



free flight • vol libre

3/97
Jun-Jul

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Liaison



AIRSPACE While you are awaiting your turn to take your annual check flights, you will read Scott McMaster's report on the meetings that took place around the establishment of the new Ottawa TCA. I believe that we did well. This is my opinion. But what stands out is the superb representation we are all benefitting from. I want to tip my hat to Airspace committee members Scott McMaster and Ian Grant for the leadership and dedication to this important and critical issue. These meetings are totally unsuited for non-profit organizations such as ours. They are sometimes two or three days long, on weekdays of course, forcing people to use hard earned vacation days to participate. In fact, SAC was the only recreational aviation organization present at one of these meetings. Scott, Ian, Jim McCollum and I felt that this first TCA review, while delivering an interim agreement of interest to the Ottawa members, will pave the way for future studies, such as will occur for Calgary and Halifax. At this time, we are looking at adding members to the airspace committee so that this overwhelming workload can be further shared.

RECRUITING We practise a wonderful sport, one that gets tremendous people together to share an intellectual and physical challenge with, not against, the forces of nature — harvesting the energy of wind and sun. Collectively we need to offer a product of quality, a challenging learning experience, in a safe environment. In order to achieve this, we need a critical mass at the club level and nationally. Most of the issues dealt with by our national organization do benefit all of us, as they deal with our future, like airspace, like training and safety, like licensing, etc. The cost of doing this is the same whether we are 1000 or 2000. The Board can and will do its utmost to re-focus the activities of the national organization. You have to do your part, which is getting people enthusiastic about soaring, getting people to practise the sport, getting people to push the limits of their knowledge, to push the limits of their accomplishments. Get involved, get others involved.

The soaring season has started. I had the opportunity to take an early start at Keystone Soaring and fall in love, again, with the sport. I hope all of you will have your annual love affair with soaring and transmit that love to many others.

Les vélivoles du Québec faisaient la couverture des deux magazines vélivoles nord-américains — les deux photos, œuvres de Hicham Hobeika du Montréal Soaring Council. Pendant que la revue Soaring utilisait une photo illustrant André Pepin de Champlain et son DG-600, notre éditeur, Tony Burton, en utilisait une mettant en vedette Bernard Palfreeman et son PIK-20. Les photos ont été prises lors du camp annuel du MSC à Lake Placid. La saison qui débute s'annonce intéressante. Champlain et les Outardes procèdent au renouvellement de leur flottes, suivant en à l'exemple de Québec et MSC. A suivre alors que le vol à voile se développe au Québec.

Rappel: Marc Lussier donnera un cours de formation pour instructeurs vers le début septembre.

Je suis toujours à la recherche d'un groupe de volontaires pour traduire en français le manuel SOAR & LEARN TO FLY GLIDERS. SVP me contacter. J'ai une offre à vous faire.

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

ISSN 0827 - 2557

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Cover
Chuck McGee of London Soaring thermals
his 1-26 in weak October lift last year.
photo - Pat Gamble

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Airspace update

Scott McMaster, SAC Airspace committee

AS I WRITE (15 May), the first in a series of "Aeronautical Studies" (ANS) is wrapping up, the one for the Ottawa Terminal Control Area. The ANS is Nav Canada's response to the uproar created last October when large TCAs were dropped on several Canadian airports. A major source of the subsequent indignation was the lack of effective consultation with user groups. Surprisingly, these unconsulted user groups included not only general aviation but large parts of Nav Canada and the airline industry as well. In an effort to reduce the TCA sizes, without making the same mistake of poor consultation, Nav Canada adopted the CSA Q850 dispute settlement and consultation process. Ottawa was the first trial.

So how did it work? A full ANS consists of many stages, but only three are set up for user input. The first "user accessible" stage was a three day meeting in Ottawa where all groups identified their concerns and objectives. SAC was there, along with representatives of the two area Ottawa clubs. General concerns raised on behalf of soaring included, but were not limited to, loss of access to a national resource and increased collision hazard outside an overly large TCA due to traffic congestion at its edges. Negative economic impacts on soaring included the expenses necessary to meet the equipment requirements of the new airspace and the loss of utilization of club assets if people reduced flying because of TCA imposed restrictions to glider operations. Many other groups: COPA (Canadian Owners and Pilots Association), ATAC (Air Transport Association of Canada), CATCA (Canadian Air Traffic Controllers Association), Nav Canada, CSPA (Canadian Sports Parachuting Association), and representatives of ballooning and hang gliding interests, all raised their own concerns. Many of the concerns of COPA and SAC are similar enough that we have formed a loose alliance at both the national and regional levels in opposition to the airspace seizure. Surprisingly enough, many of Nav Canada's concerns also mirrored ours (although for different reasons). They worried about increased staffing, responsibilities, equipment requirements, and training costs incumbent on them with any enlarged airspace.

The bottom line? At the risk of oversimplification, the issues raised in this first meeting were:

- Us
 - minimize controlled airspace to the greatest extent possible.
 - maximize our access to the "necessary" controlled airspace that's left.
- Them
 - provide safe corridors of controlled airspace for airliners.
 - provide TCAS (Traffic Alert and Collision Avoidance System) safe areas everywhere airliners might be.
 - conform to existing standards and air regulations.

After the first open meeting, a Risk Scenario Analysis group was formed. This group was the second "user accessible" part of the ANS. During the group's two day meeting, the objections of all the user groups were compared and balanced against each other in the context of the proposed "new" Ottawa TCA. It should be noted that SAC was the *only* non-Nav Canada group represented in this group, others were invited but chose not to attend.

After all this a new TCA emerged. It is considerably smaller than that imposed in October of 1996 but still much larger than we are used to. Its basic structure is a 12nm ring at 1200 feet agl, and a 24nm ring with various floors of 2200 to 3700 feet agl. It has many "kinks" and "bends" in the floors to aid local flying and the astute observer will note that a preponderance of positive (for us) modifications are close to the two soaring clubs. The TCA is Class D meaning gliders *do not need* permission to enter. Gliders also have a transponder exemption so *no* transponders are required to enter. The only entry requirement is to call the Ottawa Terminal Control Unit before entering the TCA and state your intentions. After that, a listening watch must be maintained on the TCA frequency while inside the TCA, but communications are only "as required" by the TCU and generally will consist only of periodic position updates and traffic advisories. By the end of May the proposed TCA should be in place as an interim measure, pending the implementation of the final (probably very similar) TCA.

The last "user accessible" phase is scheduled for May 26. It is to be a shortened repeat of the first session and its purpose is to allow all user groups one final chance to discuss their problems with the proposed new TCA before its permanent adoption. The SAC airspace committee will update you on the outcome of this meeting in a future *free flight*. ➔ p15



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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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.

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Veuillez vous adresser au bureau national à l'adresse indiquée à gauche du bas de la page pour tout changement d'adresse et abonnement à *vol libre*. Les prix des abonnements à cette revue sont les suivants: au Canada \$26, \$47 et \$65 pour 1, 2 ou 3 ans et aux Etats Unis et outre-mer les mêmes montants mais exprimés en \$ américains.

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Date limite:

5

janvier, mars
mai, juillet
septembre, novembre

Letters & Opinions

44 YEARS FOR 5 HOURS

(a letter to Badge chairman Walter Weir)

Thank you for your letter dated 97-04-02 acknowledging my duration claim and undertaking to process the documentation. You made my day!

... on an August day in 1951 it must have been an eager-faced 13 year old who cycled that dusty road to the new, evolving site of the Buckingham Gliding Club to find there a man in a long, black, flowing robe, Brother Hormisdas, who taught science at the local Ecole St-Michel and who was the founder of the Club Vol à Voile St-Michel, which by 1951 had become the Buckingham Gliding Club. Visiting that day from the Gatineau Gliding Club at Pendleton was, among others, Barrie Jeffery, with a friend who had been practising medicine at Chesterfield Inlet, and the GGC Tiger Moth. For some unknown reason the visiting doctor funded a flight for the starry-eyed boy in the Buckingham 2-22, where he soon was installed in front of the then Canadian altitude record holder, Barrie Jeffery...

A year later, the now 14 year old had completed eleven dual flights in the 2-22 and thirteen 'ground tows' behind an aging panel truck in the Buckingham open cockpit 1-19. Two more checkflights in the 2-22 then preceded the first aerotow solo in the 1-19...

How fleeting is that age of innocence, with a bicycle and paper route financing. How quickly it passes and is replaced by wife, children, mortgage... About 1980 son Ian was showing Dad how a five hour flight is done — in the Erin Soaring 2-33 (Dad was doing some towing for ESS at the time.) Finally, remarkably close to 44 years following first solo, and in his son's footsteps, the 'boy' found that elusive 5-hour flight, on 31 August 1996 in a York Soaring 2-33 before his grandchildren beat him to it!

Alfred Waymann

WHY BOTHER WITH BADGES?!

"Could you persuade some high-priced salesman type to write an article for *free flight* proclaiming the merits, necessity, feeling of accomplishment, and absolute joy! of earning FAI badges. We have a very ho-hum attitude to badge flying in our club and probably in many other clubs. We need to change this.

I have just reviewed FAI badge rules with our members using your fine new guide. I came to realize that there is really very little interest in this aspect of our sport. In my

day, about 30-40 years back, badges were a hot item. Everyone wanted to acquire them. The problem was whether the equipment was good enough and could you do it. In our family (over two generations), we had five Silver badges by 1961 as well as a couple of Gold legs and a Diamond badge. We were always proud that we were lucky enough to achieve these awards. I think it should still be important. The present generation in our club doesn't see much merit in trying for badges. Too much red tape and trouble for a badge that means nothing to them!

FAI Badges are a measure of achievement (and this is a criterion for gaining funding support from Saskatchewan Sports). In our club we have a program which covers part of the expense of getting each badge leg. This has had only moderate success, so money doesn't seem to be the problem.

I suspect that the same lack of enthusiasm for FAI badges prevails throughout the sport. Do you know of anyone who could rouse the masses with a fiery dissertation to change this wrong-headed thinking? It might help.

Harold Eley, Regina

Well, what about this question/challenge? I suppose if there is an answer we must first define the problem:

- 1 *Is it really the paperwork burden?*
- 2 *Is it because pilots are uncomfortable with the prospect of going cross-country?*
- 3 *Is it because the club does not encourage badge flying in some way?*

I suppose if one is motivated to do badge flying, #1 is no real deterrent — besides, is this "red tape" any more a problem than what people manage to handle every other day in their non-flying lives? I suspect that the paperwork hassle exists only because it is unfamiliar and/or unprepared for.

A club that keeps its members' flying skills growing does itself a favour in increased safety and reduced damage claims and answers #2. A club that encourages excellence in all aspects of this sport does itself an immense added favour in increased flying activity, income, and member retention. The badges, from A to Diamond, are a proven, visible achievement ladder — so use it. For the active pilot, badges are a goad to soaring advancement. For the pilot/tourist, showing your Gold badge at a foreign gliding club is an immediate introduction into the world circle of soaring friendship.

Cross-country is a challenge and fun — what gliding as a sport is all about (see the quote on page 18). I invite others to help "justify" going after the badges. editor

West Coast cross-country

Nick Pfeiffer

Prologue — the Fraser Valley, just east of Vancouver, is a large flood plain surrounded by mountains to the north, south, and east. The western end of the valley is where the mighty Fraser River ends its journey to the Pacific Ocean. Very limited soaring has been done in the Fraser Valley as the air is usually stable due to the marine influence. In the spring however, the valley sometimes fills with lift-signifying cu.

Each year the Vancouver Soaring Association starts its soaring season with a month long stay in March at Fort Langley, a small airport located in the middle of the Fraser Valley between Vancouver and our home base of Hope. Lured by the promise of cu, we spend the month in generally wet conditions performing season checkflights and looking forward to real soaring. It finally arrived.



Some of the best flying happens on days when you least expect it. March 14 was one such day.

It was the day before the SAC Conference. I had a meeting with a client scheduled in the morning in Vancouver, but was free in the afternoon. On a hunch, I packed glider battery and parachute in my van that morning, just in case. My meeting ended at noon

and I quickly noticed the cu forming over the North Shore mountains as I drove eastwards. I stopped in at Fort Langley airport to work on my glider, a PIK 20, and completed some small chores. I was then able to contact a local towpilot, Bruce Nicmans, who lives only five minutes away from the airport and arrange for a tow. Since Bruce wouldn't be able to arrive for a while, I completed some more tasks and soon had the PIK airworthy, but unrigged.

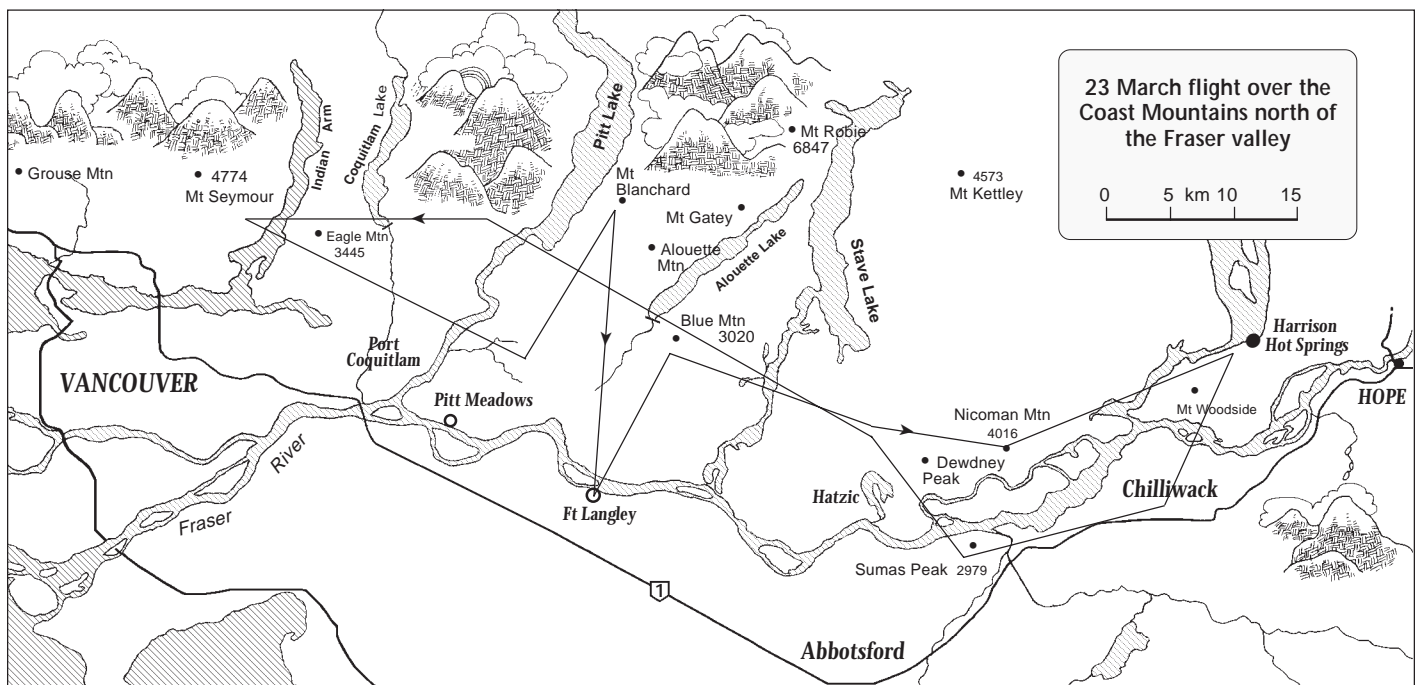
Bruce arrived about 2:30 pm and we soon had the wings and tail hung and the PIK ready to go. While Bruce did the tow-plane, I completed my preparations and with the help of Bruce's entire family (wife, son, and daughter) I was launched about 3:15 and took a 3000 foot tow to just north of the airport.

On release, I caught a weak thermal (1 knot) and climbed to about 3400 feet in blue lift. I could see well-developed cu over Blue Mountain at the south end of Alouette Lake and headed north towards them but the local lift stopped at 3400. I didn't quite make it and turned around at 2500 so as to stay within gliding distance of the airport. I caught some strong lift over a gravel pit near the western tip of Blue Mountain and climbed in 4 knot lift. I was able to reach the cu this time and climbed to 6500 feet over Blue Mountain in 4 to 6 knot lift.

I had spent much of the flight so far referring to the Vancouver VFR Terminal Area Chart that I carried so as not to wander into Vancouver's TCA. This was only the second time that I had soared high enough and close enough to Vancouver to be affected by the airspace changes that took effect a year or two ago. The maximum allowed altitude between Fort Langley airport and Blue Mountain is 4500 feet. Only north of it could I climb to 6500. The maximum allowed altitude remained at 6500 until well to the north which limited the height that I could climb to in the thermals. Cloud bases were about 7500 feet by now.

Now just north of Blue Mountain, I decided to do a little exploring and headed towards Pitt Lake about 15 to 20 miles away. My criterion for this flight (the first cross-country flight of the season and no crew) was to remain within gliding distance of Fort Langley at all times. This gave me a conservative range of about 20 miles from 5000 feet. I reached the middle of Pitt Lake at about 4500 feet. The lift was a little weaker over the lake so I headed to the very prominent Golden Ears (Mount Blanshard and Alouette Mountain). There, I climbed in strong 6 knot lift and flew around the peaks. It was now about 4:15 and I had been aloft about an hour.

I decided to see if I could reach Mount Robie, about 25 miles north of Fort Langley at the north end of Alouette Lake. This is one of the higher peaks in the area at 6847 feet and one that I had thought about soaring to for many years. Reaching Mt. Robie required crossing a fairly high 5100 foot ridge at Mount Martyr. I arrived at ridge height and slope/thermal soared back up to





The east end of the Fraser valley
from over Sumas Peak

turned right around and headed back the way I had come. I found good ridge/thermal lift in light drizzle in a mountainside bowl just northwest of Harrison Mills and used it to climb back to 4000 feet.

Christine was working in Chilliwack at this time, so I headed out into the Fraser Valley over to the town to wave. She didn't see me, but I did manage to lose quite a bit of altitude. I saw that there were two terrific looking cloud streets in the middle of the valley running east to west. I crossed south to the closest one but found it quite straggly-looking upon close inspection ... no lift either. I thought about continuing across the valley as I could reach the south mountains quite easily. As the clouds didn't look all that firm to the south, I turned westward and headed for my home town, Abbotsford, which has a large airport. Along the way I worked one knot lift in order to stay at or above 3000 feet. Finally, I reached Sumas Mountain near Abbotsford which produced two distinct, strong thermals — each signalled by a good looking, flat-bottomed cu. I climbed up over a tank farm located at the southwest side of Sumas Peak, taking care to not stray into Abbotsford's control zone. Once at 5000 feet I headed back to Hatzic Ridge for some more exploring.

Hatzic worked well and I climbed, guided by an eagle, to 5300 feet over a small hill (1814 feet) in the centre of Hatzic Prairie. I spoke with Heidi Popp in VSA's Big Grob and decided to head closer to Fort Langley to see what they were up to. I stayed to the north where the cu and lift were. The Fraser Valley itself appeared decidedly too blue to venture very far into. I caught up with Heidi just south of Blue Mountain, but she was just heading in because others were waiting to fly the ship.

The mountain valleys to the north (Alouette Lake, Pitt Lake, etc.) were overdeveloping and it was raining heavily in those areas. I could clearly see the North Shore mountains (Grouse, Seymour, etc.) north of Vancouver with well-defined cu leading the way. I headed west to the bend in Pitt Lake (just north of Pitt Meadow's control zone). Away from the mountains, the air was quite calm, but I could see that the 15 knot headwind was affecting my penetration. I arrived at Munro Lake to the west of Pitt Lake at about 2500 feet and clawed my way up the east side of the ridge until I was at 4000 feet. I crossed the ridge to the west side and climbed up to 5300 feet from thermals blowing off the west slope of the ridge. Port Coquitlam (a suburb east of Vancouver) lay off my left wing as I flew over the dam at the south end of Coquitlam Lake.

Crossing Eagle Mountain was easy and I topped up again. I could see that the cu over the North Shore mountains were not as good looking as I had previously believed, but I continued on west anyway. I crossed the Indian Arm salt water inlet and arrived at the east edge of Mount Seymour at 4500 feet. At this point the entire ⇨ p20

6500. From that height I was confident that I could reach Mt. Robie. It was getting later in the day and I could see that the cu were starting to die, but I pressed on anyway. I arrived at Mt. Robie a 1000 or so below the top and tried slope soaring the southwest face. There was strong turbulence but no lift, although it was quite a rush contour flying a new mountain for the first time. I wound up at 5000 feet at the end of my first pass and decided against trying a second pass in case I got too low to get home, so I headed off southeast. At Mount Gatey, about five miles towards the airport, I found 2 knot lift coming off the peak and climbed back to 5600 feet before continuing. My final glide computer said I had the height to fly at 70 knots and still make the field with more than enough altitude (the distance was about 15 nm). Seventy knots proved to be too slow as ten miles out I was above the 4500 foot ceiling indicated on the VTA. From that point I flew at 100 knots to an uneventful circuit and landing at Fort Langley.

Bruce had kindly hung around the airport during my flight and helped me derig. Total flying time was 1.9 hours covering a distance of about 100 kilometres. Not bad for the first PIK flight of the year. All in all, it was one fine day...

Flush with the success of my first PIK flight of the season, I looked forward to the next good soaring day. I didn't have to wait long as on Sunday, March 23, all of the factors looked favourable: my wife and soaring partner Christine was working so I had the glider to myself, a cold front had passed through the previous day, there was a fresh (10 to 15 knot) wind from the west, and the local forecast was for sun with cloudy periods in the afternoon.

I arrived at Fort Langley at 10 am and had the PIK rigged and ready to go in an hour. After assisting with the rigging of the VSA's

Big Grob, I was anxious to be gone. The towplane was willing and I launched about 12:15 into a sky covered with cu. I released over a transmission tower north of the Fraser River at 2000 feet and, after a bit of searching, was climbing in weak lift to 3000. The transmission tower appeared to be a good thermal generator all day as many other pilots reported good lift over it.

As before, once I had sufficient height I headed for Blue Mountain at the south end of Alouette Lake. On this day the cloud bases were quite low and all I could manage was 4500 feet before the clouds got in the way. Christine and I had been looking at property the previous day in the Hatzic Prairie to the east, so I headed that way. Lift along the route was plentiful and I never got very low. My motto on this day was to stay fairly high and fly conservatively due to the low bases. On the east side of Hatzic Lake is a ridge running from south to north that starts at Dewdney Peak and continues on to Mount St. Benedict and Mount Kettley. This ridge worked great with the west wind and I explored it in detail, slope soaring both below and above the ridge. (I noticed that the Vancouver VTA chart showed glider symbols in this area, so it must be a local hang glider area.

Once I got bored with the Hatzic Ridge, I jumped one ridge to the east to Nicomen Mountain. Wow! I arrived at the south side of Nicomen at 3000 feet and one pass of the 8 knot lift got me back to 4500 feet. I continued bumping along the ridges until I got to Harrison Mills about 50 kilometres east of Fort Langley. I looked down on the private airstrip on the north side of the bridge with some comfort; while I had not been low, I was entering a more rugged and isolated area. I continued eastward on the north side of Mount Woodside at about 4000 until I was at Harrison Lake. The clouds to the east had closed up and it was starting to drizzle — PIKs don't fly well in rain, so I

One day in June

Paul Scott
Edmonton

JUNE 12, 1996 was a good day. In fact it was a very good day, in the sense that glider pilots understand it. How else would you describe a day that yielded three flights over 500 kilometres, a just for fun 300 kilometre flight, and a valiant 94% successful 300 out and return — all from Chipman. Though most of the '96 season was disappointing, with weeks of cool and wet weather, for those lucky enough to be in the right place at the right time, there were some good flights to be made. This is my story of that day — there are certainly others waiting to be written...

On the evening of Tuesday June 11, I had checked the forecast on the Weather Network, more out of habit than anything else. What I saw got me quite excited. A day earlier there had been one rather large low pressure area over northwestern Alberta and northeastern BC, but now there were two, one over northern Alberta and another over Saskatchewan. Not only that but there was a high centred somewhere over the western States. Together, at least in theory, these weather systems should pump air easterly across the prairies at a good rate. Add thermals and stir and you have the makings of an ideal day for a certain type of flight.

For three years I had been waiting for suitable conditions to make my Diamond distance flight. On at least three earlier occasions I had taken off with such a flight in mind but the furthest I had managed so far was Vermillion, about a month earlier. The year before I had landed in St. Paul while attempting to fly a triangle (St. Paul, Westlock, Chipman) with an intended day's end

downwind dash to North Battleford. I might have got further if I had abandoned that over-elaborate plan and turned downwind (to follow Chester Zwarych into Saskatchewan) when I first spotted the rain showers developing over St. Paul! This time I was not going to try anything fancy — a "dirty downwind dash" would be the order of the day. I collected what I would need: documents, chart, barograph, toothbrush etc, etc. (the list is almost endless, as anyone who does this sort of thing will know), put the glider battery on charge and got to bed early.

I was up at the crack of 7:30, and the day looked promising: no clouds, a not-too-strong westerly and a certain crisp feel in the air (probably the writer's imagination if the truth be known, but it sounds good). Out at Chipman by about 0930, there was quite a bit of activity on the field. Bruce Friesen and Buzz Burwash were already rigged. By the time my Pilatus was rigged, Chester Zwarych had arrived and promptly started to rig his DG-202/17, VRR (Romeo Romeo for short). With three such experienced cross-country pilots scurrying around — at the unseemly hour of 10:30, it was surely going to be a good soaring day.

The camera (in case it was needed to prove the departure and/or landing points) and the barograph were sealed and installed by Buzz who had agreed to be my OO, in return for the same service from me for his 500 quadrilateral attempt. My (undeclared) goal was Humboldt airport, 530 kilometres slightly south of east from Chipman.

It occurred to me that if I were forced to fly south into Saskatchewan I would need the

Regina chart as well as the Edmonton one. A little asking around elicited the generous offer of the same from Bruce who would not be needing it that day at least. A final trip to the clubhouse, returning with a promise from Graeme Craig that he would come and retrieve me from deepest Saskatchewan, Bruce telling me he had put the Regina chart in my cockpit, and out on to the line at about 1130 to wait for a tow. This being the official ESC cross-country flying week, towpilots had been scheduled for each day.

Takeoff was around 12:30 and the Pawnee parked XTA and I in a good thermal at 5200 feet asl, in just the right place, a mile or so west of the hangar. At this time there were a few good clouds in reach, with some suggestion of streeting off to the NNE. My 4-6 knot thermal fizzled out at 6000 feet and by this time I had drifted the length of the runway, a clear indication that the winds aloft were strong — both Buzz and I later estimated them at 20 to 25 knots from the west. On the way past I took a photograph of the hangar in case it were needed later.

I had to make a quick decision at this point, to try and penetrate back upwind or to carry on downwind without much chance of getting back if I didn't find any lift. There were a few promising clouds downwind of the field so I thought we would probably make Vegreville airport 46 kilometres to the south-east at the very least. A couple of miles east of Chipman we hit solid lift and climbed to about 6500 (cloud bases were now around 7000 and seemed to be going up). The nice thing about flying downwind is that you are making progress in the desired direction even when circling! With the occasional pause to top up we blew right past Vegreville within 40 minutes or so of taking off. By this time there were two or three parallel cloud streets established out to the east and cloud base was now around 7500 feet.

Once past Vegreville the going got easier, with runs under the clouds of 15-20 kilometres, losing only a few hundred feet in the process. My intended track was ESE, paralleling the Yellowhead Highway, and to stay anywhere near it I had to jump over to the next cloud street to the south periodically. These "lateral excursions" resulted in the loss of rather more height than the runs under the cloud streets but this was easily made up by occasional circling in the stronger lift once the far side was gained. We punched through so many 6-8 knot thermals, usually within a minute or two of climbing in something not quite so strong, that I eventually gave up circling almost completely, just slowing down to about 50 knots in the lift and speeding up to about 75 in between. Occasional glances back along the courseline encouraged me to keep flying fast since the air behind seemed to be drying out. Between Innisfree, AB and Langham, SK, the ground speed crept up and up. The first 440 kilometres of the flight went by at about 110 km/h, not bad for a metal ship designed more with aerobatics in mind than long distance flights!



While circling about 12 miles southwest of the airport, I made contact with Lloydminster radio, explaining that GXTA was a glider enroute for Maidstone and points east. In reply to a query from the airport radio operator about whether my altitude was constant, I gently explained that for the time being I was going up but really didn't know how long this desirable state of affairs would last! By this time the operator's curiosity was piqued and I had to admit to having come from Chipman, Alberta and that I was attempting to fly to Humboldt. This sounded pretty silly when I said it out loud, but after a moment's silence the operator wished me luck and the pilot of a power plane in the vicinity chipped in with a reassuring "you'll make it". I don't know who that was or whether he had some basis for his confidence, but his words gave my morale a boost at just the right moment and almost had me believing it really was possible that I could make it.

At this point in the flight, cloudbase had risen to about 10,000 feet. Southwest of the Battlefords I called North Battleford radio to check for traffic in the vicinity and was rather surprised to get a reply from Regina. I guess those cutbacks in ATC services really are rather deep. At about 4:30 I had Saskatoon in sight, off in the haze to the southeast, but by now it was apparent that I was crossing from one weather system to another. Cumulus were few and far between and those I did manage to reach all seemed to be dying. The altitude was slowly bleeding off but thankfully no strong sink was encountered. For the first time in several hours I started to seriously worry about landing short of my goal which was now less than 100 kilometres away. At this time I was conducting a somewhat tense conversation with a controller at Saskatoon International who kept asking me to "squawk". Eventually he came to terms with the fact that as a glider I really didn't need a trans-

ponder, and as a metal aircraft I am sure XTA was visible on his radar.

After what seemed like ages mooching around north of Saskatoon, trying to follow the lift, stay aloft and not penetrate the control zone, I was relieved when finally we drifted across the river at Clarkboro and were officially requested to contact the next radio station (Red River?) to the east. Declining to be thus positively controlled, I soon lost sight of Saskatoon in the haze back towards the sun and within a remarkably short time got hopelessly lost. Crossing from one weather system to the next had changed the drift from northeasterly to southeasterly and it took me a while to realize that we were no longer on the Edmonton area VFR chart but south of it, rather like falling off the edge of the known world! No problem, you say, the Regina chart was somewhere in the cockpit. Unfortunately I had neglected to refold it before ➔ p20

Soaring the Valley of Cerdanya

Frank Pennauer
York Soaring

IN EARLY SPRING this year I travelled to the airfield of Cerdanya near the town of Alp in the eastern part of the Spanish Pyrenees, 10 kilometres from the French border and 30 from Andorra. The airfield lies at 3000 feet in a wide flat valley between the Sierra del Cadi to the south and the mountains bordering Andorra to the north with peaks as high as 9500 feet. The valley of Cerdanya is blessed with the longest sunshine hours of any region in France where wave flights to 32,000 feet and thermals to 13,000 feet have been experienced.

The trip's purpose was to fly with the European Soaring Club. The club was formed by Brian and Gillian Spreckley to provide facilities and guidance for all levels of soaring pilot, with emphasis on the challenging, exciting and unusual in soaring. The club's base for the summer is Leblanc in central France where they concentrate on cross-country flying. They move their operation to the southern French Alps in autumn and to the Pyrenees in the spring for developing mountain flying techniques. In the winter, the club sends up to fifteen gliders, their own and private ones, to South Africa where they operate a cross-country camp in Mmabatho, the site of the 2001 World's.

I joined them this year, the week before Easter, for their operation in the Pyrenees. The equipment available from the club was an ASK-21, ASH-25, LS-4, ASW-19, and a Pegase, and it has a Robin 400 for a towplane. Being a former world champion, Brian attracts many private owners and other clubs to all the different venues.

On this occasion a Discus, LS-1, Mosquito, Libelle, LS-4, ASK-21 and K7 of private owners from Britain and Germany, and members of two German clubs, were taking part. Every morning a comprehensive briefing is given by Brian or Gillian, who have been operating here for the last eight years and know the valley, its meteorological conditions, and its peculiarities intimately.

As the mountains surrounding the valley do not produce any useable ridge lift, all lift created over the slopes is either convective by the convergence of different air masses or by rotors occurring in connection with waves. Wave conditions are quite frequent in early spring whenever the upper wind is from the north to northwest with a strength of at least 20 to 25 knots at 10,000 feet. To make contact with the wave there must be thermals and preferably a convergence zone somewhere in the valley.

In the valley itself a wind from either end starts around noon every day; it is light at first, increases during the afternoon and often changes direction. This wind layer is about 1000 feet deep creating a turbulent shearline and making for interesting tows and approaches.

Although thermals start early on the upper slopes, the thermal activity on the lower slopes, 1500 to 2500 feet above the airfield, begins only around noon in early spring. Therefore, we started flying around 1300, with Brian or Gillian taking the first exploratory flight while directing the towplane to one of the known thermal sources.

The release height is not fixed as it is imperative to release only when a thermal has been positively located, with the average release height being around 2500 feet. In reality, after release, one is only a few hundred feet above slopes or rocky ledges while thermalling in often narrow and turbulent updrafts. Having done this initial climbout,

the next higher slopes can be reached and one finds more settled and stronger thermals which take you to cloudbase above the now covered peaks, opening up a most fantastic view over the Pyrenees to the west and the Mediterranean to the east. I averaged three hours of flying daily during my stay in Cerdanya. Flying with Brian and Dave Allison, the British Junior champion, I encountered most conditions that soaring has to offer in this area including a flight in the wave on the last day. Although the flying in the valley is challenging and demanding, I experienced a completely new dimension of soaring, picking up many new skills. The spectacular scenery, flying above the rocky snow-covered peaks, visiting Andorra at 12,000 feet, soaring to France under cloudbase just above a long row of mountain peaks and above frozen mountain lakes and green valleys, is an experience long to remember.

The valley is very picturesque with many interesting ancient mountain villages and many historical sites to visit. There are several skiing resorts in the valley, the nearest one on Alp Mountain, a 20 minute drive from the airfield, and more extensive ski slopes are available 40 minutes away in Andorra. There are tennis courts at the airport and horse riding is available throughout the valley. The cost of it all is reasonable, considering the amount of flying one can do and the experience one gains. The cost of the glider for six days is £280 (about \$670 Canadian) with each tow averaging \$40 Cdn. The area has a good selection of hotels with a room for two costing on average between \$50-90, with breakfast for two \$7-10 and dinner \$25-50.

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The inner game

Cross-country soaring requires only minimal physical strength and agility, but no other sport requires such prolonged, uninterrupted mental effort. In addition, in a competition, this effort must be sustained for three to seven hours a day, for five to nine days.

Alan Reeter
from *SOARING*

EVERY SPORT IS UNIQUE, but soaring is unusual in its reliance on brain versus muscle. So, mental techniques that work in other, less cerebral, sports should have application in soaring. The techniques most applicable to soaring are the ones that work for sports requiring a high degree of skill rather than effort. Every pilot is unique. What works for one pilot, or even the majority of pilots, may work differently for you. What works for you on one day may not work as well the next. It is up to each individual to discover what does and does not create the mental state that enhances performance. Let me introduce a fictitious pilot named Bob. Last year, Bob refined his racing equipment and even installed a MegaData 2000 in his glider. However, this year, Bob began studying and refining mental techniques.

Motivation Bob understands that longevity in the sport is necessary to acquire advanced soaring skills. Many new racing and cross-country pilots start out progressing quickly. But, over time, they may become disappointed with their rate of progress. They become frustrated with themselves when they make mistakes. It's not surprising that motivation wanes and skills plateau well before pilots reach their potential. Slow learning, plateauing, and burnout can often be traced to the pilot's motivational style. Like most, Bob grew up with a motivational style that focuses on negative consequences. From an early age, he heard admonitions such as, "You'd better work hard or else ...". For most of his life, Bob didn't question this style — it works a lot better than having no motivation. But, over time, Bob's self-imposed pressure to achieve started to take a toll. Practising became less enjoyable.

Most elite performers are positively motivated. They are *attracted* to goals, not pressured. Most importantly, they enjoy the process of improving their skills. This goes deep. Positively motivated people aren't just interested in the momentary rush of the win. They enjoy getting there. They don't get as fatigued and learn more, faster, because the process is enjoyable. This strengthens their motivation. This year Bob began to consciously change his motivational style. He reminded himself that soaring is a wonderful privilege and experience. He tried to see mistakes as discoveries that would lead to

improved future performance. He looked forward to challenges. When he did something well he took the time to savour the experience. He also set goals that enhanced his motivation.

Goal setting Bob always knew that goal setting is important to maintaining motivation. Achieving even small goals provides positive reinforcement. Goals also pull you forward out of your comfort zone and help you focus your efforts. Seeing improvement is a strong motivator. Bob also knew to set goals that are attainable. Earlier he didn't grasp the full implications of this. His goals often included external factors that he could not possibly control. For example, Bob used to set goals such as winning the Region 14 Championships. Goals such as this include many external factors related to other competitors, officials, equipment, and weather. Including external events in goals has three negative consequences:

- 1 During practise, you may speculate about the skill of the competition. This will distract you from working on something you *can* control — your personal skill.
- 2 During the event, you will be tempted to "turn around and look at the competition" instead of flying your glider.
- 3 After the event, you will feel discouraged if you don't win even though the fault may be completely out of your control. Your motivation and faith in the training process will suffer.

Try to set goals that include only those things you can control. Such goals will focus your attention on your skills, that is, personal mastery. This year Bob set several goals. One was to learn to "locate thermal centres within the first 45 degrees of the turn." Another was "to use sixty percent of the lift band during each flight." Although not stated explicitly, achieving these goals are likely to give Bob the same results that he previously desired, winning the regionals.

Personal mastery Jerry May, Professor of Psychiatry at the University of Nevada said, "The best competitors ... forget who they are competing against, because they're so focused on achieving their own goals." When you strive for personal mastery you'll be focused on the task at hand instead of winning a trophy. Think about it, these are different goals. *Zen in the Art of Archery* by

Eugen Herrigel (Pantheon 1953) is a good motivational primer on mastery. You may want to get it on tape. It is available from Audio Renaissance (800 321-9299) and Recorded Books Inc. (800 638-1304).

Optimism Sport observers are aware that good athletes tend to be optimists. In soaring, good pilots seem to be more optimistic than average about the upcoming lift conditions, speeds for the day, etc. In *Learned Optimism* (Alfred A. Knopf, 1991), Martin Seligman, PhD, makes a compelling case that being optimistic significantly increases our chances of succeeding. He also believes that we can learn to become more optimistic. Optimism is the result of a positive self-explanatory style. Our self-explanatory style is the way in which we explain our performance or other events to ourselves. Compare Bob's explanatory style this year compared to previous years. As he climbed out of holes in previous years, Bob typically thought, "I'm always screwing up everything." He felt discouraged. This year he thinks, "Everyone hits holes occasionally, but I made a great save." His outlook is positive, even after a near landout. He is relaxed, energized, and eager to move down course to the next challenge. Imagine the cumulative effects of these two explanatory styles over the course of a long contest.

One way to enhance awareness of explanatory style is to understand the vocabulary. There are three dimensions to a self-explanation: *personalness*, *pervasiveness*, and *permanence*. An explanation is personal when the pilot attributes the event to some personal trait: "I pulled off a great save", or "I screwed up." The alternative is to attribute the event to something external, such as luck or the weather. An explanation is pervasive when the pilot interprets the single event as evidence of general ability, or of inability. An explanation implies permanence when the pilot interprets the single event as evidence that the skill, or lack of skill, will continue into the future.

We can analyze Bob's self-explanation of a bad event using this model: Pessimist Bob, of previous years, thinks, "I'm always screwing up everything." Here, Bob is telling himself that the event is due to a personal defect, and the defect is pervasive and permanent. Optimist Bob, of this year, thinks, "everyone hits holes occasionally." Here Bob attributes the bad event to something separate from him. It's not a personal inability, it's not pervasive, and it's temporary. Here's how Bob interprets a very good event: Pessimist Bob thinks, "Gosh, I lucked out that time." Bob is not accepting credit, and the good event was temporary. Optimist Bob thinks, "Hey, I made a good decision again." Bob's taking personal credit. His ability is pervasive and permanent.

Optimists learn faster. Several decades worth of research show that positive reinforcement results in faster learning. The optimist recovers from bad events quickly. The event is shrugged off as not being personally relevant. Attention shifts to the next chal-

lenge. The pessimist tends to get wrapped up in the personal failure. Attention is focussed inward. There is a major caveat — learning requires that we accurately see what we do correctly and what we don't. A person who is slow to accept credit for mistakes or who fails to recognize the accomplishments of others has a learning handicap. Seligman's book includes a self-test that you can use to evaluate your explanatory style. He also includes suggestions for changing your explanatory style.

Dealing with rumination Rumination is the process of recalling and rethinking past events, usually bad ones. In the past, Bob would mull over mistakes, sometimes becoming quite agitated in the process. Rumination has three damaging consequences:

- 1 It distracts the pilot from attending to the immediate tasks at hand.
- 2 It can lead to fatigue, anxiety, and depression.
- 3 Rumination reinforces the tendency to ruminate in the future. It reinforces the bad habit.

For some, ruminating is a hard habit to break. Dealing with rumination involves learning to become aware of when you are ruminating, and then doing something else with your mind. In flight, try directing your mind to look out in front of the sailplane toward the next challenge. On the ground, find something positive to think about. Bob Leve, PhD, sports psychologist for the US National Soaring Team, says, "Give equal time to positive thoughts. If you find yourself ruminating about something negative, spend some time ruminating about some thing good that you've done."

Mood management Mood is a person's emotional state. In previous years, Bob would occasionally get in a bad mood. Like many people, he assumed that there wasn't much he could do about it. He'd think, "that really made me mad." This implied that he had no control over or responsibility for his mood. Now, he manages his mood by consciously changing his attitude. Attitude is our readiness to behave or react to people, objects, and issues in a certain way. Unlike mood, attitude is the culmination of our conscious decision making processes. By becoming aware of and adjusting his attitude, Bob changes his mood. He does this by applying three attitudinal strategies. Since his goal is to turn these behaviours into habits, he practises them all the time in his daily life.

One strategy is to keep his inner language positive — practising a positive self-explanatory style and instant forgiveness, especially self-forgiveness. When Bob makes a mistake he immediately lets it go. If he picks the wrong cloud street, he avoids punishing himself. His full attention is on flying what is in front of him. Bob is also quick to forgive others. If another glider comes too close, he forgets about it as soon as the danger passes. Bob continues on, unfazed and calm. The calm is real as there is no

internal distraction or eruption. Others recognize this as indicative of a winning style.

The second strategy is to pursue activities that have a positive effect on him. Bob discovered that listening to music or taking a walk worked well during the period between the pilots' meeting and launch. He made a mental list of other activities for other times. Again, individual pilots need to experiment to find what works for them.

Bob's third strategy is to manage his arousal level. Over-arousal can lead to fatigue and bad moods.

Bob would think, "That really made me mad." This implied that he had no control over or responsibility for his mood.

Arousal monitoring and control

Arousal describes your level of activation or intensity. Sports psychologists tell me that elite athletes have the ability to monitor and control their level of arousal. New pilots often are too aroused. They get so psyched up that they make mistakes. Experienced pilots sometimes aren't aroused enough. They have trouble paying attention. Most people have trouble matching their arousal level with the situation. Early in a contest, many pilots tend to be too aroused. (It's not surprising that the first couple of pilots' meetings will be marked by episodes of bickering and complaining.) This wastes energy. As the contest wears on some pilots begin to sag noticeably.

A low arousal level gives us a broad field of perception. At very low arousal levels we take in too many clues, including many that are irrelevant. The mind wanders and is easily distracted, "Gosh, look what's going on in that swimming pool down there!" A high arousal level will narrow the field of perception, causing perceptual tunnel vision. An overly-aroused pilot may miss task relevant cues. This is one reason why a student pilot's performance deteriorates when an instructor starts yelling. The ideal arousal level is one that helps you take in all the relevant cues without being distracted by irrelevant cues.

Many sports psychologists use the "Inverted U" model of arousal to successfully teach arousal management skills to their clients. It says that there is one correct level of arousal for each flight task. Any more, or any less, results in decreased performance. Some sports psychologists argue, correctly, that this oversimplifies a very complex mental state. There are many types of arousal that affect the competitor. Still, the consensus is that competitors benefit from learning arousal awareness and management.

Here is a training exercise that may help improve your arousal management skills. Draw a time line representing the period

between grid time and start. On the timeline mark important events so you have a series of intervals. On the vertical axis make a scale of 1 to 10 for arousal level. Ten is maximum arousal, say a level necessary for handling a very serious emergency. Zero is totally relaxed (as I'll discuss later, this is commonly called the *relaxation state*). For each interval make your best guess at the arousal level you think is optimum for you. The performance/arousal relationship is highly individualistic. Some pilots may benefit from being at a very low arousal level prior to takeoff. Others will do best by maintaining a medium level. Remember that being at a high state of arousal can be exhausting. Bob decided that the preflight inspection requires a level of 5. That's what this pilot requires to do a decent inspection. After strapping in, Bob relaxes by going to a level of 2. Just before launch, he goes to an 8 in preparation for handling possible tow emergencies.

Try taking your personal chart to the gliderport. Write down your actual arousal levels at each interval. Initially, you will probably decide to adjust some of your target levels. Working with the graph will increase your awareness of your own arousal levels. You will eventually find levels that are best for you. This exercise, and others like it, should probably not be performed once you go through the start gate. Sports psychologist Lucy Jo Palladino says, "Trying to analyze your own mental processes on course is likely to interfere with your flying."

The goal is to become so good at managing your energy level that it will become instinctual and effortless. But there are exceptions. At times, it may be a good idea to consciously check your arousal level in flight. For Bob one of those times is when he gets low. Like most pilots, he gradually becomes quite tense as the risk of landing out increases. Bob found that he became too aroused and didn't realize it. Now he consciously checks and, if necessary lowers his arousal level to broaden his field of perception. This has helped him find more sources of lift and make more saves.

Controlling arousal can be tough in the beginning. For many the key is to know how to get to the relaxation state. Many psychologists believe that if you can get to the relaxation state, then you can adjust upward from there. It serves as an anchor or reference state.

Relaxation Practising relaxation is an exercise in arousal control. Many pilots find it difficult to completely relax. After all, we are taught to be eternally vigilant and on guard. Yet, if you can't consciously adjust your arousal level there is a risk that external events and other people will control it. You may want to refer to the exercises found in a sports psychology book. It is the one technique found in almost all of the books and practised by most elite athletes. It's that important. After you know how to get to the relaxation state the goal is to learn how to evoke it quickly and at will.

One effective method is to associate a simple word with the relaxation state. Pick a word that does not have a lot of other associations with it. Bob named it “calm.” During relaxation practise, Bob reinforced the name. On course, Bob thinks or says “calm.” He can easily adjust arousal up from there. Bob also learned to put a number with each energy level. By simply thinking “eight” Bob was ready to begin the tow.

Imagery Some studies indicate that one can achieve substantial performance gains through guided imagery. But using imagery is a skill in itself. You can’t learn to use it overnight. It takes practise to master imagery and make it useful. There are two kinds of images: *result* images and *process* images. A result image is one where you see the results of your efforts, such as winning an award. Result images may be useful for motivation, but process images are the ones that will make you better. A process image is about the process of employing your skills. Guided imagery exercises must be done correctly in order for them to be effective. Performing this exercise incorrectly can reinforce bad habits and negative impressions. Here are some rules of thumb for guided imagery:

- Make a “flight plan” or story line for the imagery exercise. It may be about making a start, centering thermals, or porpoising down a cloud street. Flying a whole task is too big of a bite.
- Begin the exercise by relaxing into a state that will eliminate distracting thoughts. Dr. Palladino says that relaxation is a gateway to the exercise; evoke the emotions that go with a successful flight task.
- Play the image in your head as realistically as you can. Smell the cockpit. Feel the air. See the environment. Add colour and motion. Feel the emotions. Rest your hand on the stick and fly the glider.
- Keep the emotions positive. Feel the emotions that accompany a well performed flight.
- Use the inside-out perspective, that is the view from the pilot’s eyes. The outside-in perspective is an outsider’s view.
- Keep the image positive. Don’t rehearse mistakes. If an image takes you toward a difficulty, make a masterful recovery.
- Suspend critical analysis. This is a time for doing. Think about it logically later.
- At the end of the exercise, mentally reward yourself for a flight well done.
- Practise mental flying often. It’s better to practise five minutes twice a day than to practise thirty minutes once a week.

Bob practised guided imagery to improve his flying and mental techniques. He made sure that his exercises included practising a positive self-explanatory style, instant forgiveness, and other mental techniques.

Intuition It is often said that many of the best pilots fly intuitively. They seem to “just know” what to do next. George Mofat, five times National and two times World Soaring Champion says, “When you are on, it almost seems unfair (to other competi-

tors), as though another self, intuition, has taken over.” Almost all the experts on this phenomenon believe it originates from the nonverbal mind. Dr. Palladino says, “It (intuition) involves noticing, feeling, and trusting subtle inner cues.”

The best advice on improving one’s intuitive abilities seems to be to just avoid interfering with it. When I was an Air Force student pilot, a well respected fighter pilot warned me about thinking too much. He said, “Engineers usually make good pilots, but they seldom become great ones, they analyze everything. The best sticks (pilots) are liberal arts types.” At the time, this was disturbing news since I had just graduated from engineering school. And, any engineer will proudly point out that conscious analysis has saved the world. Yet, it does have a serious limitation. It’s a sequential process, and therefore it can only handle a fairly small amount of information at a time.

The brain’s parallel processes can take in and simultaneously process a tremendous amount of information. These processes do not utilize language simply because language is sequential. As frustrating as it may be, this also means that we cannot easily inspect the workings of that part of our minds. Ideally, we would like to simultaneously take in and process many task relevant cues at once (a parallel processing task). We would like to see clouds, terrain, dust devils, birds, and other gliders. We would like to hear the air, audio variometer, and radio. We would like to feel g-forces and subtle vibrations in our wings. And, we would like to make decisions and act without hesitation. When this mode of thought is working, flight decisions become effortless, automatic and effective.

Analyzing one’s way through an entire flight is hard work. In addition, the internal conversations that accompany analytical thinking drown out the subtle cues that come from parallel processes. The result is less effective decision making. In reality, effective flying is a whole brain activity. Some flight segments benefit from nearly pure parallel processing. Others require a blend of parallel and sequential processing. The trick is in finding the right balance at the right times.

Don’t mistake flying without an internal dialogue for mindlessness. Good flying is precise. Mindless flying is dangerous and sloppy. Poor airspeed control and clearing technique are indicative of mental sloppiness. Beginning pilots especially should carefully reason out strategies for reaching safe landing sites and handling other critical matters. Eventually, this will become second nature.

Bob tried to minimize the amount of time that he spends on sequential activities, such as talking on the radio and fiddling with objects in the cockpit. He also tried to eliminate unnecessary internal conversations and over-analysis. An example of an unnecessary internal conversation is one about the

last bad decision. Over-analysis often occurs when the pilot is faced with two nearly equal choices. Bob used to get balled-up mentally over the decisions that mattered the least. It’s often better to just make a quick decision and not worry about it.

The ideal performance state The goal of using the mental techniques discussed so far is to achieve the optimum mental state for soaring. Sports psychologists have several names for the optimum mental state including Peak Performance State and Ideal Performance State (IPS). Nearly all elite athletes describe the state using the same descriptors; physically relaxed, mentally calm, low or no anxiety, energized, optimistic, enjoyable, effortless, automatic, alert, mentally focused, self confident, and in control. Even though everyone uses the same words to describe the IPS, the methods of achieving it are highly individualistic. To learn what works requires personal study, experimentation, and practise. To learn more about IPS get a copy of *Peak Performance*, by Charles Garfield (Jeremy P. Tharcher Inc. 1984) or *The New Mental Toughness Training for Sports* by James Loehr (Plume, Div. of Penguin Books, 1994).

The good team The pilot and crew are a team and everyone should know what the game plan is. The crew decided to practise some of the same techniques Bob was using, especially the ones on arousal control and positive self-talk. Like pilots, crews can easily become overly aroused or negative. The pilot and crew can unintentionally transfer negative thinking back and forth. As a minimum, team conversations should be kept positive during the contest. Bob briefed his crew chief on psychological matters that he thought were important for the contest. The crew came up with ways to keep Bob from being distracted at critical times. For example, when Bob is sitting in the cockpit prior to launch, the crew intercepts walkup spectators to answer their questions. The team approach improves pilot performance, builds camaraderie, and makes everyone feel rewarded.

Training There have been instances where competitors have botched major competitions because they tried to adopt new mental techniques just before the event. They went into the contest doing things they had never tried before. They were thinking about what they were doing instead of “doing.” They were distracted and off balance. It’s important to work on mental techniques throughout your training program. Early in the season, do a lot of experimenting to find out what works for you. As contests draw near, begin incorporating the “proven” techniques into your routine. That way, your later training sessions will be similar to actual contest flights. Remember, having fun is vital.

Just before the contest last year Bob had become proficient and confident in using his MegaData 2000. This year he feels the same way about using his most important instrument — his mind. ❖

hangar flying



Not this hangar!

Mike Maskell, Winnipeg

SOMEONE — throw me a life jacket! The cry could be heard through all of southern Manitoba as us flatlanders faced the ultimate challenge, a once in 500 year flood. Water so deep that houses were lifted off their foundations. Where over six million sandbags were produced and laid down to form dikes to prevent the rising tide of "The Red Sea". All this after suffering through the winter and blizzards of the century.

What have we done to displease the soaring gods? You saw and heard the reports on TV of how we suffered in late April and on into early May. By now we are beginning to dry out and hopefully return to a normal life again — finally! In mid-April with the approaching flood waters, a group of club

members forced their way into the snow-bound hangar (yes, we still had four foot drifts against the doors) and did their best to raise the gliders up off the floor and secure the remaining towplane. Fortunately we had moved three gliders from the field in the fall to be prepared for the early spring startup at Southport, an ex-military base now privately owned.

We did manage to begin our operation on April 20 with some limited flying and by early May were flying every weekend on a regular basis. Some members even enjoyed the first thermals of the year, as weak as they were, but they were there nonetheless.

We are looking forward to a great summer with many planned activities, both at home and away from base. Several members are looking forward to attending the 25th Cowley Summer camp and we expect a large contingent of gliders to make the trek. ❖

Back in the saddle

Mike Glatiotis, Cu Nim

HAVING just returned from an extended leave of absence to southern climes which precluded any flying over the past year, I arrived at Cu Nim's Black Diamond field to shake out the rust and refamiliarize myself with the joys of soaring.

After undergoing the ritual spring check-flights the previous week, I hoped to be able to have at least one last "free flight" unencumbered by the rapidly approaching airspace regulations. I don't savour the necessity of radio calls in order to get away from the field, and I suspect that my recent

award of the club's Silver Speaker trophy (*not* given for a silver tongue) is indicative of my skills at radio useage. *Jolly Miller*, my trusty Cirrus, was still down in Claresholm getting its annual, so I signed up for a Blanik with intentions of catching a couple of early circuits. It seemed like a nice way to spend a morning, and the practise this early in the season is always a good idea.

A typical early spring Black Diamond day ensued: round up and herd the escaped cattle from the field, shovel pats off the strip, and then complete the DI just as the wind shifts to the opposite runway. It was a nice enough morning though, just warm enough to comfort my sun-thinned blood. Some nice wave appeared to be forming over the Rockies, and the thermals started to pop.

Taking off on 25 for the first circuit was pleasant enough. Felt good to be alone in a glider again. The only unfortunate aspect was all the herded cows in the only emergency-rope-break field to the west! At least any disaster might be commemorated with a big barbeque! The cattle seemed to be doing their stuff though, and the climbout was very quick. Release at 1000 feet was followed by a few circles upward (only when you intend to descend!). I popped back down to the IP and committed to the circuit, at least knowing that I still had another 1000 left on my tow ticket.

The second takeoff was much like the first, with the faint odour of beef rising with the thermals. The towpilot delivered me to a nice stinky one at 1000 yet again, and a quick couple of turns determined that the circuit wouldn't be necessary this time. Spring climb-outs are the best. The body remembers the sensations, and that exhilaration returns. A couple of red tail hawks and a crow accompanied me for the first few minutes, then departed for better pickings. As the ground dropped away, the vista of snow-covered Rockies expanded, and the first cu started to form in loose streets paralleling the foothills.

About a half hour of struggling in rough thermals got me close to cloudbase. Meanwhile, the streets had aligned very well across the westerly flow, so I ventured west into the blue, hoping beyond hope for just a little bit more. And there it was, glassy smooth, zero sink, then 50 up. Gently exploring, I figure 8'ed up, and began to climb to cloudbase. At 10,000 feet, I was marveling at the view and glanced at the vario. Steady four knots as the bases passed from view, and the climb up the side of the cu began.

I love "ridge soaring" clouds. It's the main reason I go to the Cowley camps where the leading edge of rotor clouds provide unparalleled and breathtaking flying. Today was offering the same thing, but from the home field! Unfortunately, with no oxygen (and airspace limitations) my only option was to push the nose down and follow the "ridge" southward. At 80 knots, the view from a Blanik sucks, as the canopy hoop lies just on the horizon. The stick feels like stirring hardening cement with a spade, but the response is so much smoother than at normal Blanik speeds. This speed, coupled with spoilers, kept me from climbing too fast, and sped me south. At the Hutterite colony, south of Longview and 30 kilometres from the club, I glanced north around a thick aluminum wing which reminded me where I was and what I was flying in. The wave continued cleanly all the way south to Cowley, but I reluctantly turned north for the run home.

Sitting quietly in the smooth air on the return, savouring the whole experience, I hoped that this wouldn't be the last of the free access adventures flying from Black Diamond. It was, at least, a hell of a welcome back home! ❖

His master's voice

Steve Hosier, Cu Nim

LAST SUMMER, in preparation for flying cross-country, I asked Tony Burton to accompany me on a flight beyond gliding range of the field. I flew "Funny Girl", one of Cu Nim's two Jantars, and Tony was in "Echo Echo". It was a good day and we climbed in a thermal over the field to about 9000 feet (5000 agl). Tony headed out first, south towards Longview, and I followed.

Lesson #1 – experienced pilots fly much faster between thermals than do fledglings; 70 knots seemed a nice reasonable speed to fly, but Tony was disappearing rapidly. Down went the nose, and at 90 knots I was just keeping up! Tony found a good thermal near Longview and started to climb. I came in below him but was not climbing as fast so he told me to increase my angle of bank and tighten my turn. This instruction, "tighten your turn", was repeated often as we climbed in thermals that day. Each time I obediently complied (but never did climb as fast). We headed west to the foothills then worked our way, in a large southerly loop, over the Chain Lakes and the Porcupine Hills, east to Nanton, north to High River, and northwest back to the field – a

round trip of about a hundred kilometres. A really great flight all around, after which we discussed several aspects of where to search for thermals and most emphatically to "tighten the turn" to stay in the core.

The following weekend was practise for the Nationals up in Red Deer, 165 kilometres north of Cu Nim's field at Black Diamond. I was flying out of Black Diamond and climbing through 9000 feet when I heard Tony's voice very clearly command, "Tighten your turn!" I immediately rolled the aircraft into a steeper turn.

Then I realized that neither Tony nor anyone else was in the sky with me – I was all alone! For what seemed an eternity but was probably just a few seconds, I was concerned that I had imagined his voice; was I hallucinating? ... a quick check of the altimeter – 9000 feet ... can I be hypoxic at 9000? ... hallucinations are not a symptom of hypoxia ... are they? Suddenly Terry Southwood's voice (our CFI) was on the radio giving instructions to someone, and then came Tony's voice again – they were both talking to a third person thermalling with them up at Red Deer. I wasn't hallucinating after all! The radio traffic could not be heard at lower altitudes. I started to laugh at how quickly I had responded to the sound of the master's voice. ❖

1997 Nationals, 8-17 July SOSA Gliding Club

Dave Springford, competition manager

AS YOU MAY BE AWARE, SOSA AGREED to host the National Soaring Championships this summer. Larry Springford (my father) will be the Competition Director. The competition will start with an opening ceremony at 10:30 on 8 July. The opening ceremony will feature an aerobatic demonstration by Oscar Boesch in his famed *Wings of Man* ASW-15. The organizing committee has invited several high level federal and provincial politicians, as well as representatives from Transport Canada, Nav Canada and local politicians and businessmen. The ceremony will be followed by launching the competitors on the first task.

Pilots should plan to arrive at SOSA on 5 July to take advantage of two scheduled practise days (6-7 July). The practise days are also used as a shakeout for the contest staff. We will grid the sailplanes and launch them both days. All contest procedures will be used, including starts and finishes. The data from the practise days will be used to score the competitors to ensure the scoring program is working properly.

As part of a continuing program in the soaring community to increase awareness and participation levels in our sport, we will invite media coverage of the competition. We hope that some of this media coverage will result in new members for SAC.

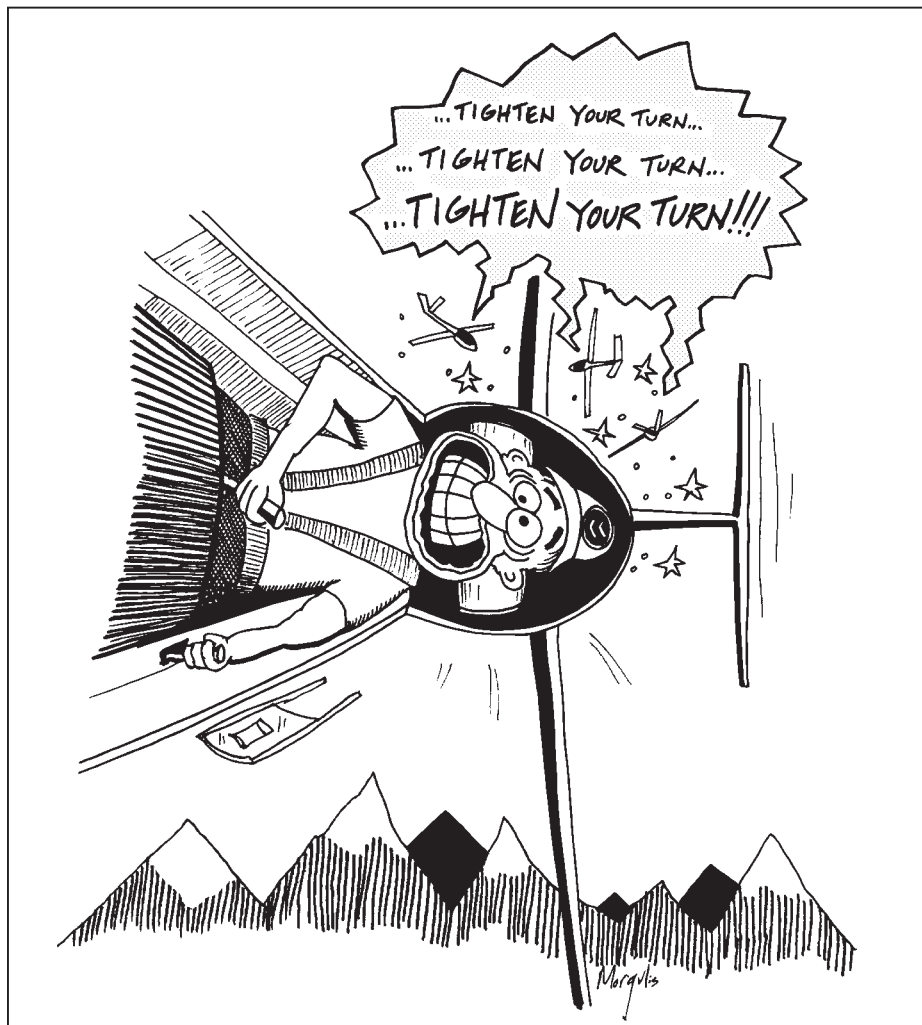
There has been one major change to the rules – GPS flight recorder systems can now be used in place of databack cameras. The rules state that the competition committee is to determine what constitutes an acceptable recorder, and that the committee will provide the hardware and software for the flight analysis. To this end, the committee will accept any flight recorder system that provides an output in IGC format and can be proven, to the satisfaction of the CD, to be tamper-proof during flight. Databack cameras will of course continue to be used for those without GPS/FR.

A homepage is running which has the turn-points, registration and accommodation information and the 1997 competition rules. The homepage can be accessed from the SAC homepage or directly at:
psych.utoronto.ca/~sosa/97Nats.htm

Eastern pilots meet in Julian

Pierre Pepin, Champlain

A RITUAL that took root over ten years ago, the annual spring fest, was on again at Doris Grove's and Tom Knauff's Keystone Soaring (formerly called Ridge Soaring). My brother André, who has been going there since the mid-eighties, finally persuaded me to join him on his almost



annual pilgrimage. On my arrival, Jörg Stieber gave me a very thorough area check in SOSA's Twin Grob, brought there by Andrew Parker. During my stay, sixteen Canadian pilots visited the place.

They came mostly from Ontario, like Hans and Eric from the Windsor club, but also from Québec. Charles Yeates, from Bluenose in Halifax, was becoming acquainted with his new PW5. The flying was great. The ridge worked but in no spectacular way. Thermals were quite powerful some days. On my last day, I flew a 300 km triangle in blue thermals, climbing to 9100 in one occasion while most of the flight took place between 5000 and 8000 feet. The week before, Karl Striedieck flew a record straight distance to goal of 1250 km then continued on to Selma, Alabama for about 1360 km. Two other pilots who started with Karl flew over 1000 km. Yes, it is a fun place to fly.

.....

Voler sur le "Ridge" est une expérience exaltante. Cet endroit, surnommé la plus longue mine de diamant du monde à offre des défis aux pilotes intermédiaires et expérimentés à une période de l'année où nos clubs sont encore en hibernation. Je vous recommande fortement d'en faire l'expérience. L'endroit est aussi fréquent par des pilotes de haut calibre. C'est un endroit fabuleux pour apprendre de ces pilotes. Ce sont ces expériences qui rendent la pratique du sport fascinante.

L'endroit offre des facilités rustiques. Le "bunkhouse" peut accommoder environ dix personnes. Il était plein les 8 jours de mon séjour. J'ai préféré, à l'instar de mon frère André et de Bernard Palfreeman, coucher dans mon véhicule. Doris charge à peine \$3 par jour pour les campeurs. C'est correct compte tenu de l'utilisation des douches et de la cuisinette. Pour ceux qui désirent une vraie chambre, la ville de State College, à 20 minutes, offre des services hôteliers et de restauration de toute sortes. Peut-être seront nous une caravane en 1998! ❖

Pierre Pepin



l to r: André Pepin (Champlain), Charles Yeates (Bluenose), and Bernie Palfreeman (MSC) check maps and GPS prior to their ridge flights.

Airspace update

from page 4

The Big Picture Did we get all we wanted? Not by a long shot, but I think we got all it was possible to get within the current rules.

Does the process work? Sort of. It definitely tries to account for user preferences, but it is very time and work intensive for volunteer organizations to support. SAC alone put about three person weeks of work into this particular ANS and there is to be one of these for each TCA in Canada. Luckily Nav Canada recognizes this problem and is trying to shorten the process. We'll see how successful they were when the Calgary meeting begins. Airspace won't back to its pre-1996 state as the airlines are adamant about having a safe zone for their aircraft. In the Ottawa case all this means is that your glider needs a radio and you must be talking to the TCU if you are going to soar in the TCA. The TCA design was modified to the extent possible to allow local soaring

without calling, so only x-country flights should see a real impact. This raises an important question to the x-country pilots: do we really want to be exempt from calling when entering the TCA? The reduced size of the new Ottawa TCA means that when you are in it, you are potentially "in the circuit" of the airliners going into Ottawa. We would expect hang gliders and skydivers operating in and around our gliding club's landing and takeoff circuits to be talking to us, the airlines expect the same courtesy. Given the catastrophic consequences of a midair, both to the victims and the sport, the current radio requirements seem a reasonable price to pay for continued access to traditional x-country areas.

So that's where we stand. Calgary is the next TCA slated for an ANS. After that the priorities are Gander and Halifax. There appears to be no immediate changes for Vancouver, Montreal, or Toronto. We will keep you abreast of developments. ❖

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training & safety

Fred Kisil

Flight Training & Safety Committee

Finding weak links

We are all familiar with the physical weak links used on towropes and we may reasonably predict where the rope will break. However, the weak link in a chain of events which can lead to an incident or accident is not as readily identifiable. Seemingly simple changes to a standard operating procedure (SOP) can introduce a weak link into an otherwise tried and true procedure. The following situation describes an example of subtle change in a SOP which then had the potential to contribute to an incident/accident.

A student who had trained only in evening sessions, was familiar with the SOP of using the right hand side of the runways for the launches by towplane, while the left hand sides were reserved for landing aircraft. Shortly after soloing, the student came out for additional flying experiences on a weekend day operation. The wind conditions favoured launching from the intersection between two runways. Moreover, launches were made from the left hand side of the runway and landings were to the right hand side. The advantage of this orientation was that people coming for an introductory flight would not cross the active runway.

The student had observed the operations and assisted at the flight line for eleven launches. When his turn came for a check flight, we reviewed the weather conditions and made a preflight plan and launched from the left hand side of the runway. Apart from our air exercises, I was along for the ride without any prompting on my part. On final approach, the student lined up with the runway and proceeded to land to the left of center of the runway, with less than a wingspan clearance to a parked sailplane and towplane. In the post-flight debriefing, I questioned as to why he had flown so close to the parked aircraft. He stated that he always landed to the left hand side.

Weak link #1 Although the student had witnessed the day's operations and saw the clear space on the right hand side of the runway, he had not visualized in his mind the adjustments that were necessary to adapt to the modified SOP. As a result, the flying actions reflected a habituated response.

Weak link #2 The fact that runway space clear of any obstructions was available, but not used, reflected the need for more practise in applying the "SOAR" technique in making decisions.

Instructors have considerable responsibility not only in facilitating the students' acqui-

sition of knowledge and practical skills, but in assessing what the students perceive and understand. The simplest statement can be misinterpreted, or misunderstood, or simply forgotten. It is part of our instructing duties to find the weak links. Pilots should recognize that such problems are not limited to students. Analysis of the incident/accident reports suggests that pilots, at all levels of experience, who fly at a different club may be prone to higher risk. The subtle differences in the SOP can result in differences in interpretation and implementation that may be sufficient to produce weak links.

When is OK not OK?

On the basis that we can learn from the experiences of others, I would like to relate the results of a flight where the message received was not the message that was intended. The lesson is simple: CONFIRM THAT THE INFORMATION TRANSMITTED IS UNDERSTOOD AS INTENDED.

The objective of the flight was to practise instructing the incipient spin exercise. I asked the instructor to demonstrate the entry from a climbing turn while reducing the airspeed, using too much rudder, and trying to prevent overbanking by using more aileron to pick up the down-going wing. However, the entry was made at too high an airspeed and with our combined weight, the nose promptly dropped at the stall. In the dive that followed, sufficient airspeed was gained which precluded the development of a spin. My verbal suggestions and the pilot's actions did not prove satisfactory in succeeding attempts. Consequently, I said that I would come on the controls as necessary to assist the entry into the spin. What I meant was that I would only provide input into the controls as required to establish the conditions for spin entry. I did not mean that "I have control" and that the pilot was to relinquish control.

We tried once more, and I made several control inputs while describing the desired objectives and effects. When the aileron control lost effectiveness and the wing began to drop, I said, "OK, we're going in" and let go of the controls. By "OK" I meant the instructor was to continue into the spin and recovery technique. What followed was that the sailplane's nose dropped into a dive with the pilot commenting that the spin wasn't going to develop. I agreed and suggested he try it again. The sailplane had by now picked up speed and was in a shallow climb and a gentle turn. As speed bled off, the nose eventually bobbed down and we repeated the clearly unsuccessful maneuver. The pilot joined me in critiquing the performance. At least I had the satisfaction that the pilot was interpreting the results accurately.

Several more unsuccessful attempts followed. My concerns were focused on the fact that we had descended to an altitude where pilots should have an absolute reluctance to initiate any exercise where there was risk of major loss of altitude.

To jog the instructor's mind of this fact, I said, diplomatically, "I would feel more comfortable if we were making plans to prepare to enter the circuit." A few seconds later, the realization of what was happening struck home and we both had control! From the moment I had said "OK", no one was on the controls and the sailplane was merrily demonstrating its properties of dynamic stability. From that time on, it has been, "I have control" and "You have control." The fact that the incident happened almost twenty years ago has not diminished the value of repeating the story.

A club member remarked that communication between pilots was not as bad as it may seem, because the same story is repeated year after year.

Senseless checks

Why, in spite of checklists, do we still have incidents of launches with spoilers unlocked, canopies popping open, or landings with

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the gear up? How are the important checks missed? Inattention or distractions while going through the checks are prime contributors to the omissions. It's not difficult for any one of our senses to be fooled. After countless repetitions of performing checklists, we can become habituated and "see the expected" rather than reality.

The solution is *to involve as many of our senses as possible*. Let's go for a ride. Follow through as the pilot begins the control checks. All seems satisfactory after wiggling the control column, so it's on to the next checklist item. Wait, hang on a moment.

First of all, was the stick moved full forward and backward and also full left and right to check for freedom of movement throughout its nominal full range of motion? Another procedure involves rotating the stick in the widest possible circle, both clockwise and counterclockwise directions. Why not combine both procedures? Any deficiencies not detected by one of the procedures may be picked up by the other.

Second point — where was the pilot looking when the checks were being made? Was the pilot looking at the control column to examine if the travel in one direction was equal to those in the opposite direction? Good. May we proceed? No, not yet. When did the pilot examine the direction and extent of travel of the ailerons? Oops! Okay, let's do the checks again and this time look at the response of one aileron and then the other. Is that all? How about one more point. When the stick is centered, do both ailerons line up equally with the trailing edge of the wings?

So far we have used the sense of touch and sight (not just ours but also those of a wing runner who provides feedback on responses of control surfaces that we cannot see from the cockpit). Okay can we proceed to the next item now? Well ... no, not yet. Have we used our sense of sound? Did we listen to sounds that could come from control rods or cables rubbing through their guides, or dry squeaking hinges, perhaps a rattle when the aileron moved to an extreme position? Could these be indicators that something is binding or loose? Perhaps the aircraft was "slightly bent" in an unreported incident?

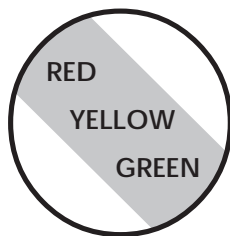
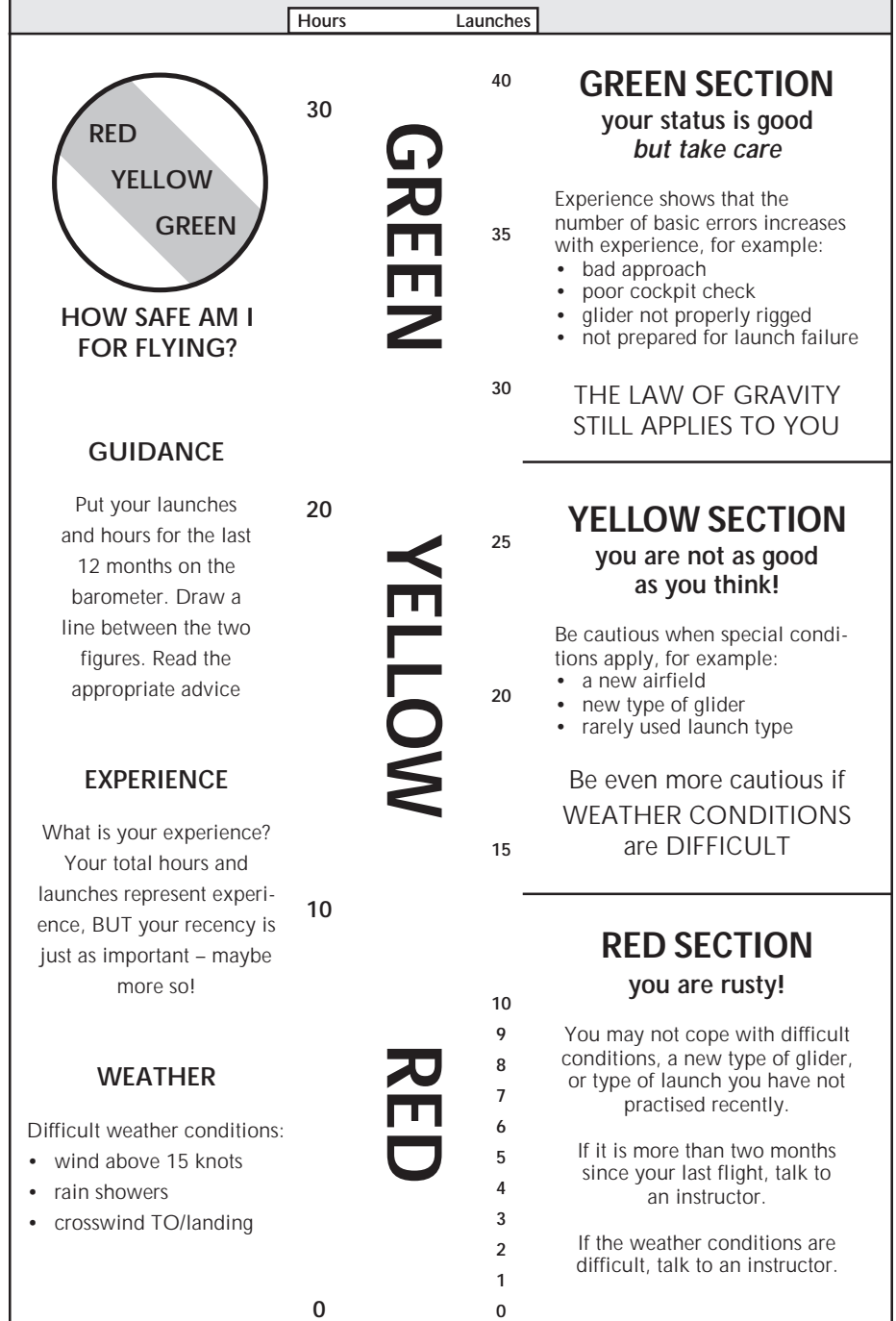
Did a mouse set up a nest inside the wing? One more sense to call into service. Do you smell urine? It's time for a closer inspection, eviction and clean up. How about the smell of hot rubber on take off? Is it due to a binding brake or a wheel well caked with mud? The smell of hot wire insulation is best investigated on the ground.

How about the sense of taste? Dry mouth due to lack of fluids? Dry, metallic or unusual taste due to medications? Stomach acids regurgitating? Are we fit to fly? Last but not least, how about the sixth sense? You came to fly. You've waited all day and it has been tiring. You are frustrated and impatient. Time to tune into your sixth sense. *Are you using all of your senses!* ❖

SAFE FLYING

The training barometer below, reprinted from *Sailplane & Gliding*, was designed in Denmark by their past national coach, Ole Didriksen, and has also been widely used in Germany. A problem for most pilots is getting in enough flying, and accident data indicate that the levels given in the graph are critical. Trying to be aware of one's limitations obviously requires a review of experience, especially at the beginning of the season, so plot your own hours and launches to see where you sit.

training barometer



HOW SAFE AM I FOR FLYING?

GUIDANCE

Put your launches and hours for the last 12 months on the barometer. Draw a line between the two figures. Read the appropriate advice

EXPERIENCE

What is your experience? Your total hours and launches represent experience, BUT your recency is just as important – maybe more so!

WEATHER

Difficult weather conditions:

- wind above 15 knots
- rain showers
- crosswind TO/landing

FAI badges

Walter Weir

3 Sumac Court Burketon, RR2, Blackstock, ON L0B 1B0
(905) 263-4374, email: waltweir@inforamp.net

The following badge legs were recorded in the Canadian Soaring Register during the period 21 Dec 96 to 16 Apr 97.

DIAMOND BADGE

89 Lewis Burwash Edmonton

GOLD BADGE

279 G.E. (Tim) Wood USA (incorrectly listed as a Diamond badge in 1/97)
280 Paul Scott Edmonton
281 Alfred Hunkeler SOSA

SILVER BADGE

884 Anthony Rywak SOSA
885 Douglas Smith Vancouver

DIAMOND DISTANCE (500 km)

Paul Scott Edmonton 548.8 km Pilatus B4 Chipman, AB

DIAMOND GOAL (300 km goal)

Fred Hunkeler SOSA 300.7 km Std Jantar Rockton, ON

DIAMOND ALTITUDE (5000 m gain)

| | | | | |
|----------------------|------------|--------|----------|------------|
| Aaron Archibald | Rocky Mtn. | 5440 m | LS-4 | Cowley, AB |
| Peter Foster | York | 5180 m | Grob 103 | Minden, NV |
| Leili Pedo Foster | York | 5760 m | Grob 103 | Minden, NV |
| Andrzej Staniszewski | York | 5550 m | Grob 102 | Minden, NV |
| Noel Luneau | USA | 6740 m | DG-300 | Minden, NV |

GOLD DISTANCE (300 km)

Fred Hunkeler SOSA 300.7 km Std Jantar Rockton, ON

GOLD ALTITUDE (3000 m gain)

| | | | | |
|----------------------|------------|--------|------------|------------|
| Alan Hoar | Cu Nim | 3690 m | Std Cirrus | Cowley, AB |
| Aaron Archibald | Rocky Mtn. | 5440 m | LS-4 | Cowley, AB |
| Peter Foster | York | 5180 m | Grob 103 | Minden, NV |
| Leili Pedo Foster | York | 5760 m | Grob 103 | Minden, NV |
| Andrzej Staniszewski | York | 5550 m | Grob 102 | Minden, NV |
| Wayne Watts | Edmonton | 3800 m | ASW-15 | Cowley, AB |
| Noel Luneau | USA | 6740 m | DG-300 | Minden, NV |

SILVER ALTITUDE (1000 m gain)

| | | | | |
|----------------------|------------|--------|----------|------------|
| Aaron Archibald | Rocky Mtn. | 5440 m | LS-4 | Cowley, AB |
| Leili Pedo Foster | York | 5760 m | Grob 103 | Minden, NV |
| Andrzej Staniszewski | York | 5550 m | Grob 102 | Minden, NV |
| Wayne Watts | Edmonton | 3800 m | ASW-15 | Cowley, AB |
| Noel Luneau | USA | 6740 m | DG-300 | Minden, NV |

SILVER DURATION (5 hours)

| | | | | |
|----------------|---------|--------|--------------|-----------------|
| Andrew Gill | London | 5:13 h | RS-15 | Embro, ON |
| Garry Kramer | Toronto | 5:58 h | Zugvogel III | Conn, ON |
| Alfred Waymann | York | 5:33 h | 2-33 | Arthur East, ON |

C BADGE (1 hour flight)

| | | | | |
|---------------------------|------------|-----------------|--------------|-----------------|
| 2548 Robert Blake | SOSA | 1:05 h | 1-26 | Rockton, ON |
| 2549 Aaron Archibald | Rocky Mtn. | see Diamond alt | | Cowley, AB |
| 2550 Andrew Gill | London | 5:13 h | RS-15 | Embro, ON |
| 2551 Gary Kramer | Toronto | 5:58 h | Zugvogel III | Conn, ON |
| 2552 Earl Cowley | Saskatoon | 1:25 h | L-13 | Birch Hills, SK |
| 2553 Alfred Waymann | York | 5:33 h | 2-33 | Arthur East, ON |
| 2554 Gerhard Geihler | Toronto | 3:16 | 1-26 | Conn, ON |
| 2555 Andrzej Staniszewski | York | see Diamond alt | | Minden, NV |
| 2556 Wayne Watts | Edmonton | see Gold alt | | Cowley, AB |
| 2557 Noel Luneau | USA | see Diamond alt | | Minden, NV |

“One of the main rewards of cross-country soaring is succeeding in the face of uncertainty.

When the outcome of the undertaking is in doubt to the very end, the reward is the sweetest.”

Richard Carr

Fred Hunkeler completed his Gold badge with the first Canadian claim to use a GPS data recorder as the sole means of turnpoint verification. Fred used an FAI-approved Filser LX20 to record a 300.7 kilometre flight from SOSA to Norwich to Flesherton and back to SOSA on August 18, 1996.

MEASURING HEIGHT TO 1/1000 OF A MILLIMETRE

Some OO got hold of all or almost all of the Cowley barograms and calibration traces from last fall and made calibration graphs by measuring the height of the trace to within half a millimetre and then running this through a computer to do a linear regression analysis and come up with tables of statistical info and height gains calculated to eight significant figures.

Everybody has been happily claiming gains such as 5321.5432m which they copy onto the claim forms directly from the computer printouts. (*The pilot*) was being conservative by dropping the fourth decimal place in his claim! I have told them to STOP and go read the guide. They are driving me nuts..! Walter

Tony speaking here — this e-mail which Walter sent to me had me on the floor in laughter! The “Badge and Record Flying” guide reference is para 5.4d & e related to uncertainty of data and measurement precision. It would be a rich man that invented an airborne instrument that measured real altitude to even a millimetre.

To engineers and scientists, graph paper is mostly passé — computerized linear regression is the only way such things are done in the “real world” nowadays. A lot of university types would have trouble finding any graph paper with a millimetre scale anywhere on campus! So the OO Walter refers to was only doing what comes naturally. However, a nicely prepared calibration graph must not be misused. (Scientists always say that about their work!)

This reminds me of the official value approved by the SSA for the FAI world altitude record — 49,009 feet. This nine feet is pure mathematical vapour; the pressure change of this distance at that height is about 6/100 of a millibar (about a foot and a half at sea level), and the finest trace on a Winter would be about 30 feet wide at that height! However, let’s assume that a barograph was invented that could sense and record pressure to five significant figures of accuracy. You STILL wouldn’t know exactly how high you were because this pressure is correlated to a static theoretical “standard” atmosphere which does not exist in the very dynamic conditions of a mountain lee wave. Meteorology textbooks warn power pilots that altimeters (or any pressure sensing instrument) can be out as much as a 1000 feet down near a ridge in a strong wave due to the dynamics of atmospheric airflow. It is for both the recording and subsequent measuring uncertainties that the Official Observer is directed in the guide to round off the calculated height to the closest 50 feet or 20 metres.

The Book of the Best In 1994, every club received a complimentary copy. Compiled by Ursula Wiese, this looseleaf book is a complete flight record of all Diamond badge, SAC trophies and awards, and Canadian record holders. Also included is a history of all SAC non-flight trophy awardees and other info. It is fascinating reading.

We again urge clubs to make sure that the book is not buried somewhere in your files but is prominently displayed in your clubhouse or otherwise available to interested pilots for study.

This book is kept up to date by Ursula and the latest version is available for sale at the SAC office (see *Soaring Stuff*, item 25 on page 21).

Dave Hennigar

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

RECORD PROCEDURES THIS SUMMER

Good news! SAC members will no longer require a Sporting Licence for record flights originating in Canada. Flights in other countries will still need a licence from the Aero Club of Canada: Bruce Carter, Box 1390, Carleton Place, ON K7C 4L7 ph/fax 613-257-7712. Please note that the Sporting Code changes arising from the March IGC meeting only become effective 1 Oct 97.

Let's do some record flying this summer. The free distance is up for grabs (and could have been claimed by some recent Diamond distance pilots had they realized it). Have a safe and enjoyable year.

22-28 June **SAC Eastern Instructors Course**, York Soaring. Director is Paul Moggach. Pilots interested are to contact their club CFI.

6-17 July **Canadian Nationals**, Rockton, ON. Contact Dave Springford, springford-d@rmc.ca (613) 634-2056, or Al Wood akwood@interlog.com (905) 793-9849. There will be a Nationals home page on the SOSA home page at: <http://psych.utoronto.ca/~sosa/>

13-19 July **SAC Western Instructors Course**, Chipman, AB. Director is Terry Southwood (403) 255-4667. Interested? Contact your club CFI.

26 Jul - 4 Aug **25th Cowley Summer Camp**. Celebrate the special occasion – there will be many events besides the fun and great soaring. Interested pilots are requested to call a month in advance this time so that the Alberta Soaring Council can organize for the numbers. Contact: Tony Burton, (403) 625-4563, free-flt@agt.net

30 Aug - 1 Sep **Ontario Provincial contest**. Hawkesbury.

FLIGHT TRAINING UNIT OPERATOR CERTIFICATES

SAC has been contacted by several clubs concerning the *Flight Training Unit Operator Certificate*. There is an impression in some clubs that gliding operations require it. Transport Canada has confirmed that "certificates" are not required. What is required is that TC be supplied with various details about the club operation and be updated when changes occur. The requirement is detailed in Section 406.05 of the Canadian Air Regulations. Earlier it had appeared that such certificates would be required. Before the introduction of the CARs, the Soaring Association of Canada had extensive discussions with TC officials on this issue. SAC questioned the need for such certificates for gliding operations and noted that it would be an onerous requirement (particularly for smaller clubs).

Jim McCollum, SAC Executive Director

The BC Summer Soaring Vacation – July 5 to 27, 1997

BC's premier soaring event takes place at the Invermere Airport. Invermere offers fantastic soaring conditions for both local and advanced x-country flying; last year over 20 FAI badges and badge legs were flown from 50 to over 500 km. We also offer a congenial, fun soaring social scene for the participants and lots to do in this mountain resort area for nonflying spouses. The Grob 103 Acro two seater, the Grob 102s and the Jantar single seater will be there. The Acro is available for area checkouts, as well as for rent (\$60/hr) to qualified pilots. Arrangements for single seaters are subject to qualification and availability. Tows are available for private sailplanes. Guest pilots are normally expected to commit by the week, like our VSA pilots, at \$75 per week. The typical tow is 3000 feet at \$36. For more details, contact Hans Baeggli: (604) 434-2125 (H), (604)231-2291(B), fax (604)278-2533 or email HHB@MDA.CA

IS YOUR CLUB GOING TO THE 25TH COWLEY SUMMER CAMP?

This is a reminder to all clubs intending to participate in the great 25th camp to please contact Tony Burton regarding the club equipment coming (bring your two-seater along). We need to have some idea of numbers to ensure that enough towplanes are on hand and we have some clues towards planning the special events.

SAC SUPPLIES FOR CERTIFICATES AND BADGES

| | | |
|----|--|-----------------------|
| 1 | FAI 'A' badge, silver plate pin | \$ 6.00 |
| 2 | FAI 'B' badge, silver plate pin | \$ 6.00 |
| 3 | SAC BRONZE badge pin (<i>available from your club</i>) | (12 for \$55) \$ 6.00 |
| 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 | Badge & Record Flying, ed. 7 | \$ 6.00 |
| 19 | FAI Sporting Code, Section 3, Gliders (rev 1 Oct 96) | \$10.00 |

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.

ARTICLES ACVV POUR CERTIFICATS ET INSIGNES

| | |
|---|--|
| Insigne FAI 'A', plaqué argent | |
| Insigne FAI 'B', plaqué argent | |
| Insigne ACVV BRONZE (<i>disponible au club</i>) | |
| Insigne FAI 'C', écusson de tissu, 3" dia. | |
| 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> | |
| Insigne FAI OR, 10k ou 14k | |
| Insigne FAI DIAMAND, 10k ou 14k et diamants | |
| Certificat FAI de vol à voile (recueil des insignes) | |
| Frais de services pour chaque formulaire de demande soumis | |
| Formulaire de demande pour insignes (<i>aussi disponible au club</i>) | |
| Formulaire de demande pour observateur officiel (<i>aussi disponible au club</i>) | |
| Formulaire de demande pour trophées de vol de l'ACCV (<i>aussi disp. au club</i>) | |
| Formulaire de demande pour records FAI | |
| Formulaire de déclaration de vol par feuille (<i>aussi disponible au club</i>) | |
| Vol pour certificats et insignes, éd.7 (anglais seulement) | |
| FAI Code Sportif, Section 3, Planeurs (rev 1 Oct 96) | |

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 • email sac@comnet.ca

leaving the ground — a classic rookie's mistake, and we all know how small a single seat glider's cockpit is. After losing about 1000 feet, flying with the stick between my knees, thrashing my arms around and getting more and more frustrated, I gave up, throwing the chart in the back of the cockpit and concluding that it was better to be lost in the air than to know precisely where I was on the ground and almost certainly short of the magic 500.

Thus the time went by — for about 1-1/2 hours all I knew was that we were in Saskatchewan, somewhere east of Saskatoon. Luckily there were now rather large areas of gentle lift and not much sink and after one modest climb (to about 6000) I was finally able to get the chart open and identify Manitou Lake, just before flying over it and finding Watrous airport conveniently located near the southeast shore. The grass strip looked serviceable, perhaps a little bare in patches but there were several light aircraft parked near one end. I was tempted to land and could feel the pull of the ground as we spiralled slowly down from about 3000 above ground.

Something made me hesitate however. For one thing I was not entirely sure that I had gone far enough for the Diamond distance. Watrous is lower than Chipman and that distance penalty can be brutal. The town of Watrous looked to be 2 or 3 miles away and there were no signs of life at the airport. To get a landing certificate signed I would probably have to walk for an hour or so into town and kidnap a brace of citizens from the local hotel. Would that work?

For some time before reaching Watrous I had been listening to Chester in his DG-202, VRR, talking to Saskatoon International. Chester had left Chipman about an hour after me and was having a similar, if not worse, struggle getting around Saskatoon. By now it was about 6:30 and he was past Saskatoon and drifting southeast. I called him up and asked him where he was. Now, as a navigator, Chester is clearly in a different class than me. At least he wasn't lost. But then neither did he know where he was. I'll never forget the triumphant, "Now I know where I am, I'm at Viscount", that came through the ether a short time later.

"How do you know that Chester?"
 "I just read it on the roof of the arena."

So here we were, two ESC pilots a long way from home, drifting across Saskatchewan in scraps of dying lift at the end of a long day. I don't know who first suggested it but at some point we agreed that we would both try to get to Lanigan, NNE of my present position and ESE of Chester's. I ended up flying due east for about 10 kilometres using up all my excess altitude in the process, but fortunately in easy reach of some good fields. The heavily treed town of Lanigan appeared out of the western sun like an oasis in the desert and there was the air-

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field, no buildings just a long strip of lush grass, about a mile east of the town. I touched down at 7:30, almost exactly seven hours after taking off. Chester landed ten minutes later, giving me just enough time to push XTA off to the side of the runway, 554 kilometres from home.

We tied the aircraft down while fighting off Saskatchewan-sized mosquitoes that might otherwise have carried them off, and walked into the town about an hour away along the highway. I had just emerged from the office of the nearest motel when who should come driving down the main street but Reg Adam who had been following Chester with VRR's trailer but had lost contact with him a couple of hours earlier. Reg's instincts, fine tuned after many days spent chasing Chester across the prairies, had led him to conclude quite confidently that his pilot would land in Lanigan! Having arranged accommodation at the Sleep-Eze Motel, we repaired to Jan's, a local steak-house known to Reg from his Saskatchewan days, for a well-enjoyed and relaxing dinner washed down with quantities of cold brew.

This same day in June, Buzz flew his definitive (5th?) Diamond distance flight, a 504 kilometre quadrilateral; Graeme Craig flew to Kitscoty and back just for fun; Hugh McColeman flew to Kitscoty and back to Mundare (about 14 kilometres short of a Diamond goal); and Mike Freeland flew Silver distance to Smoky Lake. It was Mike's bad luck (for which I feel partly responsible) that his film from that flight ended up squashed on the road in Lanigan the next day when Graeme Craig came to retrieve me! Never mind Mike, you did it once, so there's no doubt you can do it again, and much more. Given another day like 12 June 1996, perhaps we could all do more! ❖

West coast XC

city of Vancouver lay just off my left wing and the view was spectacular. Although I was under the cu just above the slopes of Seymour, I could find no lift. I was undecided on whether to continue further west to Grouse Mountain and risk landing out, or turn around with a sure glide to Pitt Meadows airport. I chose the latter because it was getting late and the lift looked pretty ragged to the west (I again had no crew).

The glide east towards Pitt Meadows was fairly easy due to the tailwind. I flew just below best L/D speed and let the wind do much of my work for me. Still, I arrived at the east side of Pitt Lake at 2500 feet with 10 nm still to go. I was confident that I could reach Fort Langley, but wouldn't have altitude for a circuit. Rather than do a marginal final glide, I worked a very weak thermal (less than a knot) until I was at 3500 feet. Then another friendly bald eagle showed me that if I moved a quarter mile to the north the lift was much better. I rocketed to 5000 feet in 4 knot lift and decided to fly home via Golden Ears.

The flyby of Golden Ears was thrilling. I was far below the peaks and semi-slope soared the south faces of both Mt. Blanchard and Alouette Mountain. Then it was home at 100 knots from 4000 feet. It's not often that you get to photograph Chilliwack and Vancouver on the same flight! The flight lasted four hours and covered about 200 kilometres — not bad for the Fraser Valley.

These two very early season flights showed some of the unexplored potential for local soaring and I can't wait to head back into the North Shore mountains. It was another fine day. ❖



SAC SOARING STUFF / ARTICLES DE L'AIR

May 1997

| | Price Prix | Size Taille | Qty Qté | Amount Total | T a x | | | | | | |
|---|---------------|----------------|------------|-----------------|-------------|---|--|--|--|--|--|
| 1 SAC T-shirt • navy with gold and white crest specify size – M, L, XL | 15.00 | | | | ✓ | ACVV T-shirt • bleu marin avec un écusson or et blanc, précisez la taille – M, G, XG | | | | | |
| 2 "SAC University" T-shirt • various colours specify size – M, L, XL | 15.00 | | | | ✓ | T-shirt "l'université de l'ACVV" • couleurs diverses précisez la taille – M, G, XG | | | | | |
| 3 SAC golf shirt • navy specify size – M, L, XL | 25.00 | | | | ✓ | ACVV chemise de golf • bleue marine précisez la taille – M, G, XG | | | | | |
| 4 SAC sweat shirt • navy specify size – M, L, XL | 25.00 | | | | ✓ | ACVV sweat shirt • bleu marin précisez la taille – M, G, XG | | | | | |
| 5 SAC 50th ANNIVERSARY sweat shirt specify size – L, XL | 25.00 | | | | ✓ | ACVV sweat shirt 50ième anniversaire précisez la taille – G, XG | | | | | |
| 6 SAC hooded sweat shirt • navy specify size – M, L, XL | 35.00 | | | | ✓ | ACVV sweat shirt à capuchon • bleu marin précisez la taille – M, G, XG | | | | | |
| ✿ 7 SAC Beanie • white with blue gliders | 12.00 | | | | ✓ | ACVV chapeau • blanc avec des planeurs bleus | | | | | |
| ✿ 8 SAC tie • blue with white gliders | 26.00 | | | | ✓ | ACVV cravat • bleu avec des planeurs blancs | | | | | |
| 9 SAC bow tie • blue with white gliders | 24.00 | | | | ✓ | Nœud papillon • bleu avec des planeurs blancs | | | | | |
| 10 SAC decal (glider & maple leaf) | 2.00 | | | | ✓ | Auto collant "AVCC" (planeur et feuille d'érable) | | | | | |
| 11 Decal "I'D RATHER BEE SOARING" | 0.50 | | | | ✓ | Auto collant "I'D RATHER BEE SOARING" | | | | | |
| ✿ 12 Bumper sticker "I'D RATHER BE SOARING" | 2.00 | | | | ✓ | Auto collant "I'D RATHER BE SOARING" | | | | | |
| 13 SAC pen, blue or burgundy with glider | \$9.50 | | | | ✓ | ACVV style bille • bleu ou bourgogne avec planeur | | | | | |
| 14 Tost ring (4 for \$100) | 28.00 | | | | ✓ | Anneau de remorquage Tost (4 pour \$100) | | | | | |
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| 20 SOARING CROSS-COUNTRY – ed. 2 Helmut Reichmann | 58.00 | | | | | SOARING CROSS-COUNTRY – ed. 2 Helmut Reichmann | | | | | |
| 21 FLYING SAILPLANES • Helmut Reichmann | 40.00 | | | | | FLYING SAILPLANES • Helmut Reichmann | | | | | |
| 22 SILENCE ON THE WIND • Helmut Reichmann | 45.00 | | | | | SILENCE ON THE WIND • Helmut Reichmann | | | | | |
| 23 SOARING WITH THE SCHWEIZERS Bill Schweizer | 30.00 | | | | | SOARING WITH THE SCHWEIZERS Bill Schweizer | | | | | |
| 24 UNDERSTANDING GLIDING • D Piggott (autog.) | 40.00 | | | | | UNDERSTANDING GLIDING • Derek Piggott | | | | | |
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| 29 WINNING ON THE WIND • George Moffat | 3.50 | | | | | WINNING ON THE WIND • George Moffat | | | | | |
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| 31 SOAR AMERICA • Jon Joss | 3.50 | | | | | SOAR AMERICA • Jon Joss | | | | | |
| 32 FROM THE GROUND UP, ed 27 • Isabel Pepler expanded & revised | 32.00 | | | | | FROM THE GROUND UP, ed 27 • Isabel Pepler | | | | | |
| SAC crests, pins, cards | | | | | | Ecussons et epingles de l'ACVV | | | | | |
| 40 Crest "SAC•ACVV", embroidered | 3.50 | | | | ✓ | Ecusson "SAC•ACVV", brodé | | | | | |
| 41 "SAC" lapel pin | 5.00 | | | | ✓ | Epingle "SAC" | | | | | |
| 42 Lapel pin • Glider | 10.00 | | | | ✓ | Epingle • Planeur | | | | | |
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| | Price Prix | Size Taille | Qty Qté | Amount Total | T a x | |
|--|-------------------------------|----------------|------------|-----------------|-------------|--|
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| 50 Glider pilot logbook (box of 22 for \$199) | 10.00 | | | | ✓ | Carnet de vol pour pilote de planeur (boîte de 22 pour \$199) |
| 51 Student progress book (10 for \$30) | 4.00 | | | | ✓ | Carnet de vol d'entraînement de l'élève pilote (français) (10 pour \$30) |
| 52 French instruction manual | 6.00 | | | | | Manuel d'instructions de vol à voile rev. jan 80 (français) |
| 53 <i>SOAR AND LEARN TO FLY GLIDERS</i> ed. 1993 | 19.95 | | | | | Revision française en préparation |
| 54 Air instruction notes (for instructors) (10 for \$40) | 5.00 | | | | | Instructions en vol – notes (pour instructeurs) (français) (10 pour \$40) |
| ✿ 55 <i>Badge & Record Flying</i> • édition 7 | 6.00 | (5 for \$25) | | | ✓ | <i>Certificats et insignes</i> , édition 7 (anglais) |
| 56 FAI Sporting Code, Section 3, gliders | 10.00 | | | | | FAI Sporting Code, Section 3, gliders |
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| FAI supplies • certificates, badges | see page 19 for complete list | | | | | Articles FAI • certificats / insignes |
| 1 FAI 'A' badge, silver plate pin | 6.00 | | | | ✓ | Insigne FAI 'A', plaqué argent |
| 2 FAI 'B' badge, silver plate pin | 6.00 | | | | ✓ | Insigne FAI 'B', plaqué argent |
| 3 SAC Bronze badge, pin (available from your club) (12 for \$55) | 6.00 | | | | ✓ | Insigne ACVV bronze (disponible au club) (12 pour \$55) |
| 4 FAI 'C' badge, cloth, 3" dia. | 6.00 | | | | ✓ | Insigne FAI 'C', écusson de tissu, 3" dia. |
| 5 FAI Silver badge, cloth, 3" dia. | 6.00 | | | | ✓ | Insigne FAI argent, écusson de tissu, 3" dia. |
| 6 FAI Gold badge, cloth, 3" dia. | 6.00 | | | | ✓ | Insigne FAI or, écusson de tissu, 3" dia. |
| 7 Flight Declaration form (available from your club) | nc | | | | ✓ | Formulaire de déclaration de vol (disponible au club) |

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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 T0L 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 ad length is 6 lines and subject to some editing as necessary.

single seat

1-26, two for sale with open trailers. One needs fuselage fabric, \$5750. Second for parts or made airworthy by replacing corroded tubing and re-covering fuselage, \$3750. \$9000 for both as is. Glenn Lockhard (613) 692-3622.

L-Spatz, C-FUJZ, 1966, recent fabric and overhaul, basic instrmts, radio, Varicalc, open or closed trailer avail. \$7000 obo. Winnipeg Gliding Club (204) 837-8128 or wgc-info@lark.magic.mb.ca

Tern-II, 17m, basic instruments incl portable radio. Recently constructed, still in test flight phase at Winnipeg. \$4900 obo. Call Jim Cook at (204) 489-6734, outside Winnipeg 1-800-224-7508 or e-mail accessm@escape.ca

Ka6E, 803h, \$11,000. Uwe Kleinhempel (250) 344-6620.

Duster, C-GHEU, 226h, excellent condition, Genave 100 radio, 2 mech varios, 10ah gelcell batt, Garmin 55 GPS & database, encl metal trailer. \$6500. Harold Weidemann (403) 474-0139.

HP-14 mod, C-FXFP. Self-launching, trailer, chute, many extras. Not enough time to fully use this good XC performer. Sell, or share and relocate to any central or southern Ontario club. Make offer. Ron (705) 689-5528, fax 329-2108.

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Jantar Std 2, C-GHDR, 1/2 share at SOSA, excellent cond, 650 h, Imron paint, Dittel 720C radio, ILEC SC7 vario/TE, PZL vario, O2, covers, chute, etc. XC & contest ready. \$15,000. Tim O'Hanlon (905) 332-1930, ohanlont@bailey.ca

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

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towplane

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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. 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. john@roake.gen.nz

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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. AGEditor@gfa.on.net

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