glider was no longer supported, and it fell. As the glider fell sideways through the air, the yaw string went way off to one side, and the designed stability on the vertical axis (airflow against the side of the glider fuselage and vertical stabilizer) caused the yawing motion.

Every pilot is taught the stall speed increases as the bank angle increases. Few pilots are taught the *aircraft becomes more stall resistant as the bank angle increases*. In fact, it can be stated that in a bank angle of 30° or more — without a violent control input, or unusually turbulent conditions — it is nearly impossible to stall a standard type-certificated aircraft within its weight and balance limits. (All bets are off on home-builts or experimental aircraft.)

Even violent control inputs may not be a problem. Try the same 30° bank angle and bring the nose of the glider well above the horizon. Keep the control stick fully back as before. At the worst possible moment, just as the nose of the glider begins to yaw and the airspeed is at its minimum, give

full, abrupt, opposite aileron. Now watch what happens.

The glider's nose will fall sideways through the horizon, and at the same time, the wings will roll level. The ailerons still work normally because the wing is not stalled. If you continue to keep the stick held fully back, the nose of the glider will first fall below the horizon, then rise above the horizon as the bank angle decreases, and a stall can then occur. The wings will be nearly level at the moment of the stall.

As every pilot knows, if this same maneuver is attempted from a very shallow bank angle, most gliders will enter a spin when the opposite aileron is applied. From the standpoint of stalls and spins, shallow turns are more dangerous than steep turns because the elevator has maximum effectiveness to cause the wing to reach the stalling angle of attack.

The difference between an aircraft that is falling because it is flying too slowly in a steep turn, and an aircraft that is falling because it is stalling in a shallow turn is pilot reaction. When falling from a steep turn, the pilot's natural, instinctive reaction of opposite aileron to reduce the bank angle will be okay. Since the aircraft has not stalled, the ailerons will work normally and the glider will roll out of the turn. In the case of a stall entered from a shallow turn, the pilot's instinctive reaction to level the wings can cause the wing stall to be aggravated by the applied opposite aileron, causing a spin.

Combining pilot considerations with aircraft considerations reveals that pilots must overcome their unfounded fears of the steep turn in order to fly safer. There are occasions when a steep bank angle is necessary, especially when close to the ground.

Pilots who have unwarranted fears will resist the bank angle necessary to turn the

aircraft, especially in stressful situations, and will subject themselves to deep-seated, incorrect reactions that will have them pulling back on the control stick to hold the aircraft up while pressing on the rudder to make a quicker turn. The instinctive reaction will be to hold the controls in the position necessary to perform a spin.

Combining aircraft considerations with environmental considerations dictates a need to avoid any turn (regardless of bank angle) at low altitude if conditions are turbulent, or if there is the possibility of wind shear or wind gradient.

Combining pilot, aircraft, and environmental conditions will result in taking each into consideration and flying in a manner that will preclude the possibility of the stall.

The educated pilot will understand how the mind would naturally have the pilot fly incorrectly, by fearing the steeper bank angle, resisting altitude loss with excessive back stick pressure, and attempting to make the aircraft turn quicker with inappropriate rudder pressure.

It is not suggested to use steep turns when at low altitudes or under stress, but rather the pilot must understand how the aircraft works, how humans work, and what effects the environment might have. With this knowledge, the pilot can use judgement to avoid the need for low altitude turns (at any bank angle) in turbulent conditions. If a low altitude turn is necessary, (eg, rope break, low altitude thermalling, landing, the pilot will use a bank angle steep enough to accomplish the desired turn. During this turn, the pilot will fly in a manner that will make the aircraft most stall resistant by maintaining a proper pitch attitude (airspeed) and keeping the yaw string straight. ❖

Take the information here to heart — under stress, any pilot can make a mistake — the Nationals provided a prime example.

Blank ad (your EPS file) goes here

hangar flying

OF MICE AND MEN

I have a Cobra trailer that I am unable to keep mice out of it this year. Does anyone know where they get in, and how to stop them?

Judah Milgram
milgram@eng.umd.edu

• I have seen mice run up walls. A small mouse can get through a hole that your little finger can't. Moth balls will only work for a while, the hole must be sealed. If there is no other water around, a bucket with a few inches of water in it makes a good trap.

• At one field I used to fly out of in South Florida the FBO kept (or tolerated) a small family of semi-wild cats living around and under the trailer which served as the office. Sweet purring kitties around humans, but bloodthirsty ghouls when it came to rodents. Very effective.

• Mice can squeeze through very small holes — saw a video of a mouse going through an airbrick — the size of the hole would have been maybe 10mm (two-fifths of an inch) — how wide is *your* pee tube?!

• Fill your trailer with water and see where the leaks are ... anything bigger than a nickel and you have found the entrance.

• I have a Cobra trailer. The mice were getting in through the hollow tongue. I plugged the back of the pipe with steel wool and taped over it.

• Easy. Just dump all or part of a box of old fashioned mothballs into the trailer (the kind made out of naphthalene, not p-dichlorobenzene). The smell keeps out all kinds of little wee things (eg. mice) but isn't bothersome to humans since the smell immediately vents out of the glider while you're putting it together. They will last about a year on average.

• Same thing works on tied out gliders or airplanes ... just put an open box into the plane (or hang a closet hangar style moth-repellant in there) and take it out when flying. Works like a charm.

STANDARD UNITS OF MEASUREMENT...

(from chat in the rec.aviation.soaring news-group) When, oh when, do you think we shall ever see a worldwide standard set of measurements in aviation? And what should they be? (effects: sound of can opener and worms escaping...)

Phil Swallow
phil@migrant.compulink.co.uk

• Why not start with gallons and pounds? I saw an explanation in this forum of how much one gallon of water is in pounds (I think it was). Much easier than 1 litre equals 1 kilogram, isn't it? (sound of can opener and worms escaping again).

• Ah! But those were US gallons. A proper (UK) gallon of water weighs 10 pounds.

I'm also familiar with readings on the ASI and vario both being knots — a simple mental division gives an idea of achieved glide ratio. (Even sink in 100's of ft/min is good enough.)

• Now, when the ASI is km/h and sink rate in m/s, all one has to do is the same mental arithmetic, then divide the answer by — what is it, 3.6? or is it multiply?

• In the UK it's simple. We measure height in feet, speed in knots, and distance in kilometres. What a cocktail!

• And if you have an engine, you measure fuel in litres when you buy it, and gallons per hour when you burn it.

• And in New Zealand it's height in feet, ground distance in kilometres, air distance in nautical miles, runway length and width in metres. Keeps one thinking — the brain rots otherwise.

• Did you hear about the astronomer who had his vario calibrated in microparsecs per millenium? (The reader is invited to do the conversion — answer #1 below)

Once, when flying a glider in Germany, it took a little while to get my head around the altimeter which was calibrated in kilometres with zero at the bottom of the dial.

• Or the glider pilot with a vario calibrated in furlongs per fortnight (answer #2 below).

*1 Just under 2 knots
2 1/16 ft/min - good only for British
thermals. I think!*

... AND MORE ON MILES

The "international nautical mile" is defined as 1852 metres exactly (6076.1154 feet). It is an agreed mean figure related to the distance between the poles and the equator.

Originally the nm was 1 minute of latitude, or 1/5400 of the distance between the pole and equator. On the 1984 'world ellipsoid', a minute of latitude is 6087.024 feet at the equator and 6066.615 feet at the poles.

While we're splitting hairs, did you know that there is an American foot and an International foot!

1 US Survey foot = 1200 / 3937 metres
= 0.30480060960 m

1 International foot = 0.3048 m exactly

So, 1 International nautical mile (which is 1852 metres exactly)
is = 6076.11548556 International feet
or = 6076.10333333 US Survey feet

also, 1 International statute mile
= 5280 International feet exactly
or 1609.344 metres exactly.

Life is complicated, ain't it!

Ian Strachan, FAI Sporting Code editor

BEWARE OF FALLING TANKS

The US military has defined an operational requirement for the high altitude paratrooping of heavy front line equipment. What this means is they are practising parachuting "rather dense vehicles" (tanks, actually) from unusually high altitudes... like, say 41,000 feet. Interesting, you say, but these things take place in Military Operations Areas and don't interfere with us, right? Not these drops. The idea is to release the tanks at a sufficient altitude to allow the aircraft to be a considerable distance from the combat area and the equipment can then be parachute maneuvered to a pinpoint landing in the forward operating zone.

From a civil aviation point of view, practising this means that tanks could be falling towards an unsuspecting public, and if anything were to go wrong, the resulting midair would be abrupt to say the least. (What the heck is the terminal velocity of a M1-A1 anyway?) The drops are being done in controlled airspace in collusion with at least one person in the ATC center involved, but the coordinating officer is not necessarily the controller on duty. To say all would be surprised when the report of a falling tank comes through is an understatement.

Maybe altitude encoding transponders installed in the tanks would help the big boys keep track of them, but we little guys still wouldn't have a clue. Just be aware, when you hear of parachuting activity in your area, it might not just be free-falling people you have to worry about.

from Professional Pilot via Soar Montana

TRY THIS WITH PENGUINS

The Audubon Society magazine reports that bored RAF pilots stationed on the Falkland Islands have devised a marvelous new game. Noting that the local penguins are fascinated by aircraft, the pilots find a beach where the birds are gathered and fly slowly along the water's edge. Perhaps 10,000 penguins turn their heads in unison and watch the planes go by. When the pilots turn and fly back, the birds turn their heads in the opposite direction, like spectators at a slow

motion tennis match. Then, the magazine reports, "the pilots fly out to sea and then directly back at the penguin colony and overfly it. Heads go up, up, up, and 10,000 penguins fall over gently onto their backs".

from COSA *Crosswinds*

DG BACK IN BUSINESS

As you may have heard, Glaser-Dirks had to terminate its business due to financial problems. However, a new company, "DG Flugzeugbau GmbH", has been founded to take over all Glaser-Dirks activities. The new company retains most of the old DG team but with new management and new financial resources, and are again able to take and confirm orders for its complete sailplane line as well as materials, spare parts, and repair and maintenance work.

THE GREAT AND THE SMALL

Well, the French are at it again. Michel Bruno launched a giant paraglider (105m², 25m span, and 14m line length!) from the 4300m high Dôme du Gouter. It carried seven passengers who released to free fall more than 2000m before deploying their parachutes. The report doesn't say whether the pilot flew the monster to landing or if he also parachuted down.

Due on the market is a true mountain paraglider, the "Kenya", designed for the hike and fly enthusiasts. It weighs only five kilograms, *harness and carrying bag included*, it has intermediate performance and the stability of a "standard". It is in the process of homologation.

from *Parapente*

OTHER SMALL GLIDER NEWS

In 1850 hours over four and a half years, John Stockwell finished building his wood 12m *Woodstock* (less paint) up in his 15th floor apartment in Hong Kong! He has an understanding wife. The little ship was lowered over the balcony in three pieces on a lot of rope by movers who had done this before with grand pianos. Now he is making a shipping crate which will become its trailer when he gets it back to England.

And a new light sailplane on the market is the *Silent*, a 12m glass and carbon ship from Italy. In April it passed JAR 22 load tests (+6-4g @ 595 lbs all up weight).

Technical data:

Max L/D - 32.5 @ 59 mph
 Stall - 31 mph with 192 lb pilot plus chute
 Min sink @ 192 lbs - 2 ft/sec
 (stall - 37 mph & min sink - 2.1 ft/sec @ auw)
 Wing area - 111 sq ft (Discus planform)
 Aspect ratio - 14:1
 Vne - 124 mph @ -6° flap / 99 mph @ 0° flap
 Wt empty - fuse/tail 83 lbs, each wing 63 lbs
 Price - US\$22,400

from *Sailplane Builder*

club news

WINNIPEG

Snow in April! Floods in May. Swarms of bloodthirsty mosquitos in June. What else could possibly happen to us? The weather gods decided that enough was enough and smiled kindly on us for the July 1 weekend with excellent weather, great soaring and the second in a series of Saturday night member BBQs with an excellent display of fireworks to cap off the night.

For eight long months club members dealt with the often minus forty degree days, knowing that spring and the prospect of great soaring was just around the corner. A planned start-up at Southport at Portage La Prairie to the west of Winnipeg for 30 March did not come off due to inclement weather (read: still minus forty). We did eventually launch our first glider on 13 April with the fields still covered in snow, but we flew!

Checkouts progressed at Southport until the May long weekend with a return to Starbuck and the receding flood waters. From there on the weather cooperated more or less, with many of the better days coming mid-week. For those of us fortunate enough to have time off from work, it was an excellent chance to hone our soaring skills

without the stress associated with otherwise busier weekend flying.

We also had an average intake of new students over the winter with ground school wrapping up in late April. All the students have started flying and many are well on their way to first solo. It is encouraging to see that our promotions over the years are paying off with an increased awareness of our sport.

Other news is the formation of yet another glider syndicate being formed. A 1-26 has been purchased locally and is undergoing an extensive overhaul, including stripping down the entire fuselage with many tubes being replaced, complete recovering of the fabric, and an updated instrument package. Serial #059 is expected to take to the air sometime late in 1997. There are other members looking for the right glider and we hope to have another two gliders at the club sometime in the future.

Finally, after a full season of flying our new Krosnos, I'm happy to report that the gliders have been enthusiastically received by all members and the level of flying activity has increased over previous years. The aircraft is wonderful to fly with no serious vices. We are still learning some of the finer points about the maintenance of the glider but have had no time lost due to snags as of yet. Since it arrived, one glider has flown close to 150 hours over 5 months of flying.

Mike Maskell

Name	Club	Glider	Call Sign	No. Flts	Total Kms	Alt Gain	Pts	Place
Dave Frank	RVSS	ASW-20	SR	1	362.8		402	1
Ian Grant	GGC	LS-4	ZT	2	360.0		375	2
Chris Eaves	LSS	ASW-20	XU	1	175.0		164	3

ONTARIO SOARING LADDER

As of June 20, three pilots had claimed four flights with score listed below. In addition several new names have registered. But my club contacts have quipped that their friends are saving the \$15 registration fee to buy floats for their gliders. I hope that by the time *free flight* readers read this and I get

back from vacation, the weather in Ontario will have dried out and a pile of claims will be waiting for me. The ladder rules and scores are now available through links into SAC's Internet home page. This electronic publication will help to keep participants abreast of current scores.

Ian Grant

DID YOU KNOW?

Did you know? A 3500 mile tow was needed to take a GC-4A *Hadrian* glider across the Atlantic in 1943. The glider was piloted by Wing Commanders Gobeil and Seyes of the RCAF. The trip was flown in four legs towed by a C-47 Dakota.

Jun 23	Montreal/Goose Bay	850 mi	6:47
Jun 27	Goose Bay/Greenland	785 mi	6:13
Jun 30	Greenland/Iceland	1000 mi	7:20
July 1	Iceland/Prestwick	865 mi	7:43

Did you know? From 1891 to 1896, Otto Lilienthal made hundreds of glider flights

of 600 to 1000 feet distance lasting from a few seconds to over a minute. But the first timed glider flight was in 1902 with Orville Wright at Kitty Hawk, North Carolina. The flight time was 26 seconds with a distance of 622 feet! On 24 October 1911, Orville made a soaring flight of 9:45 minutes, an unofficial record for over ten years.

Did you know? Hawley Bowlus, the American designer of the *Senior*, *Super*, and *Baby Albatross* gliders obtained a copyright on the word "sail-plane" which was a translation from the German "Segelflugzeug".

Eric Newsome

SAC news

See you in Vancouver!

March 14-16, 1997

SAC Conference and AGM

"The Soaring Party of the Millennium!"

sponsored by BC Soaring Society
hosted by Vancouver Soaring Assn

Prime Location We'll meet at the well known Hotel Georgia right in the heart of downtown Vancouver (serviced by airport bus). Special room rate offered by the hotel (\$89 - single or double with full breakfast), nominal registration charges and airline travel at its lowest this time of year.

This will be no ordinary AGM, come Saturday night we will dance in a ballroom as only the ballrooms of this era offer with their high ceilings and crystal chandeliers. The best of Vancouver lies outside the hotel doors. Shopping at Pacific Centre, the famous Robsonstrasse, Vancouver Art Gallery, Museums, Theatres, Canada Place, Gastown, Chinatown, Stanley Park and more.

Soaring Workshops Improve your soaring skills • up-dates on safety • insurance • the latest in electronics & airspace • instructing techniques • history • Transport Canada • CARs • medical • aeronautical

Please, tell us what more you want to see or hear or whom you'd like to meet. We'll try to incorporate your suggestions into the agenda. Offer to conduct a workshop or nominate someone you want us to feature.

Be a Sponsor You or your business may want to become a sponsor, even a small contribution will allow us to keep the registration charges down. If you would like to set up a display, this too will be possible at a nominal charge.

Come earlier - stay longer Vancouver offers so much that you may want to spend more time here. It also is the gateway for exploring BC further. Whistler Mountain, Victoria (where a night at the famous Empress Hotel is a must!). Spend some time in a Gulf Island retreat or do a quick side trip to Hawaii. Look for more details of 'Things to do' in future issues of *free flight*.

Register early and save \$10 off on your registration (cost tba) by committing early - it really helps us organize. Early registration deadline is 10 February 1997.

Please direct all your comments etc. to:

Heidi Popp or Kalli Brinkhaus
906 - 1030 West Georgia Street
Vancouver, BC V6E 2Y3
ph (604) 688-0831
fax (604) 688-0834

1996 SAC "MEMBERSHIP METER"

Club	Membership (15 July)					
	90-95 avg	1996 total	% avg			
ASTRA	5	10	200	London	44	30 68
Air Sailing	30	17	57	Mont Valin	5	3 60
Alberni	12	10	83	Montreal (+ Ariadne)	103	90 87
Aero ... Outardes	30	27	90	Pemberton (new)	-	6 -
Base Borden	15	13	87	Prince Albert	9	13 144
Beaver Valley	11	10	91	Regina	33	25 76
Bluenose	41	27	66	Rideau	17	7 41
Bonnechere	9	11	122	Rideau Valley	39	22 56
Bulkley Valley	13	6	46	Rocky Mountain (new)	-	3 -
Central Alberta	10	8	80	Saskatoon	13	15 115
Champlain (+ App)	57	45	79	SOSA	123	104 85
CVV Quebec	38	27	71	Swan Valley	6	6 100
Cold Lake	27	27	100	Toronto	19	18 95
COSA (+ Kawartha)	43	37	86	Vancouver	102	74 73
Cu Nim	62	57	92	Westman	5	1 33
East Kootenay (new)	-	5	-	Wheatbelt (new)	-	6 -
Edmonton	68	49	72	Windsor	11	7 64
Erin	32	29	91	Winnipeg	70	50 71
Gatineau	88	64	73	York	89	75 84
Grande Prairie	8	16	200	Non-club	9	7 78
Gravelbourg	6	6	100	<i>totals</i>	<i>1333</i>	<i>1085 81</i>
Guelph	31	20	65			
Lakehead (new)	-	2	-			

Membership is low compared to this time last year. (Membership of newer clubs are averaged from their incorporation year.)

LIBELLE ADS

Three Airworthiness Directives have recently been issued against Glasflügel sailplanes and the Libelles in particular:

96-116 SUBJECT: Aileron actuating shaft. Cracks on the aileron operating lever's welded seams due to overloading in case of derigging without disconnection of aileron controls.

96-131 SUBJECT: Inspection of spar stubs for cracks in surrounding glass fibre and corrosion of stubs.

96-137 SUBJECT: Necessity of ensuring all control surface repairs include static mass balancing.

Paul Fortier
Chairman, Technical Committee
ae605@freenet.carleton.ca



Coming Events

26 - 30 Aug **CAS Beginners XC clinic**, SOSA. Call Fred Hunkeler (905) 335-1246, or e-mail hunkeler@inforamp.net

31 Aug - 2 Sep **SOSA Dust Bowl**, call Fred above.

10-14 Oct **Cowley Wave Camp**, call Tony Burton (403) 625-4563.

14-16 Mar 1997 **SAC AGM**, Vancouver, call (604) 688-0831 to assist or for workshop suggestions.

NEW TRANSPORT CANADA POLICY ON TYPE CERTIFICATION OF IMPORTED GLIDERS

Partly because of representations made by the Technical Committee and partly because of the reallocation of resources within Transport Canada, TC has redefined its policy concerning the Type Certification of imported gliders. I believe that the new policy will benefit our members by a more predictable and more consistent application of the rules resulting in hopefully shorter waiting periods for certification. The following is a summary of the policy in effect since 1 June 1996:

"In order to refine the type certification process and to gain the benefits of existing bilateral and other agreements in place with foreign airworthiness authorities, TC intends to apply risk management methodology to the process, particularly where foreign aircraft have been type certificated by other civil airworthiness authorities in whom TC has an acceptable level of confidence.

To this end, various new aeronautical products will be subject to different levels of airworthiness review based on the type and complexity of the product and its country of origin.

Three levels of airworthiness review have been developed: Level 1 is essentially a paperwork exercise usually applied to less complex products (gliders, balloons). Level 2 is a more complex exercise for products destined for the transport of passengers (aeroplanes, engines, props). Level 3 is the most complex and would usually be applied where the product to be imported

has been type certificated by an airworthiness authority of which TC has little knowledge. The countries of origin have been grouped into 3 groups: Group 1 consists of countries with whom Canada has bilateral airworthiness agreements. Group 2 consists of countries with whom TC has experience with their airworthiness authorities in certification matters. Group 3 consists of countries other than those listed in Groups 1 and 2.

Most of the glider-producing countries fall into Groups 1 and 2 and, gliders being classified as simple products, would be subject to a Level 1 airworthiness review in most cases. The type approval document issued by TC would consist of a one page certificate to which are appended the data sheets of the foreign type certificate."

Paul Fortier, Chairman, Technical Committee

The simpler aircraft certification process is good news for SAC pilots importing sailplanes. However, the equally simple question I would have SAC ask Transport Canada is, "Does a one page 'checkoff' certification still justify a multi-thousand dollar user fee?" Tony

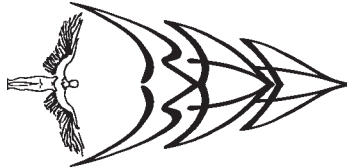
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La BGA comme modèle? "God bless the Commonwealth!" On veut encore imiter les Anglais. Et si on se préparait à faire une erreur? Les internautes en sont parfois témoins: le modèle anglais d'administration du vol à voile ne fait pas l'unanimité chez nos amis insulaires. Nombreux sont ceux qui aimeraient avoir une «vraie» licence de pilote de planeur. Ceux qui rêvent de voir Transports Canada se retirer complètement du vol à voile pour en laisser l'entière responsabilité à l'association devrait savoir qu'à partir de ce moment, on risque fort de se retrouver dans la même situation que les pilotes d'ultra-légers, ce qui signifie moins de privilèges et davantage de restrictions.

Trois points méritent d'être examinés attentivement. Tout d'abord, notre licence de pilote d'aéronef pourrait devenir une simple licence sportive, non reconnue par l'OACI, ce qui signifie que pour voler en pays voisins (que ce soit en France ou aux USA entre autres), il faudrait obtenir une licence de ces pays (alors qu'une simple validation suffit avec la licence de Transports Canada).

Deuxième point à surveiller: l'usage de l'espace aérien contrôlé. Il y a présentement des zones qui nous sont encore accessibles, mais qui ne le sont pas aux ultra-légers. Et si ce privilège tombait avec l'abandon de la licence de Transports Canada ?

Le dernier point peut toucher encore plus de gens. Un pilote de planeur britannique et un pilote d'ultra-léger canadien ont quelque chose en commun: ils ne peuvent prendre de passagers à bord. Seuls les vols d'instruction sont autorisés, et le commandant de bord doit alors être instructeur. Dans certains clubs, les vols accompagnés représentent une grande partie des activités. Ces clubs pourraient être sérieusement touchés.

Et le modèle français? Je sais: la France est un sujet tabou au sein de l'ACVV. Pourtant, si on la compare avec la nôtre, la situation du vol à voile en ce pays est plutôt enviable. La Fédération française de Vol à Voile vient de publier, sur son site Web, un résumé des activités des dernières années. En examinant ces statistiques on constate que de 1990 à 1995, le nombre d'heures de vol a été en progression constante (bien que lente) ont aussi progressé le nombre d'envolées et le nombre de pilotes. Pourtant, le taux de chômage de ce pays est tout aussi élevé que le nôtre (la récession et la politique européenne ayant fait leur travail). Et n'allez pas nous chanter que l'État accorde une aide généreuse aux vélivoles c'est de l'histoire ancienne (et ça se manifeste au sein des clubs par des frais de participation sensiblement plus élevés que les nôtres).

Comment expliquer la situation du vol à voile en France? Une fédération puissante et dynamique? Ça aide mais ça ne suffit pas. Les Alpes et leur aérologie phénoménale? Oui, sans doute. Une politique spor-

tive «nataliste»? Là, on touche un point sensible. Les jeunes sportifs ont leur place dans les aéro-clubs français, et ils y sont encadrés de façon quasi militaire, ce qui ne les rend pas plus malheureux pour autant. Quel contraste avec la condescendance qui a marqué nos relations avec notre propre jeunesse, et je pense surtout aux cadets de l'air. Ces jeunes vous le diront: ils se sentent malvenus dans certains de nos aéro-clubs. Notre réputation est à ce point entachée que nous avons creusé un infranchissable fossé entre la communauté vélivole et le mouvement des cadets de l'air. Certains clubs, qu'on ne nommera pas, sont particulièrement pointés du doigt.

Notre attitude face à la jeunesse, nous en payons lourdement le prix: un vieillissement excessif de nos clubs et par voie de conséquence, leur dépeuplement. Évidemment, l'arrivée massive d'éléments plus jeunes au sein des clubs ne peut se faire sans qu'il y ait un certain bouleversement des vieilles habitudes. Mais qui a dit que le changement était malsain ?

Stratus et cumulus Vous connaissez les stratus, ces nuages qui vous clouent souvent au sol. Mais connaissez-vous *Stratus*? Il s'agit d'une application logicielle dont se servent les météorologistes d'Environnement Canada pour prévoir le temps qu'il fera. Deux types de données alimentent *Stratus*: les observations aérologiques (fournies par les radiosondages en altitude), et les données des modèles numériques, fournies par le puissant ordinateur Nec SX3 du Centre météorologique canadien. Ce qui est intéressant avec *Stratus*, c'est que vous pouvez choisir un endroit et une heure données, et obtenir un téphigramme prévu. Avec les progrès sensibles réalisés dans le domaine de la modélisation au cours des dernières années, les résultats obtenus peuvent être assez surprenants, et fort utiles aux vélivoles, même si la plage d'altitude qui les intéresse est assez capricieuse et difficile à prévoir avec précision. *Stratus* est utilisé avec succès pour fournir des prévisions spécialisées de dispersion atmosphérique. De telles prévisions tiennent compte de la circulation en basse altitude, y compris dans la couche limite, de la présence ou non d'inversion thermique, et de l'épaisseur de la couche d'instabilité si instabilité il y a.

Ne vous précipitez pas chez votre marchand d'informatique pour vous procurer ce logiciel: il n'est pas commercialisé. Par ailleurs, les données qui servent à l'alimenter ne sont pas distribuées dans les réseaux grand public. Il vous est toutefois possible, moyennant la modeste somme de 1,95\$ la minute (c'est moins cher que les lignes de c...), d'obtenir un exposé téléphonique spécialisé d'un météorologiste d'Environnement Canada. Moyennant un certain supplément, vous pourriez même recevoir une copie de téphigramme prévu pour votre région. Je ne fais pas de publicité pour Environnement Canada, mais si ça peut rendre service à certains vélivoles, je peux vous communiquer le numéro: 1-900-451-4455. ❖

Lettre ouverte à Jean Richard

Je suis très heureux que tu continues à alimenter la revue en articles et je te demanderais de me télécopier une copie en même temps que tu en envoies une à Tony Burton. Cela pourrait devenir l'équivalent des échanges de lettres entre l'éditorialiste en chef de LA PRESSE et son alter ego au Globe & Mail.

Ton article est des plus intéressants car il soulève des aspects cruciaux de l'exercice de ce sport au Québec et au Canada. Regardons donc quelques unes de ces réalités.

Comme à dit Sun Tse, prendre la place, c'est l'occuper. C'est ce que je tente de faire. Si on m'a demandé de prendre la présidence, c'est pour brasser des cages. Ce que je fais. Cependant, comme tous les gens qui œuvrent à l'ACVV, je dois aussi, hélas, travailler pour supporter ma famille, ce qui limite le nombre de cages que je suis capable de brasser. Avec l'aide de Jim McCollum, un francophile bilingue, nous avons créé plus d'outils en français que jamais auparavant, surtout au niveau du recrutement. Pour la première fois je crois, le mot du président à une composante en français. C'est peu mais c'est mieux. Le manuel d'instruction, SOAR, que tu décriais dans ta lettre du trois janvier, s'est vendu comme des petits pains. Marc Lussier est en train de mettre sur pied un groupe qui traduira cet ouvrage que nous publions et vendrons au même prix que la version anglaise. SOAR représente une bonne valeur qualité prix comme en font foi les réactions que nous avons eues de l'étranger.

Donc, s'il y a des volontaires pour prendre en charge des projets, nous pourrions vraiment faire avancer le vol à voile au Québec et utiliser cet outil qu'est l'association canadienne et son bureau national.

Tu sembles avoir une crise d'urticaire pour tout ce qui britannique. Quant à moi, je m'intéresse au côté autogestion de la situation qui prévaut au Royaume Uni et dans une moindre mesure en Australie. Le modèle est d'autant plus intéressant que ces pays ont des institutions politiques et administratives semblables aux nôtres. Il s'agit plutôt de s'assurer que les mesures de déstagement administratif, prises par nos gouvernements ne se concrétisent en des coûts exorbitants pour nous. Nous sommes d'avis que nous pourrions administrer nos affaires dans le sens de nos intérêts et à un coût moindre. Je veux éviter que nous soyons inclus dans un organisme d'aviation récréative où les organisations de pilotes moteur, comme COPA, seraient dominant su fait de leur seul poids démographique.

Le modèle français est évidemment le nirvana. Mais il est le résultat de l'investissement massif et dans tous les azimuts de l'état dans l'aviation dans la période qui a suivi l'après-guerre et ce jusqu'aux années quatre-vingt. Leur gouvernement a acheté des dizaines de remorqueurs qui ont été

prêts au club qui doivent seulement en faire l'entretien et payer une redevance pour les révisions générales. On est loin aussi de la situation du club de Fayence qui est supporté financièrement par les intervenants économiques locaux parce que ce club attire des visiteurs de l'étranger qui laissent dans la région des devises. Si tu veux en discuter avec quelqu'un qui a travaillé dans le vol à voile la bas, Serge Morin, qui est pilote chez Air Alliance, peut t'en parler avec connaissance de cause.

De tout ça, il faut importer le meilleur et ce qui est pertinent à notre situation. Mais à la base, il faut au moins se regrouper et faire fonctionner ce qui existe. La FQVV est devenue lettre morte car personne ne voulait s'en occuper et parce qu'il y a plus de fric. La seule chose que nous faisons, c'est une boîte téléphonique d'information qui est financée à part égale par les trois clubs de la région montréalaise. On pourrait faire revivre la fédé mais pourquoi pas se servir d'un outil qui existe et qui a quelques modestes moyens comme l'ACVV.

Tu pointes du doigt aux certains clubs sans les nommer quant à l'attitude face aux cadets de l'air. Tu as raison. L'attitude des vélivoles canadiens face à ces jeunes est décevante. Notre programme pour les cadets de l'air a été supporté par le tiers seulement des clubs. Cependant à Champlain, environ le quart des effectifs sont d'anciens cadets de l'air revenus à leur passion. Cependant, cesse de faire des insinuations mêmes fondées, ça n'améliore pas la nature du débat. On est seulement une petite bande d'adeptes, il ne faut pas se picosser à mort. C'est contre productif.

Pour terminer, je te lance un défi amical. Compte tenu des tes énergies et de ta passion, pourquoi ne mettrais tu pas sur pied un projet, n'importe lequel, qui contribuerait à l'essor et à la qualité de notre sport. Par exemple, nous avons des documents à traduire, d'autres déjà en français, ont besoin d'être mis à jour.

À bientôt,
Pierre Pepin

Letters & Opinions from page 5

another article is the result. The comment was not on the 45 degree cutoff of the base leg of the circuit which I had expected, but to do with my comments on Derek Piggott's thoughts about teaching judgement.

But may I make some general comments first about dialogue between instructors and the healthy exchange of ideas that this can bring. Yes I have talked to Derek and many other instructors worldwide, and hope to pass on good ideas and to improve our training methods as a result. The article on early flights tried to put this all into perspective.

In the last issue I commented on some of Derek's methods and it was suggested that I was disagreeing with the master! This was not meant to be the case, certainly I regard Derek in the highest esteem, and would not deliberately undermine his methods! I have flown with him to compare teaching methods and have spoken to him at length on several occasions, and we certainly agree on most areas. But, I could be accused of not doing my job properly were I to agree 100% on all things.

A healthy discussion of flying training methods is bound to bring up areas of contention, and this makes for an interesting exchange of ideas. Where there is a slight divergence is in the emerging area of training pilots in decision making and pilot judgement skills, a subject that shares top priority at the OSTIV Training and Safety panel meetings recently. However, we have to be careful to define "judgement", as the UK and we in North America use this word somewhat differently! I try to address this and other matters in an article in this issue. See page 16. ed

Ian Oldaker



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The following badge legs were recorded in the Canadian Soaring Register during the period 17 April to 1 June 1996.

DIAMOND BADGE

87 Paul Moggach York

GOLD BADGE

274 Paul Moggach York

SILVER BADGE

871 Daniel Daly Bluenose

DIAMOND ALTITUDE (5000m gain)

Paul Moggach	York	6390 m	Grob 103	Minden, NV
Al Baldwin	York	5700 m	Grob 103	Minden, NV

GOLD ALTITUDE (3000m gain)

Paul Moggach	York	6390 m	Grob 103	Minden, NV
Al Baldwin	York	5700 m	Grob 103	Minden, NV
Jeff Anderson	Cold Lake	4690 m	1-26	Cowley, AB
Andrew Vilkas	York	4970 m	Grob 103	Minden, NV

SILVER DURATION (5 hours)

Daniel Daly Bluenose 5:15 h Austria SH-1 Julian, PA

SILVER ALTITUDE (1000m gain)

Jeff Anderson	Cold Lake	4690 m	1-26	Cowley, AB
Louise Hibbard	(USA)	1310 m	1-26	Windsor, VA
Al Baldwin	York	5700 m	Grob 103	Minden, NV
Andrew Vilkas	York	4970 m	Grob 103	Minden, NV

C BADGE (1 hour flight)

2510 Jeff Anderson	Cold Lake	(see Gold alt.)
2511 Louise Hibbard	(USA)	(see Silver alt.)
2512 Al Baldwin	York	(see Silver, Gold, Diamond alt.)

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Dave Hennigar

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

The following record flight has been approved:

500 km O & R Speed, Open, citizen's, 150.9 km/h, 24 April 1996, Walter Weir, ASW-20B, C-GGWW. Flown from Julian, PA to Sunrise Dam, VA and return. Surpasses record of 144.3 km/h set by Peter Masak in 1985, also on the ridge.

The new world and national "Free Out & Return Distance" record class is an attempt to provide the pilot more freedom to adapt the task to the prevailing conditions after launch. It isn't necessary to stipulate turnpoints on the flight declaration. A national, provincial, club or "custom" list of turnpoints may be used as long as the OO has a copy of the list before commencing the flight. Any time during the flight the pilot may change the TP to any on the list being used. Distance is calculated from point of origin to the last TP photographed to return, regardless of the route flown. Flights must be greater than 500 km to qualify as "Free O&R". The current citizen's Open record of 519.4 km is held by Walter Weir and all other categories are unclaimed.

The documentation is the same as any distance claim except it is not necessary to include turnpoints on the declaration form. Where there is no preplanned course, be careful the TP photo is taken within the zone centred on the track from TP to point of origin.

Tony Burton is writing a new edition of the "Guide" that will incorporate the 1996 Code revisions. In the meantime I hope these notes will give you enough info to utilize this new record class. The Free O&R is a versatile type of flight that should prove popular.

SAC SUPPLIES FOR CERTIFICATES AND BADGES

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2	FAI 'B' badge, silver plate pin	\$ 6.00
3	SAC BRONZE badge pin (<i>available from your club</i>)	\$ 6.00 (12 for \$55)
4	FAI 'C' badge, cloth, 3" dia.	\$ 6.00
5	FAI SILVER badge, cloth 3" dia.	\$ 6.00
6	FAI GOLD badge, cloth 3" dia.	\$ 6.00
7	FAI 'C' badge, silver plate pin	\$ 5.00
8	FAI SILVER badge, pin	\$45.00
9	FAI GOLD badge, gold plate pin	\$45.00
	<i>Items 4-12 ordered through FAI awards chairman</i>	
	<i>Items 10, 11 not stocked - external purchase approval given</i>	
10	FAI GOLD badge 10k or 14k pin	
11	FAI DIAMOND badge, 10k or 14k pin and diamonds	
12	FAI Gliding Certificate (personal record of badge achievements)	\$10.00
	Processing fee for each FAI application form submitted	\$15.00
13	FAI badge application form (<i>also stocked by club</i>)	n/c
14	Official Observer application form (<i>also stocked by club</i>)	n/c
15	SAC Flight Trophies application form (<i>also stocked by club</i>)	n/c
16	FAI Records application form	n/c
17	Flight Declaration form (<i>also stocked by club</i>) per sheet	n/c
18	SAC guide "Badge and Records Procedures", ed. 6	\$ 5.00

NOTE this change

ARTICLES ACVV POUR CERTIFICATS ET INSIGNES

Insigne FAI 'A', plaqué argent
Insigne FAI 'B', plaqué argent
Insigne ACVV BRONZE (<i>disponible au club</i>)
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Insigne FAI ARGENT, écusson de tissu, 3" dia.
Insigne FAI OR, écusson de tissu, 3" dia.
Insigne FAI 'C', plaqué argent
Insigne FAI ARGENT
Insigne FAI OR, plaqué or
<i>Les articles 4-12 sont disponibles au président des prix de la FAI</i>
<i>Les articles 10, 11 ne sont pas en stock - permis d'achat externe</i>
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Formulaire de demande pour records FAI
Formulaire de déclaration de vol par feuille (<i>aussi disponible au club</i>)
ACVV guide des procédures pour FAI certificats et insignes (éd.6 anglais)

19 FAI Sporting Code, Section 3, Gliders, 1995 **\$10.00**
now available from SAC National Office

FAI Code Sportif, Section 3, Planeurs, 1995
disponible au bureau national de l'ACVV

Please enclose payment with order; price includes postage. GST not required. Ontario residents, add 8% sales tax. Items 1-6 and 13-19 available from SAC National Office. Check with your club first if you are looking for forms.

Votre paiement devrait accompagner la commande. La livraison est incluse dans le prix. TPS n'est pas requise. Les résidents de l'Ontario sont priés d'ajouter la taxe de 8%. Les articles 1-6 et 13-19 sont disponibles au bureau national de l'ACVV.

SAC National Office, 101 - 1090 Ambleside Drive, Ottawa, ON K2B 8G7 tel (613) 829-0536 • fax (613) 829-9497

Trading Post

Personal ads are a free service to SAC members (please give me the name of your club). \$10 per insertion for nonmembers. Send ad to editor, NOT the national office, Box 1916, Claresholm, AB TOL 0T0 tel/fax (403) 625-4563, free-flt@agt.net

Ad will run 3 times unless you renew. Please tell me if your item has been sold sooner. Maximum length is 6 lines, ads subject to some editing as necessary.

single seat

1-23 Std. CF-ZBR, excellent condition, encl custom trailer. Something special, priced to sell. Don Sutherland (604) 530-6335.

Pioneer II, C-GLUV, 35/1. Fun to fly, excellent shape, all rigging aids, nice enclosed trailer. \$6000 obo. Ron McCullough (613) 547-7802.

Tern, standard instruments, TE vario/audio/speed ring, Radair 10s radio, chute, solar charger, encl trailer. \$4500. Ron Lien (306) 472-5597 (H), 648-2214 (W)

Tern, homebuilt wood glider with enclosed alum trailer. Docile handling with good performance (30+ glide ratio). Radair 10s (updated frequencies), chute. \$4000 obo. Chris Gadsby, (403) 232-4156 (W), (403) 283-2411 (H).

Duster, C-GHEU, 226h, excellent condition. Compass, 3-1/8" and 2-1/4" altimeters, 2 ASIs, Genave 100 radio, mech varios, 10ah gelcell battery, Garmin 55 GPS with database, encl metal trailer. \$6500. Harold Weidemann, (403) 474-0139.

HP-11A, 70 h, 720 chan radio, O2, Security 150 chute, Schreder trailer. \$9500. Horst Dahlem (306) 955-0179.

HP-11, CF-CMZ, A lovely ship to fly and great for cross-country. Standard class performer for half the price. Full panel including Varicalc computer. Asking \$12,000. **NIMBUS-2**, C-GAJM, 860h. Excellent condition. This is a super performer which loves to be taken cross-country. Factory trailer, full panel including radio, 2 varios, Cambridge computer, mylar seals, wing and fuselage covers. \$35,000. Regretfully, I can't fly anymore and I must therefore sell these great aircraft. Both available immediately. Mike Apps, (403) 436-9003 (H), (403) 435-7305 (W), email mapps@nofc.forestry.ca

Monerai, C-FEUQ, \$3500. Trailer \$1600, instruments negotiable. Struan Vaughan (403) 362-5837.

RS-15, C-FWSE, Serial #43, 873h, basic instruments plus RICO Vario/audio, encl metal trailer, O2 system with A-14 regulator. Contact Paul Yardy (705) 654-3205.

Phoebus C, C-GAZO, good condition, oxygen, parachute, good enclosed trailer. \$18,500 and will consider offers. Saskatoon Soaring Club (306) 249-1420, or e-mail ad401@sfn.saskatoon.sk.ca Clarence Iverson, Saskatoon Soaring Club.

DG 202/17, 564h, excellent condition, Sage vario, M-Nav computer, Terra 720 radio, Security 250 chute, O2, Komet trailer. US\$32,000 firm. Francisco Diaz, (514) 355-6081 evenings.

PIK20Bc, C-GXWD, carbon fibre, 820h, very good condition, new paint, Ball 400 c/w netto & cruise, Edo Air 720 radio, chute, O2, gear warning. Call Lee at (403) 242-3056 or Denis at (403) 526-4560.

PIK20D, carbon spar, water, O2, cameras, chute, refurbished factory trailer, fresh annual. Successful Sports class record. \$37,500. Brian (604) 467-0020.

miscellaneous

Magazine giveaway. *SOARING* magazine, fairly complete set from 1960-93, mostly mint condition (missing 1973-74 and a few others). *Sailplane & Gliding* 1965-72 plus 1976-79 and a few earlier issues. Take either lot for the cost of shipping. Harold Eley, (306) 584-4712.

Tost hook for Cessna? We want to install an E-85 Tost hook on a Cessna 150F. If anyone has done this, we would like to get the drawings or STC applicable to the mod. Thanks. Doug Tomlinson (306) 382-2267 or Tomlinson@cgooa.enet.dec.com

Wanted - Winch in working condition. Contact Paul Chalifour, (604) 426-7322.

Wanted - handheld radio. Contact Darcy Lefsrud (403) 538-3147 (H), (403) 539-8481 (W).

Winch, Gehrlein, Chev V8 engine, Trailer format, wire included. Al Sunley (403) 464-7948.

Pneumatic switches for netto on/off etc. \$15. John Firth (613) 731-6997.

Wanted - O2 mask for A14A regulator, bailout bottle and mike preferred but will consider mask alone if in good condition. Paul (604) 426-7322.

CVS 50H Vario Cambridge, 10 knot scale with speed ring & ext on/off dual range (1/2, 1) switch. A simple elec vario. *Newly overhauled.* \$200. **CPT 50MN Vario** Cambridge, 10 knot scale, triple range (1/2, 1, 2), dual sensitivity, TE adjust. No flask req'd. \$400 Cambridge **AV 10 Audio** external audio (no tone on down), plugs into either vario above. \$70. Tony Burton (403) 625-4563.

Canopy and frame complete for Blanik L13, good condition. Marty Slater (403) 481-3866 eves.

two place

2-33. MSC is replacing its 2-33s. C-FDWB, #85, about 4000h (available now), and C-FZIQ, #110, 3960h (available on delivery of 2nd Krosno). Both in good condition. Offers over \$US10,000 will be considered. Terry Beasley (613) 675-2664 ph&fax.

Non-soaring ads

To increase SAC advertising revenues, *free flight* will accept personal advertisements in **Trading Post**, your house and Chevy included. (The Italian soaring magazine has a full page ad for toilet seats — in colour — they are fibreglass, though.) With a *free flight* circulation of 600 in Ontario alone, most in or near Toronto, a market is there. Tell other pilots what you have.

non-soaring ads
\$10/issue for max. 5 lines

Solaire Canada

Ed Hollestelle (519) 461-1464 p & fx

LX-20 The new FAI standard for stand-alone GPS data recorders \$1995

LX-100 Basic audio vario with averager \$495

ATR720A 760 chan VHF with mounting tray and wiring harness \$1695

SHM1010 Boom mike and wiring (as installed by most glider manufacturers) \$150

LX-4000E S-RAM final glide computer or connects to any GPS (with NMEA output) or connects to LX-20 data recorder \$2795

LX-5000 The ultimate GPS/final glide computer system with moving map display and FAI data recorder \$5995

magazines

SOARING — the monthly journal of the Soaring Society of America. Subscriptions US\$43 second class. Credit cards accepted. Box E, Hobbs, NM 88241-7504. (505) 392-1177, fax (505) 392-8154. Email: 74521,116@CompuServe.com

NEW ZEALAND GLIDING KIWI — the bi-monthly journal of the New Zealand Gliding Association. Editor, John Roake. US\$32/year (seamail). Private Bag, Tauranga, NZ. Email: john@roake.gen.nz

SAILPLANE & GLIDING — the only authoritative British magazine devoted entirely to gliding. Bi-monthly. BGA, Kimberley House, Vaughan Way, Leicester, LE1 4SG, England. £16.50 per annum. fax 01 16 251-5939.

AUSTRALIAN GLIDING — monthly journal of the Gliding Federation of Australia. US\$34.80 surface mail, airmail extra. Payable on an Australian bank, int. money order, Bankcard, Visa, Mastercard. Box 1650, GPO, Adelaide, South Australia 5001. fax (08) 410-4711. Email: AGEditor@gfa.on.net

suppliers

REPAIRS & MAINTENANCE

Sunaero Aviation Glider repairs in fibreglass, wood, & metal. Jerry Vesely, Box 1928, Claresholm, AB TOL 0T0 (403) 625-3155 (B), 625-2281 (Fax).

Comtek Composite repairs. Hamilton, ON (905) 689-7444.

INSTRUMENTS & OTHER STUFF

Instruments for sale — best prices anywhere. Call for list and prices for vario, altimeter, airspeed, T&B, g-meter, compass, radio, etc. Lee (905) 840-2932 H, evenings only.

Barograph calibration, most makes and models. Walter Chmela (416) 223-6487 (H).

Variometer / Calculator. Versatile pressure transducer and microprocessor based vario and final glide calculator. Canadian designed and produced. Skytronics, 24 Robina Ave, Nepean ON K2H 9P9. (613) 820-3751 or (613) 596-1024.

MZ Supplies. CONFOR foam, Becker radios, most German soaring instruments. 1450 Goth Ave, Gloucester, ON K1T 1E4 tel/fax (613) 523-2581.

Variometers, winglets, mylar seals — all products designed and built this side of the Atlantic! Peter Masak, High Performance Engineering Inc. (713) 499-9518 (W), (713) 499-9620 (fax).

SAC Member Clubs

MARITIME ZONE

BLUENOSE SOARING CLUB
Ron Van Houten
17 John Brenton Drive
Dartmouth, NS B2X 2V5
(902) 434-1032

QUEBEC ZONE

AERO CLUB DES OUTARDES
Gérard Savey
16 Placae Valmont
Loraine, QC J6Z 3X8
(514) 621-4891

ASSOCIATION DE VOL A
VOILE CHAMPLAIN
Claude Gosselin
30 des Orties
Laprairie, QC J5R 5J3
(514) 444-3450

CLUB DE VOL A VOILE
DE QUEBEC
Jean-Guy Hélie
CP 9276
Ste-Foy, QC G1Y 4B1
(418) 875-2005

MONTREAL SOARING
COUNCIL
Box 1082
St-Laurant, QC H4Z 4W6
(613) 632-5438 (airfield)

CLUB DE VOL A VOILE
MONT VALIN
3434 Ch. Ste Famille
Chicoutimi, QC G7H 5B1

ONTARIO ZONE

AIR SAILING CLUB
Christopher D. Manning
417 Lakeshore Road East
Oakville, ON L6J 1K1
(905) 849-4596

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

BASE BORDEN SOARING
Box 286
Borden, ON L0M 1C0

BEAVER VALLEY SOARING
Doug Munro
187 Chatham Avenue
Toronto, ON M4J 1K8
(416) 466-1046

BONNECHERE SOARING
Iver Theilmann
7 Hoffman Avenue
Petawawa, ON K8H 2J4
(613) 687-6836

CENTRAL ONTARIO
SOARING ASSOCIATION
Keith McKenzie
21 Princess Street
Markham, ON L3P 1K4
(905) 294-2148 H
(416) 490-7156 B

ERIN SOARING SOCIETY
Box 36060, 9025 Torbram Rd
Bramalea, ON L6S 6A3

GATINEAU GLIDING CLUB
Rick Officer
1085 St. Jovite Ridge
Orleans, ON K1C 1Y6
(613) 824-1174

GUELPH GLIDING &
SOARING ASSOCIATION
G. Ritchie (519) 763-7150
259 Cole Road
Guelph, ON N1G 3K1

LONDON SOARING SOCIETY
Sue Eaves
185 Canterbury Drive
Dorchester, ON N0L 1G3

RIDEAU GLIDING CLUB
Box 307
(519) 285-2379
Kingston, ON K7L 4W2

RIDEAU VALLEY
SOARING SCHOOL

Box 1164 (served by machine)
Manotick, ON K4M 1A9
(613) 489-2691

SOSA GLIDING CLUB
Pat O'Donnell
74 Lincoln Avenue
Brantford, ON N3T 4S9
(519) 753-9136

TORONTO SOARING CLUB
Stephen Foster
10 Blyth Street
Richmond Hill, ON L4E 2X7
(905) 773-4147

WINDSOR GLIDING CLUB
Eric Durance
785 Bartlett Drive
Windsor, ON N9G 1V3

YORK SOARING ASSOCIATION
10 Courtwood Place
North York, ON M2K 1Z9

PRAIRIE ZONE

GRAVELBOURG GLIDING
& SOARING CLUB
Mark Jalbert, Box 213
Lafleche, SK S0H 2K0
(306) 472-5668

PRINCE ALBERT GLIDING
& SOARING CLUB
Keith Andrews
219 Scissons Court
Saskatoon, SK S7S 1B7
(306) 249-1859 H
(306) 933-7498 B

REGINA GLIDING &
SOARING CLUB
Bryan Florence, Box 4093
Regina, SK S4P 3W5
(306) 536-4119 or 545-3366

SASKATOON SOARING CLUB
John Toles
45 Churchill Court
Saskatoon, SK S7K 3W9
(306) 652-7909

WESTMAN SOARING CLUB
2615 Rosser Avenue
Brandon, MB R7B 0G1

WHEATBELT SOARING CLUB
Douglas Cameron
Box 101
Sovereign, SK S0L 3A0
(306) 882-3738

WINNIPEG GLIDING CLUB
Susan or Mike Maskell
489 Lodge Avenue
Winnipeg, MB R3J 0S5
(204) 831-8746

SWAN VALLEY SOARING ASSN
Sam Namaka
Box 1827
Swan River, MB R0L 1Z0
(204) 734-3404

ALBERTA ZONE

CENTRAL ALBERTA GLIDING CLUB
Jerry Mulder
4309 Grandview Boulevard
Red Deer, AB T4N 3E7
(403) 343-6924

COLD LAKE SOARING CLUB
Randy Blackwell
Box 2108
Medley, AB T0A 2M0
(403) 594-2171

CU NIM GLIDING CLUB
Keith Hay
7 Scenic Glen Gate NW
Calgary, AB T3L 1K5
(403) 239-5179

EDMONTON SOARING CLUB
John Broomhall
1040 - 107 Street
Edmonton, AB T6J 6H2
(403) 438-3268

GRANDE PRAIRIE
SOARING SOCIETY
Box 22044

Grande Prairie, AB T8V 6X1
(403) 539-6991

PACIFIC ZONE

ALBERNI VALLEY
SOARING ASSN
Doug Moore
RR3 Site 310 C6
Port Alberni, BC V9Y 7L7
(604) 723-9385

ASTRA
Christine Timm
9280 - 168 Street
Surrey, BC V4N 3G3
(604) 589-0653 H
(604) 574-4141 B
(604) 574-4907 F (school term)
(604) 581-7456 F (summer only)

BULKLEY VALLEY SOARING
Ted Schmidt
Box 474
Smithers, BC V0J 2N0
(604) 847-3585
(604) 847-2231

EAST KOOTENAY SOARING CLUB
Mike Cook
509 - 5 Avenue
Kimberly, BC V1A 2S8
(604) 4237-5471 H
(604) 427-5563 F

PEMBERTON SOARING
Box 725, Pmbn, BC V0N 2L0
Peter Timm (604) 589-0653
Rudy Rozsypalek (604) 894-5727

ROCKY MOUNTAIN SOARING
Uwe Kleinhempel
Box 1306
Golden, BC V0A 1H0
(604) 344-6620 H
1-800-268-SOAR

VANCOUVER SOARING ASSN
Hans Baeggli
108 - 8420 Jellicoe Street
Vancouver, BC V5S 4T1
(604) 231-2125 H
(604) 278-4057 F

return address:

Soaring Association of Canada
Suite 101 - 1090 Ambleside Drive
Ottawa, Ontario K2B 8G7

