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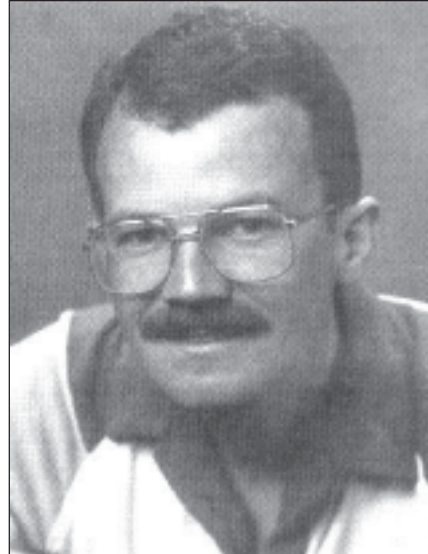
4/90
Aug-Sep



POTPOURRI

Already this is the August-September issue! How time flies — I hope you're all having a safe and fun soaring season.

Sue and I visited England this past May and besides the obligatory visits with relatives we managed to spend our weekends at glider clubs. What else would you expect? Driving down the motorway we could spot a sailplane in the air at intervals far more frequently than at home, soaring is a lot more popular there than it is here. Why is that? I guess that is true about Europe in general — are Europeans more interested in our type of sport or do the European clubs approach the public differently?



Most of the English clubs we visited were very friendly and they offered “reciprocal memberships” to visiting glider pilots. This reciprocal membership cost about \$6 a day, then you just had to pay the other expenses like any other member. After a checkout on winch launch or auto tow we were allowed to fly their club's equipment. Of course what they have to offer varies from club to club and what your skill level is.

The Canadian Nationals were a success this year despite the weather. As you'll read in this issue the contest had to be moved from Starbuck to Brandon because heavy rainfall turned Starbuck into a quagmire. Brandon is a two hour drive from Winnipeg, and the move was successful because the Winnipeg club had a contingency plan. This is the type of planning that made the contest a success. It would have been a different story if no alternate had been arranged.

While on the subject of the Nationals — have you ever stopped to consider the dedication that contest pilots have? They arrange their holidays so they can drive halfway across the country, often with their families as crew. A few of this year's Nationals competitors went on to fly at the pre-Worlds in Minden, Nevada, or the 15 metre Championships, the Standard Class Championships or Regional contests in the USA.

The club news section of free flight is underfed. Someone in each club should take on the job of writing something for Club News at least twice a year. Tell your club directors that you intend to do it and let the rest of the country know what your club is up to; what ships are new to your field, club or privately owned, who's accomplished what, the BBQ was a success, and so on. It makes interesting reading for everyone and we get to know what other clubs are accomplishing so we can set our own goals.

Chris Eaves

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Trademark pending Marque de commerce en instance

4/90 Aug - Sep

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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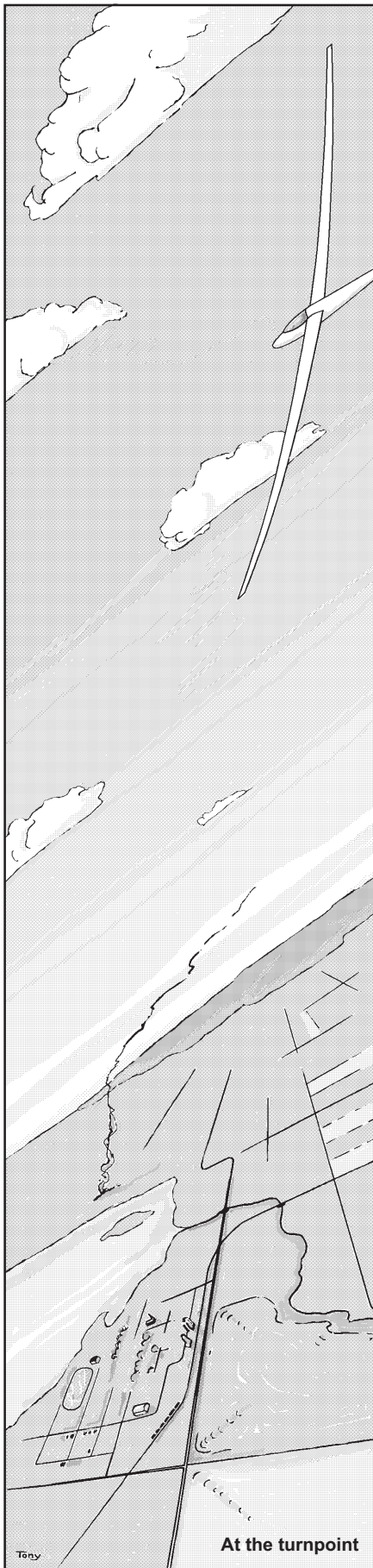
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Finishing with the sun. Ed Hollestelle in A1 completes his task at the '90 Nationals

photo by Mike Maskell



The 7 deadly sins of gliding

AVARICE

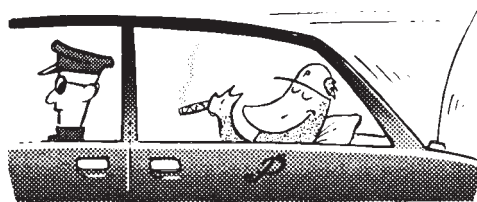
“Platypus”

from Sailplane & Gliding

Naturally, my sole interest in money is so I can afford to glide, and anything that threatens to stem the flow of launches or trips to Australia must be taken seriously. A few weeks ago my boss called me in and began talking to me about the amazing opportunities there were to be found in the world of consultancy. He's a very subtle fellow, for I was out in the corridor before I realized I'd been fired. Nevertheless he was right about the consultancy racket. With this change of life I had to pay for a financial consultant and a legal consultant (that's the same as an accountant and a lawyer, only costing twice as much). The first one had a plush office in St James' Street, right near the Palace, and he oozed charm and reassurance and said, "Now, Mr P, tell me all about it in your own time", and on his desk is the damn great clock, with the big hand marking the fivers and the little hand quietly sweeping up the hundred pound notes.

The lawyer was even smarter – she operated from a little Victorian house in Fulham, no overheads – and charged £120 an hour. Two pounds a minute! We dealt entirely by phone or post. I don't know whether she fancied me but she kept inviting me round for tea, and I thought "Even Lyons Quickbrew takes four minutes, that's an aerotow – and this could be an oriental tea ceremony – plus Value Added Tax – I'd have to sell the glider!" I felt that anything I said or did in her drawing room might be taken down and used in an invoice. All the same I suppose I could have done worse than have a lady friend who could earn two pounds a minute without getting up off her sofa.

So I have become a consultant myself – and there are two simple mottos which are "the higher the fewer", and "less is more". Have nothing to do with anyone below the rank of chairman or managing director; let them do all the talking; and send them a massive bill so they know they have been well advised. I'm hoping to get to the position where I sit crosslegged on a cushion for one hour at breakfast time, seeing a stream of tycoons for ten minutes each, then my chauffeur can get me up to the club before the thermals start. •



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 which represents Canada in the Fédération Aéronautique Internationale (FAI), the world sport aviation governing body composed of national aero clubs. The ACC delegates to SAC the supervision of FAI related soaring activities such as competition sanctions, issuing FAI badges, record attempts, and the selection of a Canadian team for the biennial World soaring championships.

free flight is the 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. Prints (B&W) are preferred, colour prints are acceptable. Negatives can be used if accompanied by a print.

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

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Deadline for contributions
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Opinions

L'ASSOCIATION CANADIENNE DE VOL À VOILE

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

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

vol libre est le journal officiel de l'ACVV.

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

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

L'exactitude des articles publiés est la responsabilité des auteurs et ne saurait en aucun cas engager celle de la revue **vol libre**, ni celle de l'ACVV ni refléter leurs idées. Toute correspondance faisant l'objet d'un sujet personnel devra être adressé au directeur régional de l'ACVV dont le nom apparaît dans la revue.

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

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

Pour changements d'adresse et abonnements aux non membres de l'ACVV (\$20 par an, EU\$22 dans les Etats Unis et EU\$28 outre-mer) veuillez contacter le bureau national.

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MÜ-13 FLYING IN GEORGIA

I am now the proud owner of a Canadian sailplane, C-FZPQ, the Mü-13-D3 which was featured in "The Mü Affair" [*free flight 2/89*]. It is in nice condition, however it will be restored and recovered to factory condition in the future.



Bob Gaines

Does anyone have any photographs or specific technical data on the Mü when it first arrived in Canada? It would be very good to know the markings and colours, etc. when it was in its original 40's configuration. Can you assist? Please write to: Robert Gaines, 308 Chase Lane, Marietta, Georgia 30068 or phone (404) 973-1414.

MORE ON TROPHIES, TRAVEL, AND TRUST FUNDS

[In response to Dixon More's letter in 3/90 p20], the Roden Trophy for 1989 was awarded to a small club — Cold Lake Soaring Club with a score of 86.50 points; second was York Soaring Association with 80.98; third was Bluenose Soaring Club with 74.40 points and fourth was Association de Vol à Voile Champlain with 72.40 points. The formula for calculating the results for awarding the trophy had been slightly reworked and appears to be more balanced in its results. Previously it had been nearly impossible for a small club to win. It is an ingenious concept and after many years of use has been more or less perfected.

Dixon More's comments about the Pioneer Trust Fund is a reminder to be more accurate when referring to the fund in case sloppiness in reference to it may induce faulty use of the funds. A bit silly but no doubt done in good spirit. Reference to the summary of things financial in the 1990 AGM report in *free flight 2/90* (page 6 of the AGM report insert) illustrates the careful use of funds and amongst other things the success in increasing the capital in the Pioneer Trust Fund which as of 1 July stands at \$92,000. Last year's campaign for contributions to the

Pioneer Trust Fund was very successful, collecting \$8200 by 1 June 1990. It is planned to make this campaign an annual drive which hopefully will eventually result in earned interest sufficient to replace the previous government funding.

Gordon Bruce
Director-at-Large

TO THE INVISIBLE ONES

There are many good thoughts about the dedication of pilots who spend their vacation, and lots of dollars, flying in a contest. But this is their choice to hone their skills in a sport they love so dearly. But who stops to think about the *unselfish* dedication of contest staff who spend their vacation *helping* these pilots to accomplish their goals?

I would like to single out George Dunbar, our national scorer since the mid sixties, and Al Sunley, contest director for 20 years — but included are all the many contest administrators of the years gone by. A bouquet of appreciation to all our fine ladies and gentlemen who work so hard in the background, but are being unnoticed in the songs of achievement. Thank you.

Crew at the '90 Nationals.

Bitten by the Soaring Bug

Dennis Haworth

from SOARING

"... What a great time that was, huh?"
"Yeah, but you remember the road trip out to Georgia, don't you?"
"Oh, how could I forget the 'Ordeal in Cordeal'." ...
"Hey guys, whatcha talking about?"
"Just some of the fun we've had crewing at different places around the country."
"Crewing, what do you mean?"
"Soaring ... gliders ... you know!"

CREWING, soaring and gliders! Strange terms, to say the least back then. I guess my interest was spurred in the beginning by the tales of exotic travel and glorious adventure in such intriguing soaring locations as Bishop, Barstow and Uvalde. All of these exciting events were taking place during some strange occurrence known as "crewing".

"Describe crewing, guys," I asked.
"Crewing is by definition 'Doing absolutely nothing but being completely useful at the same time' plus you get free food," they replied.

The next thing I knew I was experiencing crewing at El Tiro Gliderport while munching down on a free gourmet lunch of a bologna sandwich, a Coke and fritos. Meanwhile, I was trying to figure out how an airplane, in which someone actually fits, could ride in that ridiculous looking trailer. The vertical stabilizer and fuselage, terms from my B-17 model building days, I could understand, but the wing placement escaped me. When the back was opened, and the ridiculous box tilted, everything suddenly became obvious. The wings get placed on the sides, fuselage in the middle, and the little thing that goes up and down on the tail gets crammed into whatever leftover space is available. The set-up seemed simple after viewing it but the fact that someone could make an aircraft with a 15 metre wingspan fit in a box that can be towed to some of the aforementioned exotic places was the first marvel of engineering I ever recall being truly amazed at.

The second marvel came when those miscellaneous parts were pulled out of the trailer, assembled together, and cleaned up to create the masterful piece of aircraft I now know



as a sailplane. Although I wasn't sure that wings would ever stop emptying out of the funny box and the concept of getting something so clean in a place so dusty made me wonder, something prodded me onward to learn and experience more about this sport.

It wasn't long before I was learning and experiencing at least some of the aspects of soaring. Can you imagine? My first day on the job, and I got to push a fully ballasted Ventus toward its spot on the grid! The grid, where a long line of other sailplanes, anxious pilots and seemingly tired crew people existed, didn't look so far away when I started but it never seemed to get any closer as I pushed. But, that didn't bother me too much because although this task was hard work, it was work with a sort of mysterious significance to it. Don't ask me why pushing a wet Ventus around a hot desert airport seemed so mesmerizing at the time, but it did.

Nonetheless, experiences piled up rapidly. Working the line, release checks, and wing running — more new terms that made me realize the complexities of soaring — came next. The art (I say "art" because those of us



who work on the ground have to take pride in whatever we can) of "wing running" appeared more interesting to me than the other tasks of the launch line. More interesting because in order to do something where the main rules are not to do "this", or "that" or the "other" means to simply do one major thing above all — not screw up!

In order to provide a little guidance on how not to do something of this magnitude, a wing running ground school was established for me. Basically, the black and white rules given were: "don't push forward, don't pull back, and don't let the tip drag on the ground." Of course, those of you who have run wings realize that the cliché "reading between the lines" is a gross understatement of the previous guidelines. After ground school was completed, I learned a basic rule of crewing: "Forget 'how', emphasize 'do'." However, not being fully checked out on this rule yet, some clouds of concern still lingered in my mind. It was time to open my eyes and shut my mouth in order to gain further knowledge.

As I watched the contest group launch, I paid close attention to the wing running technique being demonstrated. Neither the pace nor the stamina required for a successful wing run was beyond my physical capabilities, but one small notion did hold me back — fear! Gripping fear of letting someone's fibreglass baby drag her beautiful wingtip through the rocks and dirt. But in any game, one never succeeds until one tries. So I, the rookie wing-runner, walked along the line until one pilot allowed me the opportunity of having his plane be my first.

I was told that Steve Farnher (EU) was an easy going guy and that he would probably let me do the honours. But asking still was not easy.

"Steve, would it be alright if I r-ran your wing?"
"I got no problem with that," he said rather

nonchalantly. "Oh, now I have to do it," I thought to myself, but I confidently replied, "Thanks."

As we pushed Echo Uniform up to the line, the towplane touched down and rode up onto the runway in front of us.

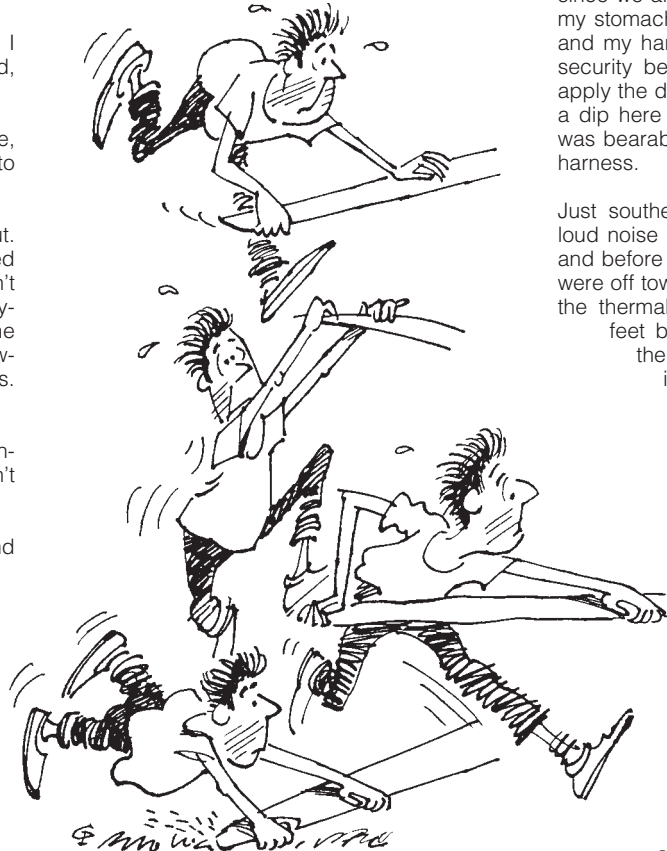
"She's hooked up and the slack is taken out. The wings are level and balanced," I observed silently. Next, I went over the rules, "Don't screw up! Don't screw up!", I reminded myself. The line was taut and the towplane stopped. The rudder wagged and the towplane responded by powering up its engines. "Don't screw up! Don't screw up!"

Echo Uniform began moving down the runway. "Run hard, don't this, don't that. Don't screw up!"

Faster ... faster, until the wingtip left my hand and I was no longer a part of the event. A time when the pilot forgot all that was behind and below him and I saw all that was in front and above me. I saw individual parts of carbon fibre joined together to obtain flight for the sailplane and something much more intricate for the pilot.

It was then that I first heard a buzzing sound and felt a stinging bite on the back of my neck. But, little did I know at the time what had infected me. I soon began to recognize my affliction because of two things. First, I could not explain to anyone, either in the soaring community or out, why it was that I would consistently crew whenever time permitted. I was always at a complete loss for an explanation, which usually meant the discussion ended with the conclusion that I must simply be crazy! After all, that does seem the most logical answer. Even though I accepted this as a possible reason for my strange actions, I nevertheless continued to see the experience of soaring. In time, I noticed the second clue as I realized I had an illness. The infection seemed to attack me more strongly around an open sailplane cockpit. Especially that of the Tucson Soaring Club's Janus, 8 Fox. It was 8 Fox that was to provide my first flight in soaring and the key to understanding my reasons for so much interest.

Paul Dickerson (19) first offered me the position of "ballast" in the Janus. This was only after I graciously hinted several times that I would love to fill any vacant glider seat if he should ever be faced with such a problem. Paul's affirmative response was a fateful mistake on his part, for as all pilots know, one never intentionally screws up a good thing. Giving crew an idea of how much fun it is to fly around the sky rather than sit on the ground and sweat is a good example of this principle. But the offer was made (must have been the heat) and the stage set. We were to get the next to last hop of the day in 8 Fox. As we buckled in and waited for the towplane to fire up, all I could think about was how different it felt to be looking at the instrument



panel and the runway instead of the wing and pilot as I would when preparing for a wing run.

Everything was checked out and the canopy closed. Thumbs up and the wingtip was lifted. Only as the wing was lifted and the aircraft shifted to a level position, did it really hit me: I was going to fly! I heard the rudder cables rub back and forth and I felt the pedals lightly tap my feet. It was time.

I paid close attention to the wing runner that day, hoping to see the event from a different viewpoint. Boy, did I! The remark I remember thinking was "So long, sucker! Enjoy being stuck on the ground!" But the thought of the "sucker" was soon gone and all that remained was the acceleration into flight. This time the concept of "screwing up" was left behind for this was no time for such mortal trifles. This was somehow beyond mortality.

However, the human side of me was forced to tag along for the ride and eventually the fear of the strange, new sensations did show up. A natural instinct of the unfamiliar told me, "don't touch." Therefore, the only item I could find that I felt safe for my insecure hands to embrace with a death grip was my lap harness. But this seemed silly to my reasonable side. "Sit back and relax, scan the instruments and watch the towplane," I calmly said to myself.

The towplane cut through the western sky rather smoothly, all in all, but at one point did

make a sudden dip. "... Let's see, if the towplane drops altitude that rapidly, that would mean he flew through a patch of sink and since we are directly behind ..." That's when my stomach found a new home in my throat and my hands searched the cockpit for the security belt across my lap in order to re-apply the death grip. The rest of the tow had a dip here and a bump there, but overall it was bearable. Of course, I still held onto the harness.

Just southeast of the field, an obnoxiously loud noise resonated throughout the cockpit and before I could identify it as the vario, we were off tow and turning. After quickly coring the thermal, we found ourselves at 10,000 feet before the towplane had touched the ground at El Tiro. I was quickly informed that this was not a common occurrence and rarely does one get the altitude of the day from one thermal.

Sensing that the turning in the thermal had made me a little queasy, Mr. D said, "Now that we have the necessary altitude we can do whatever you want. Go straight, watch scenery, fly upside down, whatever." It wasn't until after I had vocally voted nay for upside down that I realized he was joking. The smile did me well.

Soon, I was offered the chance to grab the stick instead of my belt and attempt to pilot the Janus. At the time, I had no understanding of why this complex machine was able to do the remarkable things it did, but since when did being ignorant of something ever stop me before? Besides, when one is calmly told from behind that he is flying the aircraft, one tends to skip such basic formalities as knowledge and proceed directly to the position of an imposter pilot. Funny how that works, isn't it?

After about 15 minutes of playing around in the sky and losing a sinful amount of altitude in my brief attempts of thermalling, the time came to think about landing before I redecorated the interior of the Janus. Flying straight and level, Mr. D pointed out that the vario was showing zero sink. Out came the spoilers. A whopping 2 knots of sink, now. Again, I was reminded this never happens and that if it doesn't get a little weaker outside we would be hanging arms and legs out of the cockpit in order to descent.

But down we eventually came. We entered the downwind leg for runway 26 left, turning base ... now final ... and soon we touched the ground once again and rolled up near the asphalt runway. As thirsty, hot, and ill as I felt, it was still a sad feeling to leave the Janus after such a wonderful experience.

Sometime, and a couple of glider rides later, I again had the pleasure of filling an empty Janus seat with Paul Dickerson. It was that

concluded on page 20

1990 Canadian National Soaring Championships

... a tale of gumbo, chaos, & ultimate success

Mike Maskell

Winnipeg Gliding Club

THIS YEAR'S NATIONALS are just a memory by now and for those who attended it is hoped that the memories are good. For those who were not fortunate enough to attend let me try to fill you in.

The organizing committee met for the first time over a year prior to the contest and began assembling the players who would be responsible for everything from site development to flight operations. With all this preparation it would seem that we were destined to have a good contest. The only thing that would stop us would be if it rained for the week prior to the start date, but in Manitoba in June it is generally dry and, in fact, the previous three summers had suffered near drought conditions. Well, that would change — just ask Curt and Regine Hawkins from southern California. They arrived a whole ten days before the contest to practise and soon found the campground quickly turning to a sea of mud. Yes, our nightmare was coming true. The skies opened up and the rains fell, and fell, and fell. In the first week of June the weather office reported that Manitoba had received 75% of its average June rainfall.

Well, on with the rest of the story. By June 7, four days before the contest, our field was drowning. There was standing water on all the runways, the campground was now home to a flock of ducks and competitors and their trailers began arriving. Could it be that all our hard work would be for nothing?

The morning of Saturday June 9th saw the arrival of several more pilots. All were greeted to the same horrible sight. Cars on the roadway into the field, glider trailers parked wherever it was dry, kids and dogs running about, and no way into the field. It was swamped. By late afternoon most pilots had picked out a camping spot that was reasonably high and dry and proceeded to settle in for what looked like at that point a very wet contest, if one at all. On Sunday we finally got a break in the weather with a forecast high of 28°C and strong winds. Hopefully this would get things dried out in time for the first contest day. By 5 pm it had dried enough for our Citabria to take off for a test flight after some maintenance was performed. All was looking good.

Monday June 11 ... the show's on the road

The skies opened up again with rain in the early morning, so at the pilots meeting contest manager Dick Metcalfe discussed with all present the possibility of moving to Bran-

don and operating off the airport there. Initial planning had been done much earlier with the airport officials and they had agreed to allow us to use their facilities. Now it came down to a question of whether everyone would agree to driving another 200 km in order to have a contest. The vote was unanimous (at this point I think people would have agreed to go anywhere just to get away from the gumbo). By noon our field looked like a ghost town. The tractor rescued glider trailers from the tiedown area, and camping trailers from the campground by hauling them out to the entrance road.

By the time the convoy arrived that afternoon, the grass between the main runway and the ramp was already being mowed for us. A pilots meeting was scheduled for 8 pm in the Brandon Flying Club facilities with the local air traffic controllers to explain how operations would work in the control zone around the airport. However, instead of a thorough discussion of this, it turned into a free-for-all when a call from the crowd went out for a reading of the rules for the contest. Colin Bantin took the floor and went over the changes to the scoring procedures.

Tuesday June 12 ... water, water everywhere

Mike Maskell and Larry Morrow had driven back to Starbuck the night before in order to fly out one of our towplanes. When they arrived they found the field to be as wet if not worse as the day before. The tractor was again pressed into service in order that the towplane could be moved to an area sufficiently dry to take off from. With the arrival of a second towplane from Regina and with a reasonable

soaring day a small task was set for the first practise day. Nineteen sailplanes launched in under one and a half hours. (But first some serious landscaping was in order as the in-field turned out to be riddled with gopher holes and some enormous badger holes that a leg or a main gear could be lost in. So for two hours pilots and crews, using every available shovel, went line abreast down 3000 feet of grass to make the airport safe for body and tail dolly.) The majority found moderate thermals and went off to look over the terrain below. Colin Bantin managed to get around Rivers and Griswold for about 140 km. Others had equal success and looked forward to the first official contest day.

Wednesday June 13 ... if at first you don't succeed, try try again

With a weather pattern much the same as the previous day, a task of 196 km was set for both classes. It would be a polygon course with turnpoints at Souris, Wawanessa, Bois-sevain and return. By noon the sky had filled with beautiful looking cu and the launches began by 1 pm. However, even with all that good looking cu, there was something wrong as sailplane after sailplane dropped out of the sky and came back for a relight. (To the controllers, the whole operation must have appeared to be total chaos.) At least twelve sailplanes required another launch and some even took three tries before getting away.

Larry Morrow in Std Jantar C-GCGJ had an interesting thing happen while awaiting his launch. While sitting in the cockpit he thought he could smell smoke. A check of the instrument panel did not reveal anything and he



trailer in mud

figured he must be imagining it. He again smelled smoke and a bystander also noticed a peculiar smell of burning hair. The sun coming through the canopy was positioned just right so that it was focussing on the sheepskin headrest and charred a dollar-sized hole before it was noticed.

Of those that launched, eleven made it around the course and six outlanded. Winners for the day were Peter Masak (by a large margin of over 17 km/h) with a speed of 100 km/h, and in Standard class Dave Webb with a speed of 72.7 km/h. Jim Carpenter, who placed 5th for the day, thought the task call was right on the money for the conditions. He experienced some good climbs once out on course and found it a real challenge. Cloud base was around 7000 feet ASL. Ed Hollestelle in a DG-300 also made it around the course and as a treat to the control tower guys did a superb high speed contest finish right on the deck in front of the tower. We finally had the making of a contest.

Thursday June 14 ... gopher hole patrol

As was the case the previous days, before any flying could take place a thorough inspection of the runway was needed to clear it of any rodent holes. This involved walking the entire field and filling in as many holes as could be discovered. It seemed that the gophers wasted no time in opening up the holes filled the day before.

A solid layer of cloud dominated the area with a Colorado low influencing southern Manitoba. The met man Dale Marciski indicated that the cloud would burn off by noon and that thermal activity would be possible if this did indeed happen. Based on this forecast a task of a 3 hour limit POST was declared. As the local flying club was giving scenic rides of Brandon starting at 6 pm, all our operations had to be finished by then as ATC did not want to mix both operations. The low cloud did burn off as predicted and a towplane was sent up to check cloudbase. A report of cu at 4600 was enough for the task committee to give the launch go-ahead.

At the back of the grid was Heri Pölzl in his LS6-C. On Day 1 he discovered that his flight computer did not function properly. He had tried to track one down in Toronto but without success. So he elected to launch and try the task anyway. Heri must have a very sensitive rear end as he made it around his course and was declared the winner for the day with a distance of 239 km, all by the seat of his pants!

First in the Standard class was Ed Hollestelle in his DG-300 with a distance of 269 km. In the 15m class Peter Masak actually had more distance but went over the 3-hour limit and was assessed a penalty of 55 km, although he held on to his first place standing overall.

Friday June 15 ... a contest like it should be

Although the morning brought a solid layer of overcast the met man was confident that it would clear out by noon. At the pilots meeting no task was set until further evaluation of the weather at 11 am. Al Sunley, the contest di-



weather office

Brandon met man, Dale Marciski. The contest had excellent and fast weather data

rector, gave a word of warning about the poor quality of some pilots' turnpoint photos, and stressed that it might mean the difference between first and last if he had to disqualify a claimed turnpoint. Also some of the data-back cameras being used produced a very faint image of the time and on some it was impossible to read. Many pilots were seen busy later that morning replacing their camera batteries.

At the 11 am meeting the sky had begun to clear and small cu could be seen on the horizon. Again a POST task was called. Everything went smooth on this day. We managed to launch 23 sailplanes in under an hour with no reights. As the local flying club was once again holding their scenic rides all flying had to cease by 6:30 pm.

Colin Bantin in an ASW-20 was the winner in the 15m class with a distance of 225 km while Paul Thompson was at the top in the Standard class with 185 km. Paul's strategy was to take his time and fly conservatively with the thought that the short time available for good soaring would catch most off guard and penalty points would be assessed. This was indeed the case as three out of nine were given penalties. Paul's speed for the day was a blistering 66.7 km/h. Not great, but enough to give him a 1000 points.

Saturday June 16 ... on the road again

With everyone comfortably settled in Brandon, the contest organizers felt that it was time to pack up and try flying somewhere else for a change. Couldn't have them getting used to their surroundings now, could one? Actually what happened was this — once again the Brandon Flying Club was selling rides for a local charity. As they had been planning this for months we could not foul them up. So what ATC and the Nats '90 people came up with was a task with a remote finish. Glenn Clark and his controllers in the tower would allow us a 2 hour window in which to launch and have everyone out on course. With the weather almost ideal and moderate thermals forecast, everyone agreed that this

would be our only option short of sitting on the ground. With only three towplanes (one returned to Regina for the weekend), everyone was launched in just over an hour and had cleared the area by the requested time. I think that a big THANK YOU should go out to all the ATC guys for fitting us in as easily as they did. Glider flying in a control zone is new to most of us and them, and they did a superb job of handling all the extra traffic.

The task for the day was Austin, Minnedosa, with a remote finish at Neepawa airport. As a complete landout of the grid was inevitable, most crews that had portable ground stations set out for Neepawa, 90 km by road.

Jim Oke in his ASW-20 arrived at Brandon for the first time since the contest began. For all his lack of preparations and being rushed, he still managed to smoke around the course to come in third for the day with a speed of 83 km/h over the distance of 166 km. Wilf Krueger came in first with 91 km/h in the 15m class, while Ed Hollestelle snagged his second win in the Standard class with 70 km/h. Neepawa airport quickly filled up with sailplanes and trailers, and a local flying club member was running around collecting all the signatures he could for their guest book. I think that everyone would agree that this was good fun and just a bit different. Why not, so far the entire contest seemed to be just a little bit different!

Monday June 18 ... hurry up and wait

After a no flying day on Sunday everyone was eager to get back in the air. But in the morning when everyone awoke they were greeted with a thick blanket of fog. Fog so thick that even the ducks were walking. The fog was only in a 15 mile radius of Brandon and it was forecast to move out with continued heating. And clear out it did. By 10 am it was blue as far as you could see. However, with the clearing and heating of the unstable air-mass there was a good chance of moderate thundershower activity. A task had been set at the pilots meeting with the promise of good weather.



Sierra Tango beats up the tower on Day 3

By 12:30 the grid had been marshalled but under an ever-thickening layer of high cirrus. Good looking cu could be seen to the south and further west, but directly overhead there was nothing but cloud. Nothing to do but wait. As the time dragged by, the task committee met and instead of the proposed task they agreed on another POST day. Shortly after 1:30 the sky cleared out and a sniffer was sent up to test the air. He found weak but improving lift and so the launching began. A large towering cumulonimbus began forming to the northwest of Brandon as the launches began. As pilots waited for the start gate to open it quickly got larger and blacker, and as the competitors got away from the

field and out on course it dominated the sky. By 5 pm the Brandon area was hit with a severe downpour with high winds and pea size hail, although no damage was reported. With this storm blocking the path of anyone coming home, a 100% landout was almost guaranteed and shortly after the storm passed the office phone came alive with the first reported landouts.

(For the 15m pilots who had to start last, a cloud street leading east out of the storm's shadow beckoned, but it was too late — as most of the 15m pilots ran east, it was clear that the shadow was moving even faster — their minutes in the air were numbered. EE)

This day would see Heri Pölzl picking up the honours with 114 km in the 15m class and Paul Thompson first in the Standard class with 146 km. During Paul's recounting of the day he made mention that he thought of heading straight downwind back to Starbuck and landing there. Someone in the audience commented that he would still be there as the field was still flooded out.

George Dunbar presented a new award for, "The most horrible retrieve". It went to Dick Metcalfe for his retrieve of Jim Oke from the Carberry area, only 40 kilometres east.

It seems that Jim forgot to mention that his car was low on fuel before he left and Dick neglected to check on it. As Dick got onto the highway about 9 miles from where Jim had landed he turned on the headlights and the car immediately stalled. Attempts to start it were futile so Dick hitched a ride to the farmer's house to find Jim who by now was enjoying a fine meal at Charlie Mayer's residence. (Charlie is a federal cabinet minister who farms in the area.) It turned out after much investigation that a fuse had blown for the lights and the fuel pump thus starving the engine of fuel. The low fuel didn't help matters either as they still had to put some in to get back. Needless to say they didn't make it home in time for the catered meal at a local restaurant. Tuesday's and Wednesday's flying were cancelled due to thundershower activity in the area and were rest days.



Peter Masak contemplates, home or bust!

Thursday June 21 ... a curious day indeed

After more rest that most would care for, everyone was ready for what looked like a perfect day. Clear skies, a high to be near 25°C and light northwesterlies. With only a couple of hundred points separating the first and second place pilots in both classes it was hoped that this would turn into a real hot race. A very ambitious task had been set originally for the 15m class of 310 km and 180 for the Standard class, however once everyone was marshalled it was obvious that it was not that great. Jim Carpenter in his LS4 went up as a sniffer early on, but reported only weak and disorganized lift. For close to an hour he hung on until things picked up to a point that he felt we should launch.

A change of task was then set to Neepawa, Hamiota and return for 196 km for both classes. Once everyone was launched the conditions began to improve rapidly so it was then decided that for the 15m ships the task would be lengthened to include a third turnpoint of Carberry for a distance of 229 km as it was thought that the 196 km task would be flown so fast as to seriously derate the scores. Everyone was contacted on the radio to get an agreement for this change. It was settled and finally the start gate opened and they were on their way.

Fastest time around the course was once again Peter Masak by over 12 km/h with 98 km/h to cement his overall top position in the 15m class. Ed Hollestelle flew a respectable 87 km/h for first in the Standard class. The race for first overall was won by Dave Webb in a DG-300 followed by Ian Spence in an LS4. Thankfully it was a great day to end the '90 Nationals, a contest that should remain fresh in the memories of all who attended.

THE TROPHY WINNERS ARE:

Bacardi Trophy — Best overall pilot (hndcpd)
Peter Masak (PX)

MSC Trophy — 15m Class champion
4717 points of a possible 4902
Peter Masak (PX)

Mix Trophy — Standard Class champion
5014 points of a possible 5483
Dave Webb (DG)

Dow Trophy — Fastest Std Class triangle
87.0 km/h on Day 6 **Ed Hollestelle (A1)**

Dow Trophy — Fastest Std Class triangle
(no triangles tasked in the 15m Class)

SOSA Trophy — Best novice pilot (hndcpd)
Udo Rumpf (ET)

The awards banquet ... amazing what you can do with little time

The original banquet had been scheduled for Starbuck of course but with the move to Brandon all that had flown out the window (at least

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15 METRE	DAY 1 (Speed – 196.5 km)			DAY 2 (POST)			DAY 3 (POST)			DAY 4 (Speed – 166.1 km)			DAY 5 (POST)			DAY 6 (Speed)			Total Score		
	day	pos	pts	day	pos	pts	day	pos	pts	day	pos	pts	day	pos	pts	day	pos	pts			
	km/h	km	km/h	km	km/h	km	km/h	km	km/h	km	km/h	km	km/h	km	km/h	km/h	km/h	pts			
1 Peter Masak ASW-20 PX	1	100.0	786	4	225.0	96.4	940	2	213.4	70.9	939	2	86.3	677	2	106.1	437	1	97.7	938	4717
2 Walter Weir ASW-20B 2W	4	69.1	604	3	233.7	95.5	954	6	190.4	63.9	842	4	81.6	621	8	96.3	397	2	85.2	823	4241
3 Kevin Bennett Ventus B X1	3	79.4	665	2	238.2	94.7	959	8	179.1	63.9	817	9	72.4	509	5	102.2	421	3	85.1	822	4193
4 Wilfried Krueger LS6-B K2	2	82.5	683	8	195.0	78.7	791	7	186.5	62.8	826	1	90.8	732	13	71.8	296	5	76.7	744	4072
5 Dave Frank ASW-20 SR	5	64.9	579	6	203.7	82.6	828	5	183.6	69.5	864	7	78.2	579	2	106.1	437	8	74.0	719	4006
6 Heri Pözl LS6-C KC	11	(0.0)	0	1	238.9	97.9	976	4	194.4	67.1	872	6	80.7	610	1	113.9	470	6	75.0	728	3656
7 Colin Bantlin ASW-20 3B	8	(75.6)	155	9	188.0	79.0	778	1	224.9	76.3	1000	8	73.5	523	11	81.3	335	7	74.5	724	3515
8 Curt Hawkins LS6-B CJ	7	62.7	566	5	223.9	89.9	906	14	102.9	0.0	229	5	81.1	614	6	100.4	414	4	77.1	748	3477
9 Buzz Burwash ASW-20FP AB	6	64.1	574	7	202.6	80.1	813	12	165.4	0.0	368	10	70.8	490	7	99.4	410	12	(105.2)	198	2853
10 Nick Bonniere PIK-20B ST	11	(0.0)	0	10	158.9	72.3	685	3	193.0	67.9	874	11	65.8	430	9	90.1	371	13	(82.4)	145	2505
11 Tony Burton RS-15 EE	10	(61.6)	116	11	143.6	61.5	600	9	153.0	50.7	672	12	65.5	426	12	79.9	329	14	(57.6)	87	2230
12 Rick Zabrodski Ventus VB	8	(75.6)	155	12	134.2	56.0	553	10	95.8	48.2	529	14	63.2	398	10	82.3	339	15	dnc	0	1974
13 Bob Gairns ASW-20 TZ	11	(0.0)	0	13	178.8	0.0	365	13	138.6	0.0	308	15	59.1	349	14	50.7	209	9	73.3	712	1943
14 Udo Rumpf HP-18 ET	11	(0.0)	0	14	57.4	0.0	117	11	102.1	39.3	485	16	52.8	272	15	44.2	182	11	(105.7)	199	1255
15 Jim Oke ASW-20 77	11	dnc	0	15	dnc	-	0	15	dnc	-	0	3	82.9	636	4	105.1	433	15	dnc	0	1069
16 Bob Carlson PIK-20D T7	11	dnc	0	15	dnc	-	0	15	dnc	-	0	13	64.8	417	15	44.2	182	10	(119.5)	231	830
1 Dave Webb DG-300 DG	1	72.7	1000	4	230.1	77.9	863	3	176.2	59.6	923	2	69.7	941	6	131.0	565	4	68.4	722	5014
2 Ian Spence LS4 WW	2	71.3	987	3	234.5	77.1	867	2	181.6	63.9	970	6	58.7	742	5	132.3	571	5	67.6	714	4851
3 Ed Hollistele DG-300 A1	5	(119.0)	374	1	268.9	89.5	1000	5	157.3	58.1	860	1	70.1	948	3	140.1	605	1	87.0	903	4690
4 Paul Thompson LS4 T2	7	(70.0)	189	5	226	77.5	853	1	185.1	66.7	1000	7	54.8	672	1	146.3	632	2	80.1	836	4182
5 Jim Carpenter LS4 ZZ	5	(119.0)	374	2	243.9	80.7	904	4	171.3	58.5	901	4	63.3	825	7	83.3	360	3	74.5	781	4145
6 Andy Gough LS4 ZT	3	70.4	979	7	208.7	70.6	782	6	155.7	57.2	849	3	65.4	863	2	143.8	621	9	dnc	0	4094
7 Stewart Baillie Std Cirrus B1	4	68.6	962	6	211.2	72.8	799	8	131.5	0.0	355	5	62.6	813	4	135.8	586	6	(110.0)	245	3760
8 Dugald Stewart Cirrus 75 HG	8	(0.0)	0	9	19.7	0.0	37	7	129.8	45.4	691	8	39.4	394	9	36.9	159	7	(100.0)	218	1499
9 Larry Morrow Std Jantar GJ	8	(0.0)	0	8	146.6	0.0	275	9	76.4	0.0	206	9	(10.3)	0	8	80.9	349	8	(98.3)	213	1043

() values in brackets are distance in kilometres if pilot lands out distance in POST tasks have been corrected for any overtime penalties incurred

STANDARD

A view from the Organizing Committee

Dick Metcalfe
President, Manitoba Soaring Council

The primary objective in our sport is safety — both for the people involved and for the equipment in use and it was with that in mind that the 1990 contest was moved to the Municipal airport at Brandon, Manitoba from the Winnipeg Gliding Club gliderport at Starbuck. The extremely heavy rainfall prior to the opening of the contest at Starbuck had made the site untenable. The heavy clay in the Red River Valley could not absorb the close to 200 millimetres of rain which fell during the two to three week period. The gliderport site was waterlogged as were the runways, and the surrounding areas were soggy for miles around which would have made landing out difficult and dangerous.

The move to Brandon was made the day prior to the opening of the contest, 11 June, supposedly the final practise day. Luck and good organization prevailed which permitted completion of the move by early evening of that day. Fortunately arrangements for such an emergency had been made with the Brandon airport management at an earlier date and a short conference call was all that was required for us to be on our way. Sounds easy, doesn't it!

The area from which we were to fly at the Brandon airport was reasonably dry so the next day, 12 June, was declared a practise day. The four towplanes had arrived and by 1600 hours everyone had been in the air — at least once. There were 44 tows that day involving the 25 sailplanes then in the competition. The contest began a day late on 13 June and continued with some rain interruption 'til 21 June. In all, six task days were completed. Five were reasonably good days but Day 5 was landout day. Again, fortunately, our luck held and all 25 landouts and retrieves were conducted without incident.

I would like to examine some of the events and to acknowledge some of the contributions made which led to the attainment of the goal of the organizing committee — a safe and successful contest.

The adjustment following the decision to move the contest to Brandon has to be one of the highlights of the event. Much of the credit for that success has to go to Winnipeg Gliding Club personnel who systematically initiated the move — getting trailers, motor homes, sailplanes and people out of the wet and muddy Starbuck site and onto the road. The patience and understanding of the contest officials and the competitors and their crews is also laudable. If there was discontent because of the move it remained unexpressed and that was greatly appreciated by those attempting to sort out the problems. And, of course not enough can be said for the support given the contest by the Brandon airport staff — the management and controllers, and by the Brandon Flying Club staff and membership. The contest took over their field and

concluded on next page

something flew in Starbuck). Dick Metcalfe together with office manager Ken Schykulski did a remarkable job of arranging the final dinner on Thursday night. They also organized two other smorgasbord dinners during the contest and both were well attended and

The office duties of the banquet were handled by Dick Metcalfe and Ken Schykulski with Dick leading off with remarks of the past two weeks how he was glad that the contest was successful. He expressed thanks for the patience of the pilots and crews in agreeing to travel to Brandon and of course the people of Brandon for hosting us on short notice ... Bob Carlson on behalf of SAC President Chris Eaves presented the trophies to the winners.

In addition to the serious awards there were also some presentations made by Ed Hollestelle jr. and Rebecca Hamilton in a more lighter sense. Some of the more humorous were to Dick Metcalfe a sandpail for filling in the gopher holes on the runway; Glen Buhr also gets a shovel and rake to help Dick; for Tony Burton in his RS-15 some corks to plug leaks in his water system (it was his first attempt at carrying ballast); for Ken Schykulski a toy phone to replace the cellular phone on loan to him for the two weeks "We thought Ken was getting very attached to it"; for Al Sunley a baseball hat with the famous quote "It is hard to soar with the eagles when you're working with turkeys"; for Gary Bosek an award that I had never heard of, a pink flamingo for being the novice at the competition. Apparently he should keep it by his trailer to bring him good luck.

Wrap up

I re-read an article I wrote about the '84 Nationals held in Virden, just west of Brandon. It was held two weeks later and, while conditions were better for flying, we still only managed to get in seven contest days then. It makes me wonder what would have happened if we had planned on using Brandon right from the beginning! But weather, as any glider pilot knows, is a difficult thing to predict. What is normal one summer may not hold true for



Markus Herfen

Thermals begin to cook before launch while Bob Carlson waits.

the next. And, as a saying goes around Winnipeg, "If you're not happy with the weather, just wait ten minutes." I do hope that all those who attended at least found their stay enjoyable and that they will take an opportunity to visit us again.

There were many people involved in front of the scenes as well as in the back. To try to thank each and everyone would risk missing somebody, but I do think that we owe Dick Metcalfe a hearty congratulations on a very successful if not unusual Nationals. He did one heck of a job and anyone who was there at Starbuck on that Monday morning would agree that he was under immense pressure. Way to go, Dick!

Organizing Viewpoint

continued from page 11

facilities for ten days and they permitted it to happen with grace and understanding.

The camaraderie throughout the contest and during the social get-togethers was also a highlight of the event. The two arranged

evening meals were well attended and the final banquet was a fun evening having both serious and humorous awards. Smiles and laughter prevailed throughout; an indication of the enjoyment present.

Several lessons can be gleaned from Nationals '90 which could prove valuable for the future. The first was the value of arranging for an alternate contest site. Had the organizing committee failed to do so, Nationals '90 would have been a non-event. Second, the use of remote sites, both for takeoffs and landings, was revealed as a useful addition to tasking. Necessity dictated a remote landing on Day 4 of the contest. Had the task committee requested, a remote takeoff could have been included in the task on one no-contest day when the cloud, which persisted 'til mid-afternoon at Brandon had obviously cleared 30 kilometres west of the airport. The flexibility of the currently

used camera controlled system for conducting a contest became obvious as the event proceeded.

I would be remiss if I did not acknowledge the disappointment felt by the members of the Winnipeg Gliding Club and of the Nationals '90 organizing committee following the move to Brandon. All had worked hard to prepare for the contest at the Starbuck site. Some accompanied the contest to Brandon and worked diligently in a number of capacities. Many, however, because of work and other commitments could not do so and thus missed out on a very special event in their flying careers. The participants and officials involved with Nationals '90 have expressed satisfaction with the outcome of the contest. From the point of view of the organizing committee that position reflects success, and with it satisfaction as well.

It was our pleasure to participate in the preparations for Nationals '90. Many of us have renewed and/or made new and lasting friendships both throughout the organizing process and during the contest. And isn't that what this sport, and life, is all about?

Good luck and high and happy soaring. •

Mike Maskell



Dave Webb, Standard Class champion

The “SOAR” system

Pilot judgement and pre-planning accident avoidance, based on a paper presented at the OSTIV Training and Safety Panel Meeting held in Stuttgart, Germany March 14-17, 1990

Ian Oldaker

Chairman Flight Training & Safety Committee

OUR COMMITTEE HAS WRESTLED with pilot judgement training for some time now. Transport Canada, the General Aviation Manufacturers Association and the FAA had developed in recent years a “Judgement Training” system for flight instruction and we had tried to use this in the gliding environment but with limited success. There are several reasons for this, but these are not the subject of this article. One of our committee members, Mike Apps, who has flown for Canada in international contests and who realizes the importance of decision making, has given several presentations on pilot judgement in which he examined the process of making decisions in flight, and how well we teach various skills, including those needed to make good decisions. He proposed a simple judgement or planning technique for glider pilots. This has been developed into a system for all pilots to adopt easily, and it is presented here.

Introduction There is often a common thread of poor judgement or lack of “looking ahead” in accidents and incidents. Evidence shows it can happen to the cross-country and experienced pilots, but it can happen also to the ab-initio or beginning pilots. In other words it affects pilots who have not yet developed judgement or a suitable planning technique. The result is a stressed pilot, particularly when the cockpit load is high. Such pilots generally make poor decisions, the results — an incident or too often an accident. This is a major concern as it affects our pocket books and our sport’s image.

Opportunity and benefits We have an opportunity to correct this, even with high time pilots. A simple technique can be learned at any time. It can be practised on the ground by imagining typical flight situations and thinking them through. The benefits to all of us will be better decisions, because they will be well thought through — the result? More relaxed pilots, reduced accident costs, safer flying and a better image for gliding.

The judgement technique presented here is a decision making process. You as a pilot and possibly also an instructor should first learn it yourself (it is very quick to learn), and practise it when you next go flying. This will then allow it to be adopted also into the training of student pilots so that all pilots can benefit.

Why do we need this? Before discussing the

technique I will discuss one or two typical accident sequences. This should establish the need, and why we need to incorporate the system into the training of new pilots.

Typical accident sequences

The following sequences are hypothetical though many aspects are common to a number of recent accidents, more often than not with a two-seater when passenger carrying.

Imagine a pilot taking off behind a tug that he thinks is developing less than full power. Beyond the runway is rough ground covered by trees; to left and right there are no open fields in which to land. At the airfield boundary the height attained is lower than usual, but the pilots (tug and glider) take no action. The approaching trees make the tug pilot turn. Flying away from the airfield the aircraft encounter turbulence and begin to lose speed and height; the tug or glider pilot releases; the glider pilot tries to continue a turn to the airfield but spins into the trees.

In another typical sequence the glider pilot is on a cross-country flight and has been having a good day so far. However he is now lower than he has been for many minutes and he is trying to “rescue” the flight. He has (tentatively) selected a field which is bounded by scrub and generally uninviting terrain. He is now flying downwind at a comfortable height to make a good circuit. He still has it in the back of his mind that he can climb away, so he is looking for lift of any sort. He encounters it on the base leg, he turns and finds it is only weak, in fact he loses height. He continues to try the thermal as he thinks his height is adequate. He suddenly realizes he must land (the approaching ground has grabbed his attention!); he looks for this field but sees he is out of range to reach it. He is very low ... his options are now very few ... he is running out of height, speed and ideas ... maybe he spins (yes it has happened) or with luck he recovers but all too often he CRASHES.

How do we prevent these types of situation from becoming too stressful, too difficult to handle?

A 4-step judgement technique

The following technique has only four steps, and it is easy to learn. It is based on Adaptive Management techniques used in making business decisions, and it serves our purposes very well.

The first step is to assess or to

SEE the situation

Next the pilot evaluates his

OPTIONS

Based on a predicted outcome the pilot chooses one option, and must then

ACT on this option

This leads to a new situation, so we

REPEAT the process

Notice that the steps give us an easy to remember mnemonic — **S O A R** !

In the first step the pilot must assess or SEE the SITUATION. He must ask what is happening now, what are the actual circumstances in the flight that are unfolding right now? This requires him to be alert to the current situation and for him to realize that a flight is dynamic, that is the factors controlling it are continually changing. This is most easily done in the context of three areas. First the pilot. For example the pilot may be tired after a rough four hours, so he should make allowances by deliberately saying “I will begin to plan for my landing early; I will allow lots of time to think things through, etc.” Understanding ourselves, our limitations as pilots, is a key item which we neglect too often in our flying.

Remember that as we get older our reflexes get slower, and our tolerance to heat and height, to lack of food and water gets lower too. We must admit this even though we feel it goes against the “macho” image. This leads to the second area to see and assess.

The environment is the weather, the wind, its direction (particularly when landing!), the temperature (too hot or cold and we don’t function at our best), and the terrain (lots or little to land in, or our comfortable home field). The pilot must assess these factors to be able to make good decisions; he needs to know for example if the wind has increased since takeoff (stronger wind gradient?), to recognize that the selected landing area is tricky because of a slope or trees on the approach. A little extra time to think through and to plan the landing pattern will pay off. We too often take it for granted that the same old pattern, late decision and same speed will do. Accident statistics show they won’t.

The third area or factor in seeing and assessing the current situation is the aircraft itself! We forget that this one has stiff or ineffec-

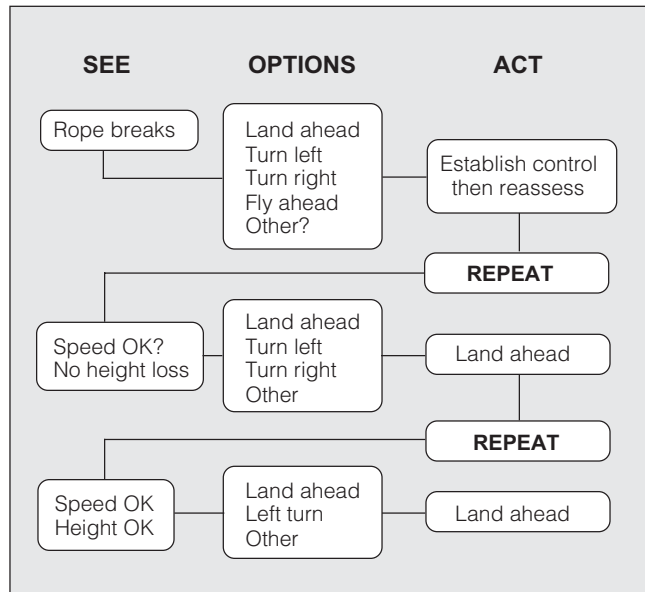
tive brakes, or that it is slow to roll compared to our own (we do fly different types occasionally, to take a passenger for example). The aircraft factor should help us assess the total situation, "What is my condition? What is the environment? What can I expect the aircraft to do in reply to my control inputs?"

From a good knowledge of the situation we can begin to evaluate alternatives and to develop some OPTIONS. A very important part of the process is to predict the outcome of each alternative. For example I am flying along ... I have several alternatives — the first is to continue going straight; the second is to turn left, or to turn right, or to decrease my speed, etc. Why turn left? ... well there is a good looking cloud and I predict lift. If I go straight I'll conflict with several other gliders and right is no good — blue sky and I predict sink! Consider the alternatives and choose the one with the best benefit to you the pilot.

(A good exercise for the reader at this point is to imagine a typical start to a flight, and to go through this judgement technique. Imagine you are taking off on a hot day and, unknown to you, the dive brakes open! Try to imagine the options at each step, for example, as the pilot takes off, then as the situation develops ... lower than normal at the airfield boundary; maybe the pilot has not flown the aircraft recently; airspeed decreasing ... now what are the options? Go back again to early in the flight and try to imagine the situation as it developed ... what do you, as the imaginary pilot, have to do to make yourself aware of the developing situation? And then at each step what would your options have been? For each of your alternative courses of action, predict the outcome, and then consider which would be the best one to choose.)

The third step in the process is to ACT on the best option. The choice will be affected by the perceived benefit to you, and by your objectives for the flight or task. The objective could be short term, for example it might be simply to stay up, or long term such as trying to maximize your speed around the triangle. Others could be to avoiding an outlanding, or to no looking bad (in front of your peers) or to playing it safe. Actually this last one should guide all your choices and should in many cases veto what might otherwise appear to be an acceptable option. The question then, is: What is the best option? To decide, we say that you must consider your goals, keeping "playing it safe" foremost in your mind.

Having chosen the option that provides the best benefit, the pilot has to ACT. We assume that the pilot has the skills to do this and this is where it is best to remember that low time pilots must be more cautious than the experienced. The high time pilots, however,



have to remember that their reflexes slow down with the advancing years, and that way they might have "got away with" when younger will catch them out now. An example here is the older instructor who is slower to monitor what the student is doing and takes over too late. Another is the pilot who is too relaxed and makes his decisions about an outlanding too late. Okay, so we ACT. This then immediately leads to a new situation, and this gets us to the fourth step in this process.

An important part of this step which is to REPEAT the process is to see the developing new situation and to COMPARE the results of our decision to our predictions of that point. This builds up experience, and by analyzing our earlier evaluations we make it easier to make predictions in the future. For example, if we had predicted that the left turn would take us to lift, but all we found was strong sink, (if we are very low) we better act fast to evaluate new alternatives, predict what will happen with each, choose the one with the best benefit to us, and act on it!

You have just read an example of repeating the SOAR steps in a very few lines, whereas it took several paragraphs to describe them first. Decisions have to be made in the air sometimes as fast as you read this, in spite of the fact that many believe soaring is all relaxation and fun!

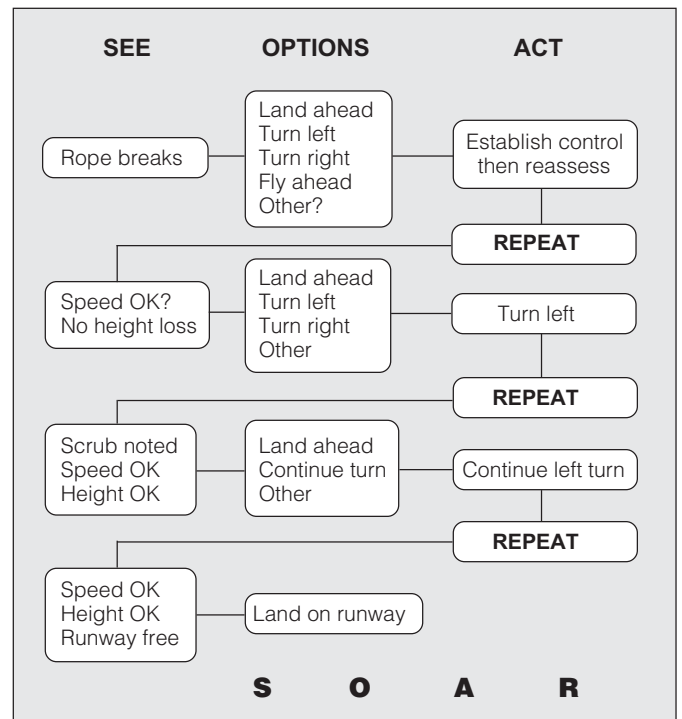
Technique in action The technique in action will go something like this — the situation is we are on aerotow at about 200

feet, there is zero wind, it is a hot day, there is a landable field ahead and to the left is a stubble field, to the right a tall crop. The pilot is low time and not too experienced on the glider. The rope breaks ... Suddenly the pilot has no more oomph? No more pull ...

How does this pilot react? What does he see? What does he do? What should he do? Okay here we go (see diagram on left)...

Note that in this case the pilot could have turned left but he was a low time pilot and the left turn was considered more dangerous than going straight ahead (remember we have had several accidents where pilots have tried to turn around and land on the runway — such low level turns ARE dangerous). Here we are also operating by a rule that says for a rope break below 300 feet we should first lower the nose to maintain (or regain) speed, then land straight ahead, with only a brief turn into wind if needed. For a situation where a landing straight ahead is out of the question, the actions of the pilot must still be governed initially by the automatic response, but this can and should be modified by judgement as to what is best. The example below shows how this would be done.

The new situation is we are again on aerotow at about 200 feet, there is zero wind, it is a hot day, ahead it is unlandable, to the left is a rough scrub area and to the right a tall crop. The pilot is low time and not too experienced on the glider. The rope breaks ...



In this case the pilot saw, and knew that landing ahead would end in disaster, so initiated the left turn even though such a turn would lead towards rough scrub. Note that he "sees" his speed continues to be "okay" at each repeat, and his repetition of the four step process led to an acceptable modification of the original rule "to land ahead".

concluded on page 20

SOME IDEAS ON TRAINING AND SAFETY

Ian Oldaker

Chairman, FT&S Committee

TWO IMPORTANT MEETINGS have been held recently at which training and safety in our sport were discussed. I am hoping I can pass on to you some ideas.

At the recent Winnipeg AGM of our Association, the Flight Training & Safety Committee met. We went through last year's incident reports and we were generally very pleased with the great improvement in our clubs. I should therefore again commend the clubs and CFIs for submitting the incident reports. These are a great help and we hope to pass on to your members any safety tips and lessons learned. There were a few from the Canadian total.

Arising out of this review, which is excellently summarized in free flight 2/90, it appears too many pilots got lost or had to land out. Mind you, no damage was reported. It seems, therefore, that they have been trained what to do if they got low, but had not been taught how to plan ahead to avoid getting disoriented and lost, and then low. So I am recommending that instructors pay more attention to teaching students how to plan where they are going — to think ahead so they won't get lost! I think lack of supervision (of the solo pilot) might have been a cause in some cases. The committee also felt that the instructors, through the CFI, need to exercise more authority over what goes on. It is all too often that as CFI we turn a blind eye, and pilots take advantage to break the most common (and sensible) rules.

Dive brakes are forever a problem — first in taking off; we had several incidents and a write-off last year. This is first and foremost a procedure fall down. We have a pre-takeoff check of "vital" actions. Vital is used because if one action is omitted it can be serious. Pre-takeoff checks, which include walk around checks, etc. are important. If any instructor sees a pilot omitting it, the pilot should be reminded. It is a safety feature which could save the guy's backside! We teach them to new students who will want to emulate the other experienced pilots and instructors. These pilots should therefore be setting a good example. We have many incidents, particularly in the landing phases, that are due to pilots not following recognized good practices, so I wonder if the general attitudes of pilots are relaxing too much. The record at some club is better than others — but is this because we had no incident reports sent in from them?

A new SAC trophy, the Hank Janzen trophy, is to be awarded to the club, group or individual for the best safety program or effort or

results from the past year or years. It is open to anyone, so keep this one in mind for this year for your club, we need to compete for it!

At the second meeting I attended in early March (the OSTIV Safety and Training Panel meeting in Stuttgart, Germany), we discussed many topics of interest to instructing and how people learn from example.

One area of concern is the increasing age of our pilots. We must recognize that as we get older our reactions become slower — we can no longer handle difficult conditions we managed in the past, and when instructing we must monitor the student more closely (because we can't react so quickly to save the situation as when we were in our twenties, say!) I suggest you think about this one, and at your next instructors meeting throw it open for discussion. I suspect an incident or two might come out of the woodwork!

A second area of concern is the adequacy of conversion training, that is, the checkouts and

briefings given to pilots who are moving up to a new (to them) type. Here we must remember that the second-hand sailplanes which are now available to the low time pilots were only flown by the most experienced pilots a few years ago when these sailplanes were new. Such sailplanes as the Std. Cirrus, Libelle and Ka6E come to mind. Checkouts should be very careful and thorough, and the briefings should be given by an instructor who has recently flown the type. I wonder how often we follow these guidelines?

All the above says that the jobs of the instructors (and CFI who, after all, controls the whole club's flying activities) are quite responsible and perhaps are changing from one of just instructing. It is still necessary to supervise the flying of low time pilots, of converting pilots, and to keep an eye on the aging pilots — those who once flew the top sailplanes and who are now perhaps content to take the occasional passenger. (We have had too many accidents in Canada with passengers, by the way). •

MORE ON SWAFTS AND DIVEBRAKES

George Eckschmiedt

member, FT&S Committee

PILOTS GET VERY BUSY during landing. When people get busy they tend to forget things unless some action prompts them to perform them without conscious thought. This is exactly the reason why we must insist on instilling in our students and pilots a reflex condition for all our safety procedures. But the reflex must bring out the question only, a deliberate examination should be afforded to the response.

Let's look at the pre-landing SWAFTS check. It seems that it has never been preached enough — do that check because your life can depend on it. Year after year it becomes more evident (especially during annual check flights) that pilots do not do the landing checks proficiently, if at all, and that applies especially to seasoned pilots with more than a quarter century of soaring behind them.

By proficiently, I mean doing the checks in time, automatically, while truly evaluating the response to each point. There are quite a few pilots for whom the pre-landing checks take 90% or more of the downwind leg. (It actually happened that one pilot took over half the leg to ascertain that we were both still strapped

in! I was tempted to tell him to forget about the checks, just fly the glider and land.) By the time they trim the glider to circuit speed they have to turn base. If there is enough time for the spoiler check, it goes wham — out, whack — in, no time to see if it really opened or not — hopefully it was felt, and then the hand is quickly removed from the handle. Then comes a pseudo-Stuka pilot turn to final with full spoilers when such use is rarely necessary if more time was spent setting up the initial part of the circuit.

The checklist can be performed quickly only if the elements of it are better known than your own name. The pilot must be able to rattle off the meaning of SWAFTS like a poem, then there is no need to waste time in trying to remember what has to be checked, and the time can be properly spent in evaluating each check item. Most of our accidents occur because we are rushed to do a certain function, and do not allow ourselves an out for our mistakes. With knowing by heart what we have to do, we can create that time. The much-used quality assurance slogan, 'do it right the first time' can hardly be more appropriate for soaring — we do not have the opportunity of fixing it the second time. •

Club News

BULKLEY VALLEY SOARING CLUB

Our club is looking forward to an active year. Our ground school attracted eight students, several of which have since become club members. We bought an L-Spatz 55 that had been stored in a trailer for 5 or 6 years and are in the process of recovering one wing. Work on the wing was coming along fine until the flying season brought it to an abrupt halt. Line-ups on the field have restored our enthusiasm and we plan to have it flying in two weeks.

We had planned to start flying Easter weekend but ran into a small snag with the Blanik. We had recovered the elevators over the winter and anticipated installing them in a few hours. Four days and countless hours later we managed to get the trim tab cables installed! In spite of the late start we are approaching 100 flights which is well ahead of last year.

The soaring has been simply tremendous. We've been blessed with unstable air with relatively low moisture and a bright sun producing thermals lasting from mid-morning to late evening. As well, there has been some ridge lift and many evening a gentle mountain wave has been working.

A 2000 foot tow is routinely producing flights several hours in length and reaching altitudes in excess of 10,000 feet. Everyone in the club has had at least one special flight. As a novice last year I'm still easily impressed but had the thrill of my short career in a three-hour flight last Sunday. Paul Chalifour was already up in the Pilatus B4 when I launched about 5:30 in the afternoon.

Paul met me when I reached 9000 feet and we flew together for several hours enjoying the magnificent scenery, me learning all the while from watching Paul's thermalling technique. Cold feet and a full bladder eventually brought us back to the airport with lots of altitude to spare.

Deciding to eat up some altitude with stalls and spins I headed in a straight line for our practise area about 5 miles from the airport. Unfortunately for my altitude losing plan, the wave was working and I flew in lift for the whole way, gaining a thousand feet. It took spoilers to get me down to circuit height and I ran into a thermal on base leg. One flight like that makes up for a lot of 15 minutes straight down ones!

Now that we have a third glider, the club is planning to do more cross-country flying. This is a new area for us but several of our new members have had European experience and we hope to learn from them. With any luck, we'll have some interesting flights to report by the end of the season.

Ted Schmidt

... BUT WE DIDN'T EXIST THEN !

It was somewhat of a shock for members of the Guelph Gliding & Soaring Association to read in the last *free flight* that news of their club hadn't been reported for the last five years. The fact that the Guelph club didn't exist 5 years ago isn't really an excuse. However, its story may make interesting reading.

For many years, this group of gliding enthusiasts called themselves the Caledon Gliding Club, and flew from a field on Hwy 24 just west of the town of Caledon, northwest of Toronto. Eventually some disagreement with the land owner made the pilots take their gliders and look for another field from which to fly. After a long search, a suitable strip was found, just north of Guelph. The old name was retained, and operations resumed. An annual membership drive was organized, usually in the form of a mall display, in Guelph or in Kitchener, and while the display attracted plenty of visitors, the name "Caledon" told them the club was situated far to the east, and no amount of explaining would convince them otherwise. Eventually this shortcoming registered with the club executive and a name change was planned.

Many names were considered including "Cross Wind Soaring", because the wind always seemed to blow across the single strip, but finally something suggesting both gliding and soaring was selected and the new name evolved. And what a remarkable difference it made at the next mall display! That was in the early spring of 1989. Guelph visitors could

hardly believe that there was a real live gliding club right at their doorstep. Response was phenomenal. Many discounted tickets were sold for introductory flights and a "lucky draw" was also available with the prize being a glider flight.

With the coming of the good weather at the end of April, the season was off to a good start, and more flights were flown than any previous year. A major set-back in August however, when it was found that one piston in the 150 HP Lycoming engine of the Citabria was rapidly dissolving in the engine oil. Leavens Bros. to the rescue — in exchange for a very large number of dollars, a rebuilt engine with chrome cylinders and "zero" hours, and we were back in business.

For the past two winters, the towplane has been kept at Guelph airpark so that it can be operational. Several potential towpilots needing to build taildragger time have become club members, have built their time, have made the aircraft earn its keep, and most importantly, the engine has not been allowed to rust or corrode over the four or five winter months. As well, there is a good "pool" of towpilots available during the summer.

The 1990 season started with the same burst of enthusiasm as the previous year. Weather has been unkind as all area clubs can confirm. Our members have simply retaliated by working on the rainy weekend days and flying on the sunny mid-week days!

The club fleet consists of the Citabria tug mentioned above, and four gliders. These are a 2-33, a 1-26, a 1-34, and a two-seat Lark. The 2-33 and the Lark are privately owned but are currently on loan to the club. The 1-26 is club owned. The 1-34 is also privately owned but is available to club members qualified to fly it. Another member has just taken delivery of an old wood-and-fabric single



seater homebuilt. Three other members have also just bought an incomplete HP-18 and are working on its wings and looking forward to next year when they can fly it.

It used to be that no one ever saw a report of a member of this club winning a badge. No more; there were six entries from Guelph reported in 3/90, and the plan is for many more to follow. Guelph is a club with a positive attitude, looking forward to a great future.

Dave Croft, GGSA

X-COUNTRY CLINIC AT REGINA

The Regina Gliding & Soaring Club hosted Saskatchewan's second annual Cross-Country Clinic May 26 to June 3. Mike Apps of Edmonton and Jim Oke of Winnipeg provided the competent instruction we needed. Jim Oke arrived in traditional gliding style with a cross-country flight of 430 km from Starbuck to Odessa in his ASW-20. Jim reported good going on his flight which was surprising to us because the weather at our field was unsoarable until late afternoon. Mike and Karen Apps arrived more humbly by car with the Nimbus in tow.

We had good Saskatchewan representation at the course, with two students from Saskatoon, three from Prince Albert and five from Regina; unfortunately Gravelbourg couldn't make it. Mike Basford and Mirth Rosser attended from Winnipeg and with our two leaders, 13 gliders, two towplanes, assorted towplane drivers and other club members, we had the makings of a successful clinic.

Out of town students and leaders camped at the field; facilities were not regal, but they made do. The Regina people were more sissified; they commuted the 50 miles. The camp was kicked off and ended with the traditional barbeque. Mike showed his interesting slides taken in Germany and Australia during the world meets.

The clinic format was similar to the previous year, with lecture sessions in the morning split between Mike and Jim, followed in the afternoon by practical flying sessions. Lectures included ideas for better thermalling, picking courses, weather analysis, cloud recognition, outlandings, final glides, and especially how to make better time around the course. With the explanation of the speed-to-fly ring, students got the hint that we ordinarily do not "press" enough between thermals and tend to fly too slowly.

The flying sessions demonstrated the lectures very well, with Mike and a student in the Grob flying a prescribed task. Nearly everyone got to fly with Mike and he got rave reviews all around. Alternately students would play follow-the-leader behind Jim in his "-20", or Mike in his Nimbus on a designated course.

The weather cooperated beautifully, in fact only one day was unflyable (sunny Saskatchewan, eh!). Most days were reasonable for cross-country and some were "super", as for example the day Mike and Harry Hoiland flew the Grob 60 km from Edgely to Montmartre at 125 km/h without circling.

photo unavailable

Mike Apps explains cross-country in the "lecture room".

"Leader Post" photo by Robert Watson

Although the clinic was primarily for cross-country, some training was carried out and congratulations are in order for Keith Andrews and Mike Newman of Prince Albert who made their first solos at the camp. And, although there was not much of a format for competition, Doug Campbell was the winner of the Saskatchewan group with an O&R of 200 km to Melville and back. Notable flights were also made by Mike Basford and Bruce Armstrong. The clinic was a complete success, but perhaps a few more people could have been accommodated.

Plans for next year are already underway with an expanded format proposed; the first week is to be a formal clinic; two or three days will be for instructor upgrading, and a final week will have designated task flying. Finally we wish to thank Mike Apps and Jim Oke for the able participation in this course, which could not have been held without them.

Harold Eley

VANDALS AGAIN!

The last twelve months have been frustrating for the Vancouver Soaring Association due to a seemingly endless wave of vandalism. Last year, gas was stolen out of the towplane on a couple of occasions and the canopies of the Blaniks and the Pilatus were smashed on another occasion. This year, the Blanik trailer boxes were pilfered and all of the tools stolen.

Most recently, the towplane and Blanik EJA were hit again in Hope. EJA was untied, pushed onto the runway and abandoned. The flap fabric was torn during the exercise, and has been repaired. The towplane was also untied and showed evidence of entry. Empty beer bottles were found in the area ...

There are always yahoos. VSA's bad luck should not extend to other clubs, so perhaps it's not unreasonable for clubs to inspect their facilities and aircraft with a view to improving their security and making valuables a little harder to lift. editor

WINNIPEG GLIDING ACTIVITIES

The Nationals '90 have come and gone and much to the relief of the organizers, and life returned to normal at the field after everything was moved back from Brandon. Flying on the weekends started up once again with some very hot and humid air moving in from the west (not the best soaring conditions).

Going back to May 26 saw Jim Oke and his ASW-20 head off for the XC Clinic in Regina. Nothing great about that, you say? Well, he flew there. This would be the first time that a member from our club has made the trip to the Regina club by air. I think the challenge has been laid down for someone there to return the favour. The total distance was in the neighbourhood of 430 km. By all accounts the clinic was well attended and the flying was reasonable.

At our own field, operations were shut down for a three week period due to above average amount of rainfall in the area in early June leaving our runways completely unusable and the area around the hangar a sea of mud. As a result our student population diminished slightly and our regular members have not been coming out to fly. Needless to say we are suffering a bit in the money side of things. To counteract this, we are again arranging to have Friday nights set aside strictly for flying introductory rides. A list of interested people was taken from our two mall displays and they will be contacted to arrange a flight. We tried this concept last year and found it very successful with over 40 rides being sold.

As mid-season approaches we are all looking forward to improved soaring conditions that always occur in mid to late August and throughout the balance of the fall. Quite often we have great days with thermals being produced by stubble fires. If we could only get the local area farmers to do all their burning on the weekends instead of during the weekdays we could have more dependable lift near the home field.

Mike Maskell, WGC

Hangar Flying

INVERMERE RAINED OUT

The Alberta Soaring Council mountain soaring camp, intended for 26 May – 3 June, was a victim of the stalled anti-cyclone in the Gulf of Alaska which pumped waves of troughs onto the west coast and resulted in the days of record steady rain and flooded rivers reported in BC and the Alberta mountains.

The event was well attended with 21 pilots showing up: nine from Vancouver, one from Campbell River, one from Victoria, and ten from Calgary. Twelve gliders were on site. The rain in the previous week spoiled the plans for getting the ASC Scout ferried down from ESC by one of their towpilots, so Cu Nim's Steve Weinhold finally had to take the bus to Edmonton on Saturday and then flew it to Calgary. Then the southeasterly winds in Alberta socked in the Rockies, but Steve was finally able to fly it over to Invermere late Sunday afternoon. (It turned out that that was to be the only soarable day of the camp!)

With no towplane on hand Sunday, three carloads of Cu Nimmers trekked up to the hang gliding launch site on top of Swansea Mountain. While we admired the scenery, Fritz Bortenlänger beat us up in his DG-400 after a flight to Golden and Panorama – we thought that perhaps motorgliders may have a place in the grand scheme of things, occasionally.

While we were up there on top, the binoculars showed some of the west coasters driving in. (A Vancouver Soaring Association week-long camp at Cashe Creek in the BC Interior had just concluded after being drowned out with five inches of rain — the annual average there is seven — and they were desperate for some soaring.)

Monday morning was solid fog, which improved to solid overcast, occasional light sprinkles, and no wind. At least that rated rigging some ships and getting a few site checks out of the way, and the Blanik and Twin Grob made six flights. That was to be the extent of the flying. Tuesday was the same except there was no morning fog. Some pilots gave up then and headed for Ephrata — to at least get some gliders parked there for the upcoming SSA Region 8 contest, even if the forecast in central Washington was also marginal.

After a 7:45 Wednesday morning PBS weather briefing meeting in Steve's motel room (out of a steady rain) showed no improvement in sight, the camp was disbanded.

Everyone was disappointed of course, and railed at cruel fate and the certain consequences of organizing a gliding meet. For the Calgary pilots it was only a 3–4 hour drive home and four days wasted — I really pitied the Vancouver and Island guys who had driven hundreds of miles chasing after some decent gliding weather only to get snookered

everywhere they stopped! It ended with the last of us getting saturated derigging Echo Echo, the Blanik, and the Twin Grob in the heavy rain.

To those of you who were in Invermere for the first time, it really is a superb place to go soaring, honest.

Tony Burton

ADDISON'S REVENGE An "encompassing" story

Ted Schmidt of the Bulkley Valley club wrote this little story as an exercise for his ground school class. Can you answer the questions? editor

Addison Snerd's face registered something between a self-satisfied grin and a smirk as he jauntily hopped into the front cockpit of the "Okanagan Spirit", his cowboy hat perched firmly on his head. The marriage counsellor was a genius. The plan had worked to perfection and the hat was the crowning touch to the nefarious scheme. The picnic at the Telkwa airstrip had included enough Kelowna Royal Red on the part of his wife, Adelaine, that even she realized she couldn't fly. She was presently ensconced in the rear seat muttering to herself as she made the adjustments to the seat harness necessary to accommodate her ample frame.

Carefully, Addison went through the CISTRs –C checklist as he prepared for his first take-off in years. He grinned wickedly as Adelaine bitterly complained about his hat blocking her forward view. Now she knew how he'd felt for these many years. No wing runner at Telkwa, so Addison waggled the rudder, the towpilot waggled back and applied full throttle. A perfect takeoff, a gentle climb, the towpilot now heading west, not towards Smithers but rather towards a little puff of cumulus building in the afternoon sunlight.

Confidence building with every foot of altitude gained, Addison decided to practise boxing the wake. Carefully, he moved to the far right of the towplane in preparation for his descent to the low tow position. Adelaine suddenly became aware of the towplane to her left. Startled, she tried to peer beneath Addison's hat to see what was going on. As she ducked to the left she inadvertently shoved the stick to the left with her knee. She still couldn't see. She ducked to the right bumping the stick right. Vision still blocked she frantically moved back left. An interesting 30 seconds followed.

Coolly controlling his aircraft, Addison's eyes flicked over the cockpit instruments. Suddenly he spotted an anomaly. In spite of the rocking wings he was managing to hold his westerly course and yet the compass was swinging. "Drat!" he thought, "Deceleration error! The towpilot must have released me!" Quickly

he reaches for the dividers tucked in the sweatband of his hat and measures the distance from his estimated position to the Smithers airport on the forestry map strapped to his left knee. Three miles. Plenty of altitude, thank goodness. Better check the wind. Smithers radio informs Addison that it's 11:30 pm in London, England and that the wind is calm. Everything under control.

Or is it? What course to set for the airport. Grabbing protractor and pencil from his hat, Addison finds he needs to head on a course of 43° true. From the forestry map he finds that the magnetic declination in the Smithers area in 1963 was 25°E, decreasing 4' per year. In addition, he knows that the variation of the Okanagan Spirit's compass is 4°W.

Questions:

- 1) Why did the towpilot release the Okanagan Spirit?
- 2) If Addison hadn't run out of altitude before he finished his calculations and had to land out in a cow pasture, what magnetic course would he have followed to the airport?
- 3) In what direction did the compass swing when the towpilot released the Okanagan Spirit?
- 4) What was the approximate local time of the release?
- 5) What did Adelaine say to the large bull in the pasture inspecting the towrope Addison had released just before landing?

WINDSOR'S PROUD HISTORY OF HOMEBUILDING

Going over some old club records during the long winter months, it dawned on me that, for a small club, Windsor has done a fair amount of homebuilding. Considering that on average this club has never had more than twenty-five members, no fewer than eleven significant creations have emerged from club members' basements.

Starting with the founding of our club in 1961, its existence was then based entirely on a Schweizer 2–22 which was built by club members from a kit and first flew in 1963. CF–OZS was flown for the beginning years as trainer and mainstay to 1966. It was later flown by the Chatham, Ontario Air Cadets. Henry Preiss joined our club about that time and, being a keen soaring pilot and a superb craftsman, he was soon involved in building an HP–11, a popular Schreder kit then. He finished the ship in short time and CF–PNK was flown in our club for several years. Starting 1968, probably because money was tight and used gliders were not available, at least five club members started a fierce homebuilding spree in the mid–60's. All of them tradesmen, handy with tools, and used to working to close tolerances, they found building easier than buying. Werner Kilsch and Alfred Scott preferred wooden ships and were able to acquire plans from Finland for the PIK–3C, a derivative of the "Vasama" and considered comparable in performance to the then famous Ka6CR. The PIK–3Cs first appear on our flight sheets in 1968. CF–UXL is still flying in our club today, but the other, CF–WIP, was lost during an outlanding in 1986.

Having flown a Ka6 and PIK myself, I would say the PIK had an edge over the Ka6 in climb. The Ka6 however, made up for it in running a little faster. In any case, the two wooden PIKs were the only ones in North America and created attention when they were taken on many trips to US sites.

About the time these ships made their debut, Werner Kilsch, Henry Preiss and Hans Berg embarked on new projects. Each of them were building versions of the then emerging HP-14 kit. The ships were re-designed into side by side two-seaters with dual controls, retractable gear, increased span 58-60 feet, and full span 90° flaps. One, the RHJ-7 had a V-tail, the other two RHJ-8s had T-tails. Performance was 36-38:1 which was remarkable at the time for two-seaters. The ships were featured in the 1974 Soaring Sailplane Directory. The designation RHJ stood for "R" for Richard Schreder, "HJ" for Henry and Joyce Preiss. All three first flew in our club within a month of each other in 1970. CF-AJS (Henry Preiss), CF-AXX (Hans Berg), and CF-AJT (Werner Kilsch) were impressive to say the least. I can still see them come in for a landing, whistling with full flaps in a steep decent, a sight to behold, and for a while, ahead of anything comparable. Each of them was later sold, two to the USA, one to a western Canadian club. As far as I know, two of them are still flying.

In the mid seventies Richard Schreder developed a new bonding process which no longer necessitated riveting of the wing skins. Three club members embarked on projects using this new method. Henry Preiss was completing yet another two-seater, CF-FIN. With the cleaner wing, another increase in L/D per-

formance was achieved in the RHJ-9 which was the ship's official designation. Not to be outdone, Hans Berg completed a 60 foot span single-seater in 1980, C-GBVF, called the RHJ-10. Hans made 500 km flights with this ship, both in Ontario and in Pennsylvania. It was sold to the USA and was lost a year later when it broke its tiedowns in a storm in 1988.

Dana Nuttall built a beautiful HP-18 from the original Schreder kit with the side stick. It was first flown in our club in 1968 and was probably the only HP-18 with a cg hook for winch launching. C-FETQ* was sold to someone in the Toronto area where it is still flying. (* C-FETQ was flown by COSA member Udo Rumpf in this year's Nationals. ed.)

Henry Preiss left our club sometime in 1978. While working for Dick Schreder in Ohio, he completed the only HP-19 ever built (see free flight 5/81 pp14/15). The ship was an all metal 15m single seater with winglets and remarkably good performance. Henry flew the glider at our club whenever he came visiting until he sold it sometime in 1985/86. Of all the homebuilders he was perhaps the most active one. Amazingly, he is probably the only person I know who single handedly built a four bedroom home, a two seat RHJ-8 and trailer, all in the span of 24 months. Having built no fewer than five sailplanes from scratch, this article is a tribute to Henry Preiss, Hans Berg and all the other homebuilders who spent many evenings over long period of time in order to create their own dream ships. A salute to the homebuilders in our club and everywhere else.

Kurt Moser,
Windsor Gliding Club

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Winnipeg, MB R3M 0K4

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Regina, SK S4S 3L7

WORLD CONTEST
Al Schreiter
3298 Lone Feather Crescent
Mississauga ON L4Y 3G5
Mbrs: Hal Werneburg
Bruce Finlay

VIVAT - A NEW MOTORGLIDER

The new L-13 SE 'VIVAT' motorglider, clearly derived from the Blanik, has recently been introduced to the North American market with its display this year at Oshkosh '90. Using the same wings and empennage as the Blanik, the Vivat is powered with a Walter Mikron 4-cyl inverted in-line engine with an electric starter. It uses either a fixed pitch or a Hoffmann variable pitch feathering prop. At 2350

rpm (cruise power setting) it has a range of 500 km and at 2000 rpm, a maximum endurance of 4:30h. Minimum fuel consumption is 2.3 gal/h. Both the main gear and the wing-tip outrigger wheels are retractable, and it features tandem seating under a one-piece canopy providing excellent visibility. Flying qualities include a max L/D of 24:1, high stability, and easy recovery from unusual attitudes. For further information, contact MORAVIA Inc. Box 942, Thunder Bay, ON P7C 4X8 (807) 475-5113, fax -9587.

AMERIGLIDE RESULTS

The "dress rehearsal" for next year's World contest has concluded at Minden, Nevada. Nine Canadians took part (seven from SOSA!), most working for a position on the Canadian Team, and testing the soaring conditions some of them hope to see again in 1991.

Kevin Bennett of Cu Nim won our best placing, working up to 8th in the 15m class then dropping to 11th overall on the last day (he flew the 429 km task at 142.6 km/h, but was only 21st!). Kevin said that the desert was somewhat intimidating to fly over at first, but with 16,000 foot cloudbases and over 8 knot thermals the norm, one had room to maneuver. Local experience was a definite plus. He flew a Ventus with the new Masak-designed winglets which provided a significant performance advantage. Final results:

Open class — 17 entries	pts
1. Klaus Holighaus (Germany)	6048
15m class — 35 entries	
1. Justin Wills (Great Britain)	5700
11. Kevin Bennett	4959
19. Heri Pözl	4157
22. Walter Weir	3829
34. Wilf Krueger	2413
Standard class — 27 entries	
1. Chip Garner (USA)	6033
15. Jörg Stieber	4241
16. Dave Webb	4134
17. Ian Spence	3935
20. Ed Hollestelle	3744
23. Paul Thompson	3211

More details of the competition will be appearing in the Canadian Advanced Soaring Group Newsletter.

The SOAR system cont. from p14

Teaching the technique This judgement technique can be started with new students at an early stage of their training. Start with an explanation of the three steps plus the repeat, and demonstrate how you apply it in the air. At first you could use the decision to return to the start of the circuit as your example, ie. if we continue in this direction I predict we will fly into sink, whereas if we turn right we will be in a good position and I predict we will find lift on the way back to the club. The examples that you can use are only limited by your imagination! Initially make the predictions for each option yourself (remember the student has little to no experience so cannot make the prediction very well yet) but gradually try to have the student involved in the prediction and in the choice of the best option. Examples of the process should include thermal centering and maintaining adequate separation from other gliders (lookouts!), circuit planning (and in this process, when to turn onto base leg for example, and whether to open the dive breaks now), and in the later stages of training, when to go looking for thermals away from the club and not to get caught out too low.

Before solo the student should be able to go through the process without prompting; you should be asking them occasionally to say out loud what the situation is, what are their options and predictions, and should be monitoring them on the actions they choose.

Summary In this article I have tried to show how pilot evaluation may be lacking. It could be a major concern for the high time pilots who believe that they are immune, that they can make these last second decisions. However our accidents show that these areas are concerns.

Pilot judgement or decision making can be a very simple four step process that is repeated over and over again. Without a look ahead and a prediction of what is likely to happen, a pilot is flying poorly, he is displaying poor airmanship and poor judgement. This goes for the several seconds or "minute or two" look-ahead, to the many minutes looking ahead that the seasoned competition pilot will be doing. We have an opportunity to reverse the trends by adopting the simple four step process of:

- SEE the situation, and compare it to our prediction,
- evaluate some OPTIONS and predict the outcome of each,
- then choose the one offering the best benefit before he must ACT on this one option and then,
- REPEAT the process.

The benefits to us will be first, a more relaxed pilot because he has planned ahead and predicted what will happen! This will improve pilot skills which will lead to safer flying and a reduction in accident trends. The major benefit will be fewer injuries and bent gliders, and of course \$\$ savings. So, take a few minutes, sit down in a quiet spot, then go through an imaginary flight and practise the four steps of this technique. Think ahead to predict the result of each option, and imagine what you would do if the prediction was wrong. The more you practise now the easier it will be to quickly adopt the system into your everyday soaring. Results – relaxed flying, safer pilots, better image for gliding and reduced

... the Soaring Bug from page 7

day in the Janus that I once again felt the bite of the soaring bug.

On a scratchy Sunday, with no lift comparable to my first ride, we flew around El Tiro admiring the power of the thunderstorm dumping its rain in the area of Nogales, one of the turnpoints for the ASA contest held on that same weekend. This should seem par for the course to all competition pilots for as they know, the turnpoint always seems to lie wherever the sink is greatest. Today, Murphy's Law reared its ugly head once again.

Due to the added traffic in the air, both from the contest and club operations, I would call out any gliders I spotted. I felt this my job since I had a slight visibility advantage by sitting in the front seat of 8 Fox. But, before I found any competitors, I noted a 2-33 ther-

Coming Events

Aug 12-17, **SAC French Instructor School**, CVV Quebec. CANCELLED

Aug 19-25, **SAC Western Instructor School**, Chipman, AB. Course director, Mike Apps (403) 436-9003. Register with National Office or Mike early!

Aug 25-Sep 1, **SAC Eastern Instructor School**, Montreal Soaring Council. Contact: George Couser (514) 655-1801.

Aug 27-Sep 11, **CASG XC Clinic**, SOSA, Rockton, ON. Limited enrollment, \$80 (\$100 for non-CASG members). Ed Hollestelle (519) 461-1464.

Oct 6-13, **Cowley Wave Camp**, a week-long event again in 1990 to guarantee a wave. Contact Tony Burton (403) 625-4563.

Oct 12-14, **SAC Directors Fall meeting**, Québec.

mailing to the west of us so I called it out. "That must be Wendy (Adams) and Elaine (Cutri) in the 2-33," I said.

After a few more turns in a weak thermal Mr. D said, "Let's go embarrass the girls." But he added the disclaimer, "Of course, we won't tell them we're going to embarrass them, just in case we don't." Soon, and for the first time ever, I was in a thermal with another sailplane. This was something completely foreign to me; something I never thought could be so very compelling. All of the relationships between machine and flight came into focus as I watched the 2-33 turn with us. However, the encounter didn't last long as the thermal was weak and the 2-33 had to begin thinking about entering a landing pattern as would we if there wasn't something better nearby. I say "we" in these situations because I'm convinced that my positive mental attitude constantly helped in keeping us aloft during that flight. Besides, I was lifting my feet up to make the airplane lighter and thereby increase the L/D. That is how it works, isn't it?

In any case, with my assistance, and a little of Mr. D's piloting abilities, we managed to scratch along and continue to fly for about another 45 minutes. In that time we saw some of the competitors returning home.

"Glider at 12 o'clock ... now!" I called out. "Got 'em," Mr. D replied. The glider got close and closer every time we came around in our thermal until finally, I could see it as the distinctively red nosed LS-4 which belonged to Bill Ordway (81). Coincidentally, I had come to El Tiro to crew for Bill over this Labour Day weekend.

We pulled out of our thermal and intercepted 81 as he made his way back to El Tiro and the finish line. We accompanied him part of the way. What a fantastic sight! Here was another fibreglass sailplane, seemingly close enough to touch, doing what I had worked on that very morning to prepare her for — to fly! Little did I realize that morning how beautiful she would look at work.

While admiring the sleek profile piercing the sky, I again heard that buzzing sound and felt the soaring bug land on my neck. I made no attempt to keep from being bitten. •

FAI Badges

**Larry Springford, 45 Goderich Street
Kincardine, ON N2Z 2L2 (519) 396-8059**

The following Badges and Badge legs were recorded in the Canadian Soaring Register during the period 1 May to 30 June 1990.

SILVER BADGE

795	Charles Gower	SOSA		
796	Christopher Staines	London		
797	Tillmann Steckner	London		

DIAMOND GOAL

Alan Wood	SOSA	305.4 km	1-35	Rockton, ON
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GOLD DISTANCE

Alan Wood	SOSA	305.4 km	1-35	Rockton, ON
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SILVER DISTANCE

Tillmann Steckner	London	63.5 km	Ka6	Embryo, ON
Alan Wood	SOSA	90.6 km	1-35	Rockton, ON

SILVER ALTITUDE

Charles Gower	SOSA	1520 m	Lark IS28B2	Rockton, ON
Christopher Staines	London	1360 m	ASW-19	Embryo, ON

USE OF ELECTRONIC BAROGRAPHS

Currently I am pursuing the possibility of accepting the EW electronic barograph for use in Canada. FAI has indicated that countries may authorize its use for flights up to 500 km or 5000 metres. I am concerned about what procedures for use are necessary to permit full assurance of the documentation of flights using this barograph. As a result of requests from a couple of SAC members I am seeking information from the British Gliding Association and the Soaring Society of America.

A cause des efforts d'Albert Sorignet, maintenant nous avons des formes de demande de brevets en français. On peut les demander du bureau national.

ACCIDENTS

Perhaps because of the wet spring Canada had, perhaps we did most things right, so as of the beginning of June only three accident reports were received. Two of these were to towplanes; a Citabria suffered a broken landing gear and a Bellanca's brake line broke, both resulting in insurance claims.

The first reported glider accident was the flip-over of a Pilatus after an otherwise routine flight. The pilot's words tell the story:

"During a routine flight, winds increased in strength rapidly. After being warned that they were expected to increase even more, I decided to land. After a safe landing on the runway, I deployed full spoilers and got out of the cockpit. While attempting to secure the airplane, a gust lifted the nose and flipped it onto its back.

There is truth in the saying, 'learn from other people's mistakes because you won't live long enough to make them all yourself'. So learn from mine — after landing in strong winds where gusts may approach or exceed the flying speed of your aircraft, STAY IN THE COCKPIT and wait for help. Don't count on the spoilers to keep it on the ground."

Amen to that.

George Eckschmiedt
member, Flight Training & Safety Committee

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FAI Records

**Russ Flint, 96 Harvard Avenue,
Winnipeg, MB R3M 0K4 (204) 453-6642**

400 Speed-to-Goal — Open, 81.5 km/h, 6 June 1990, Tony Burton, RS-15, C-GPUB. Flown from Claresholm, AB to Swift Current, SK. This record had been previously unclaimed.

Westway parachute ad

SIGNIFICANT FLIGHT

Tony Burton, 6 June, RS-15, C-GPUB, from Claresholm, AB to Indian Head A/P, SK. flying 716 km enroute to Nationals in 8:37h, also setting 400 km speed-to-goal record to Swift Current, SK. Conditions slow on first 200 km of flight to Medicine Hat, taking 3:20h — thereafter, 5-6 kts and a 11,000 foot cloud-base made the flight fairly straightforward.

SAC AFFAIRS

THE SEARCH FOR MISSING FREE FLIGHT BACK ISSUES

We are trying to assemble a complete set of free flight issues for both SAC historical and for research purposes (Ursula has found old back issues a vital resource in compiling our records history, for example). I hope that there are a few senior members of SAC out there who are both packrats and willing to part with selected copies if they haven't really looked at them in the last few decades.

The following are issues which I need:

1951-Sep, 1955-Apr, 1958-after Mar,
1959-Jan/Feb/Mar/Jun to Aug/Nov/Dec,
1960-all except Jan/Feb,
1961-all except Mar,
1962-all, 1963-all, 1964-all except Mar/Sep,
1965-all, 1966-all except Apr/Sep,
1967-Feb/Mar/May/Dec,
1970-Mar, 1973-Aug/Sep/Oct/Nov,
1974-Jan/Mar/Apr

There is the possibility that some of these don't exist in the first place, as some printings of free flight were irregular. Therefore I would also like information on which of the above list were never printed. If you do have some of these but can't bear to part with them, I will cover any expenses you have to make photocopies. Note also that I would be happy to loan out or copy selected pages of old free flights for members who are pursuing their own research efforts.

Tony Burton, editor

INSURANCE ADDITIONS

In response to requests by some government funding bodies and provincial soaring associations, SAC has approved the inclusion of those bodies, on an as-needed basis, as 'Additional Insureds'. To explain the significance of this, our broker writes, in part:

... "The following are added to your policy as Additional Insureds under the Liability section of your policy but only with respect to the operations of the Named Insured — All Provincial and Federal funding bodies; all Provincial Soaring Committees."

This clause provides the above organizations with liability protection under your policy but only for claims resulting from the direct actions of the Named Insured (the SAC and its member clubs and individual members). It does not limit in any way your limit of liability covered under the above policies. It does however provide for payment in defence and settlement of claims brought against the Additional Insureds as a result of the operations of the Soaring Association of Canada.

An example of this might be a situation where a Provincial funding body provided monies to conduct a Sunday afternoon demonstration

by a local SAC club with club aircraft. If an accident were to result a liability suit would likely be brought against SAC, the member club, and possibly the Provincial funding body. They would be defended as one entity. This coverage is strictly to protect the Additional Insured against liability arising out of the operations of SAC. The coverage is not for the direct protection of the Additional Insured to protect them against Liability arising out of their own activities, only that of the SAC . . .

Bryce Stout, SAC Insurance Chairman

NATIONAL OFFICE

Since joining the Soaring Association three and a half years ago I have been witness to tremendous growth and change here at the National Office. This association has wonderful volunteers. Thanks.

Starting with improvements to our membership support last year, our new accounting and insurance program was implemented this year and is working very well. All of these changes will save us a lot of time and will allow us to streamline our administration and serve you better.

A memo and applications for the summer instructors courses was sent out to all CFIs across the country from Ian Oldaker, dated 23 May. This memo with applications contains valuable information. If your CFI has not received a copy contact us and we will be happy to mail him an additional one.

I hope everyone have received their insurance liability cards. If you have not, again, please let us know. The memberships for clubs are flowing in quite steadily at this time of the year and all insurance premiums have been received. We have lots of supplies on hand, so if there is anything you need, order it. Have a great summer!

Nancy Nault, Executive Secretary

DIRECTOR-AT-LARGE REPORT

If, recently, you have completed your licence validation certificate medical and wondered why your new licence hasn't arrived after the normal 60 day waiting period, it is because there is a large backlog stuck somewhere in the bureaucracy — be patient, the waiting period has been extended to six months.

Submission of Accident/Incident reports last year was up and our insurance claims down, a state of affairs we should continue. These reports are the fuel needed by the Flight Training & Safety Committee to review and perfect our training methods and instructor course content. Their completion should be the automatic result of any incident observed in a

club, which should cause a review of the incident in the club as well as add to the current state of information available to the FT&S Committee. It is obvious that many clubs place little value on this procedure which is shortsighted and selfish for they are not allowing the rest of us to share and gain from their experience. We have such a short season that we should take full advantage of every avenue available to improve our procedures and training and provide current information to the FT&S Committee.

Our National Office improved the procedure for submitting the annual insurance premiums, which up to now has taken an inordinate amount of time both for the clubs and the office. The problem was the calculation of the various premiums for each club glider done by the clubs which was submitted to the office. The percentage of error was low but sufficient to cause constant checking and rechecking to ensure accuracy. To improve the procedure for 1990, each club received a new computer printout incorporating premium calculations for each of their aircraft based on the previous year's fleet and coverage requested. The results have been excellent and this year by the first week in May the premiums were in and, with minor exceptions, all were accurate. Thank you to the clubs who responded with alacrity, to Jim McCollum who designed the program, and to Nancy Nault for her cheerful administration of the various phases. In addition, the Insurance Committee under Bryce Stout negotiated a favourable contract with our insurance company which is to all our advantage.

Gordon Bruce

MARITIMES REPORT

The Bluenose club got off to a flying start this year on the Easter weekend; warm sunny weather and post-winter checkouts galore. We thought maybe it was a harbinger of the season to come but no such luck. In early May the weather turned cold, cloudy, and wet — so wet in fact that we had to cancel most of our flying training week in the middle of the month because the field was just too wet to fly from.

Since then, Bluenose has managed to make up most of the training days through extended weekends so at this writing the students are just about where they should be. Three have soloed and a couple more are nearly ready.

The club has two active winches now, one confined to field operations and the other available for afield or afar. Mid-June we're planning to take it and a couple of gliders to Debert airfield, about 100 kilometres away, and share the runways with the Air Cadets. Debert is a civilian airport, and the Cadets have been training there for the past few years to get away from the military traffic at CFB Greenwood.

The weather is looking up again now so we're looking forward (with fingers crossed) to a good soaring season.

Gordon Waugh, Maritime Zone Director

Trading Post

SINGLE SEAT

1-26A, standard instruments, in excellent shape. A delightful floater for only \$7000. Call (416) 929-5801.

TERN, excellent condition, standard instruments plus electric TE vario with audio, calibrated speed ring, solar battery charger, Gelcel, Radair 10s radio, chute. \$4500. Ron Lien, Regina (306) 789-6366 eves.

HP-14T, C-FAXH, 17m, 42/1, excellent condition, electric vario (audio & TE), T&B, radio, O2, OK barograph, chute, TP cameras, adjust. cushions and headrest. Metal trailer with good balance and handling. Reduced to \$15,500. Mark Gluck (604) 261-5361.

Ka6E, C-GTXP, 730h, good condition, metal trailer, full instrumentation, O2, chute, current CoA. \$11,000 or best offer. Call Morvyn Patterson (403) 458-9527 or Barb MacKintosh (403) 472-1634.

K8 C-FZKQ with encl trailer; needs minor work. Best offer. Windsor Gliding Club Eric Durance (519) 969-7889 H.

DART 17m, fixed gear, standard instruments, radio, O2, chute, enclosed trailer. In excellent condition. \$US6500. (307) 733-6888 (H)

PHOEBUS C, C-FVKY, 17m, standard instruments, radio, T&B, O2, chute. Encl alum trailer. Refinished in 1988. \$20,000. Keith Deller, Calgary (403) 237-7611(B), 281-8776 (H).

KESTREL 19, only two owners, used by aging pilot who likes to soar, 1000 TT but few takeoffs with same number of landings and no damage. No gel coat cracks. All ADs done. Best climb and L/D for your \$\$\$. Complete with trailer and your choice of instruments. John Firth (613) 731-6997.

MISCELLANEOUS

Wanted, 1-34, 1-36, or good 1-26E, with trailer. Any of: TE, encl trailer, O2, etc an asset. Adam Hunt, Box 326 Southport, MB R0H 1N0, (204) 428-3283.

Wanted for club ship, a medium performance glass ship, ASW-19, etc. fully equipped and in good condition. If you are interested in selling yours, contact CVVQ, c/o Jean-Guy Helie, (418) 875-2005.

Ogar motorglider — as is, needs work; engine zero time; electrical has been removed and requires rework; exterior needs work. \$15,000 or offers. Dave Puckrin 12644 - 126 Street, Edmonton, AB T5L 0X7 (403) 451-3660 (B) 459-8535 (H).

Ground station wanted, preferably a Genave 100. Must be in good condition. Andrew Jackson (306) 525-6741 days or 584-0302 eves.

Flying High ad

Radair 10s radio, **Ball 100** elec vario, mechanical vario. O2 equipment, **A20 regulator, blinker, mask** with pate, mike, earphones, etc. Kevin Bennett (403) 949-2589 (H), 237-5570 (B), fax 260-2966.

K7 Canopy, brand new, still in the box. Sold at cost. Call Marek at (403) 594-6883 evenings.

Instruments, ASI, altimeter, mechanical vario. Ballast bags for Libelle 201B. Chute, 28 ft military backpack with Capewell quick releases. Eric Durance (519) 969-7889 (H) 973-2728 (B).

Parachute, 24' Phantom canopy in "Slimline" container (see "Flying High" ad in 2/90). Very thin, light, flexible. Leftover from Alcor project. Tested acid-free and repacked. \$970 (that's 30% off). Tony Burton (403) 625-4563.

15m aluminum trailer, fittings for wings and stab, anchor points for fuselage. Solar fan. Very stable. \$2000. **Wanted, Pik20D** or equiv. in price & performance. Brian Hollington (604) 942-6716, Ken Langland (604) 271-0215

Phoebus A/B wings and a Phoebus fuselage for sale. Paul Gaines (404) 977-4444.

TWO SEAT

K7, out of service because of old glue. Canopy and instruments not included. Elevators serviced in 1990. Wings and trailer need repair. Good for restoration project or parts, \$2000 or offer. Cold Lake Soaring Club, c/o Marek (403) 594-7862 (W), 594-6883 eves.

K7 C-FWRX with encl. trailer, needs wings recovered. best offer. Windsor Gliding Club Eric Durance (519) 969-7889 H

SUPPLIERS

REPAIRS & MAINTENANCE

Sunaero Aviation. Glider repairs in fibreglass, wood, & metal. Jerry Vesely, Box 1928, Claresholm, AB T0L 0T0 (403) 625-3155 (B), 625-3871 (H).

Vankleek Sailplanes Ltd. Specializing in sailplane repairs in wood, metal, or composites. Call Günther Geyer-Doersch (613) 678-2694.

XU Aviation Ltd. Repairs in wood, metal and composites. C. Eaves (519) 452-1240 (B), 268-8973 (H).

INSTRUMENTS & OTHER STUFF

Barograph Calibrations, most makes and models. Walter Chmela, (416) 221-3888 (B), 223-6487 (H), #203, 4750 Yonge Street, Willowdale ON M2N 5M6

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Schempp-Hirth. Nimbus, Janus, Ventus, Discus. Al Schreiter, 3298 Lonefeather Cres, Mississauga, ON L4Y 3G5 (416) 625-0400 (H), 597-1999 (B).

Schleicher. ASK-21, 23B, ASW-20B, 22B, 24. Ulli Werneburg, 1450 Goth Avenue, Gloucester, ON K1T 1E4 (613) 523-2581.

Schweizer parts. Walter Chmela, (416) 221-3888 (B), 223-6487 (H), #203, 4750 Yonge Street, Willowdale ON M2N 5M6.

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SOARING PILOT — a magazine dedicated to the kind of information you want to know about. Canadian subscriptions \$US28 second class, \$US40 first class. MC and Visa accepted. Soaring Pilot Magazine, 1913 Fairwood Lane, State College, PA 16803. (814) 237-4760. A Tom Knauff/Doris Grove production.

AUSTRALIAN GLIDING — the journal of the Gliding Federation of Australia. Published monthly. \$A38.50 surface mail, \$A52 airmail per annum. Payable by international money order, Visa, Mastercard. Box 1650, GPO, Adelaide, South Australia 5001.

NEW ZEALAND GLIDING KIWI — the official journal of the N.Z. Gliding Association. Published bi-monthly with international and southern hemisphere soaring news. Editor John Roake. \$US24/year. N.Z. Gliding Kiwi, Private Bag, Tauranga, New Zealand.

SAILPLANE & GLIDING — the only authoritative British magazine devoted entirely to gliding. 52 pp, bi-monthly, and plenty of colour. Cdn. agent: T.R. Beasley, Box 169, L'Original, ON K0B 1K0 or to BGA, Kimberly House, Vaughan Way, Leicester, LE1 4SG, England. £12.40 per annum (US\$20) or US\$30 air.

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