5/88
Oct/Nov

free flight • vol libre

POTPOURRI

The last time the SAC National Office moved was in July, 1981. This tiring task occurred again on 25 August 1988. All the tribulations of moving a small household with the compensations of occupying a better office, new and at less cost. Nancy and Ella did it all and discovered muscles never before present. Service during the packing stage, moving, and unpacking was obviously disturbed but not cut off and given in the usual cheerful manner. Some of the orders for supplies have been slow in being filled, but now are completed. The new phone number is (613) 739-1063.

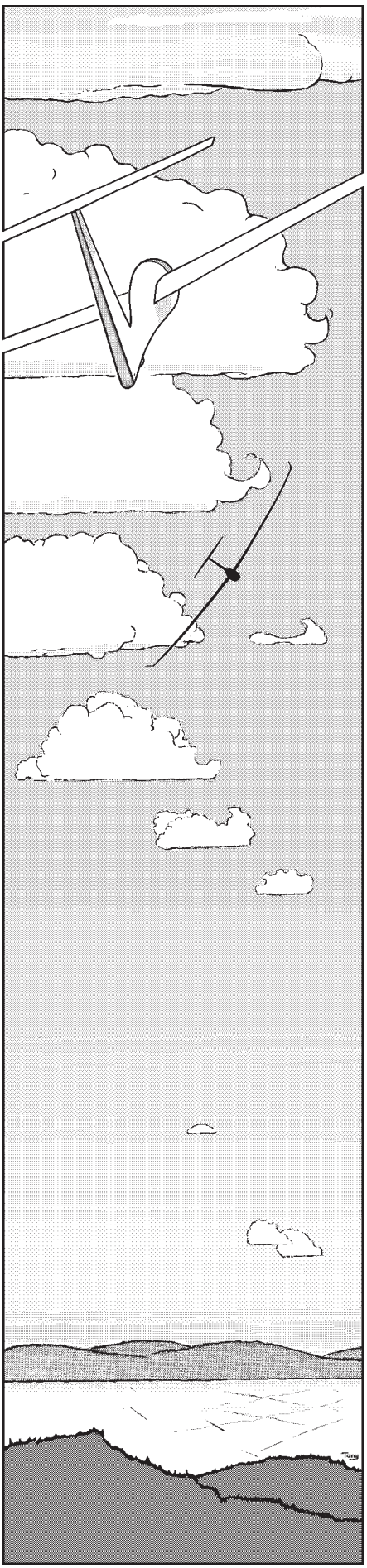
Transport Canada has been studying a method of ensuring “Maintenance of Competency” for licenced pilots which included many variations of number of hours of pilot-in-command per year, number of flights in the past year before carrying passengers, rewriting of qualifying exams after stated periods of inactivity, etc. Not a new subject and widely debated in many countries. After lengthy inputs from all parts of the Canadian aviation world, it was clear that no consensus existed except that yearly testing and monitoring an annual minimum number of hours would be an administrative nightmare. Transport Canada has, therefore, deleted the proposed “Maintenance of Competency” regulations for the time being and will introduce “recent experience” regulations. For example, a private pilot licence holder may only exercise the privileges of a licence holder if he has acted as pilot-in-command or co-pilot within the five years preceding the flight, or for carrying a passenger require that he has completed a minimum number of take-offs and landings (five) in the preceding six months.

In our sport, where we all belong to a club, much more control over competency is possible and is encouraged. Transport Canada aggressively keeps up its work in all fields of aviation training and safety and will enter our field of activity to a greater extent than at present if we show signs of laxness or poor safety standards. We have a good record and our present training programs are generally well done and appreciated by Transport Canada. However, we are weak in the monitoring of our training and ensuring that all clubs have a viable training program. Not a new subject, but one that is full of difficulties and must be addressed.

We have had fourteen accidents with the insurance claims being about $170,000. The first weeks in September brought two accidents, which contributed approximately $45,000 of the latter amount. The spring and fall are the dangerous months and on entering the fall period, we should all forget how good we are at gliding and delete any complacency which may have crept into our procedures and safety outlook. This year has been considerably better than last, but isn’t anything to crow about or cause us to drop our guard. Resolve to tighten your self-discipline, follow your checks with careful scrutiny and attention to every detail, ensure your supply of food and liquids is adequate, keep well rested and fit, relax, and make safety a way of life.

Enjoy our beautiful autumn.

Gordon Bruce



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5/88 Oct/Nov

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

DEPARTMENTS

ISSN 0827 – 2557

Cover

The wave season is upon us. The Grob 103 from the Gatineau Gliding Club flies at Lake Placid, New York with Whiteface Mountain to the right. Photo by Wolfgang Thiele

Opinions

CONTEST TIMING

I feel that an answer is required to Kevin Bennett's letter in the last issue of free flight, as that letter, in my opinion, presented a one sided view.

It seems that the annual Cowley Summer Camp has become popular for some Western Canadian and American pilots. However, to consider that this event must be held at the same specific time every year without consideration for other important events is, to say the least, inconsiderate. There was no offer to discuss a change of date for the Cowley camp some years to accommodate the Nationals.

The Canadian Nationals are just that, a national competition for all Canadian glider pilots. This contest provides a unique opportunity for comparison of one's piloting skill against the best in the country but more importantly, the contest provides the opportunity for discussion, understanding, and camaraderie between pilots and crews from across the country.

In the 1988 Nationals there were 41 pilots. I believe the largest turnout to date, but unfortunately only one Western Canadian pilot attended.

Some ten to fifteen years ago, there were a number of pilots from Western Canada who were interested in competition, particularly those of World contest team standard. If there are now no new competition-minded pilots being produced in Western Canada, so be it, but those who will venture to take part in the Canadian Nationals will find the experience rewarding both for an assessment of their flying skills and for the opportunity to discover another part of the Canadian soaring movement.

Bob Gairns, MSC

CARTOONS FROM GIL

When I asked Gil Parcell if he had any time in his declining retirement years to draw a few filler illustrations for free flight *("stocking stuffers" was my term), he responded with a wonderful stack of cartoons. Most will go into the magazine, but I've saved one for the next edition of the FAI Procedures Booklet which will come out after the updated Sporting Code is released, and one special one will show up on a soaring T-shirt which will probably be ready next spring. His first offerings appear here on pages 14 and 17.*

By way of thanks for his work, I sent him a copy of Ursula's wave soaring history and meteorology book. In reply, Gil writes:

I must thank you for your very pleasant surprise, Ursula, in the shape of "Stalking the Mountain Wave". I had no idea you were an author as well as an aviating record-setter. I've only skimmed through so far, but by George, it looks fascinating. I'm going to wait until I'm properly in the mood, turn off the TV, elevate my size 10s, and give it my fullest attention. In the meantime, may I offer my congrats and a heartfelt "Well done".

I'm glad the cartoon efforts went down alright and I've sent four more along with this letter. Talking of flying, I took my annual glider jaunt yesterday over at York Soaring. With all that forest fire smoke from Yellowstone Park obscuring the sun, there wasn't much of anything to stay up with. You could actually smell the smoke at 2500 feet. With a 3000 foot tow I managed a 19 minute flight, hardly worth a three-hour round trip... Maybe I'd better stick to drawing goofy pictures and hacking my way around the golf course. I think I'm getting hooked on the game .... Thanks again for the book of words.

A CHEAPER ASW-24

The articles about your German trip and the new ASW-24 were very interesting. I guess Germany is still the Mecca for soaring pilots and will remain so for quite a while. There was, however, an inaccuracy in your cost estimate for the ASW-24. *(I had estimated $80,000 loaded based on early 1988 information in a French magazine.)* With the current exchange rate of $0.675 per Deutschmark, following are the actual landed in Canada cost for a "deluxe importation and a "least expensive" version:

Deluxe — glider (DM 61,600), factory trailer (DM11,500), roll-on/off shipping, insurance, etc. (DM 3,000), full instruments (DM 7,000, totals DM 83,000 or **$62,823** (12% FST incl.).
Minimum — glider (DM 61,600), "basic" instruments (DM 3,000), crate and container shipping (DM 7,000), totals $54,129 (FST incl.) plus $2,500 for homebuilt trailer gives **$56,629**.

Of course, provincial sales tax would also have to be added where applicable. *(Assuming 8% Ontario purchaser — totals become $67,849 for the deluxe and $60,959 for minimum package. Tony)*

So you can see that the cost, while still high, is considerably less than the $80,000 mentioned in the 4/88 free flight article.

Ulli Werneburg
Canadian Schleicher dealer

continued on page 19

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.

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Material published in **free flight** is contributed by individuals or clubs for the enjoyment of Canadian soaring enthusiasts. The accuracy of the material is the responsibility of the contributor. No payment is offered for submitted material. All individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest. Prints (B&W) are preferred, colour prints and slides are acceptable. Negatives can be used if accompanied by a print.

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

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

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5 Deadline for contributions
5th day of each ODD month

L'ASSOCIATION CANADIENNE DE VOL À VOILE

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

L'ASSOCIATION est membre de l'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'ASSOCIATION.

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

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

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

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

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

Pour changements d'adresse et abonnements aux non membres de l'ACVV ($18 par an, $EU18 dans les Etats Unis, $EU21 outre-mer) veuillez contacter le bureau national.

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Box 1916
Claresholm, Alberta T0L 0T0

Address for courier service:
c/o Claresholm Local Press

COMMERCIAL ADVERTISING
National Office (613) 739-1063

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5

Gerhard Schaefer

THE WESTERN INSTRUCTORS' COURSE

Gerhard Schaefer
Edmonton Soaring Club

This year, if you wanted to be an instructor — smart as a fox — you went three miles past the foxhole to arrive at the Starbuck Gliderport. Mike Apps, accompanying me on the trip, had no problem finding the right turnoff — he to give the Western course in future years, me to take it now. (The last time he was there it was a bit harder to spot the tiny field from the air after racing over 1120 km from Edmonton along with Dave Marsden.)

The Winnipeg Gliding Club moved to Starbuck field five years ago and now proudly presents triangular runways, a huge white hangar, and a brand new government-supported "Training Centre". The 90-odd members are well-served by their fleet of two Citabrias, a pair of 2-33s, a two-place Lark, and a Jantar. What was once an old farmyard shelterbelt is now a beautiful campground with a firepit, outside wash and shower stands, and five outhouses. During the course, meals-on-wheels were provided by Lois Rutkouski (her five-star chocolate cookies made my recipe collection) and delivered from Winnipeg every day. This was to be our home for the next seven days and nights, and we were reintroduced to gliding and the art of teaching it.

When we couldn't fly, course director Ian Oldaker lectured us: when the winds gusted to 40 knots, when the towplanes were down he lectured us, when the temperature went to 35 degrees Celcius, when the lightning was all around he lectured, he started when we sat down bleary-eyed at 0830 and he didn't quit until 2000 and half of his ten students succumbed to hunger and thirst. He wasn't the only taskmaster though; one day Fred Kisil gave us a 12 hour non-stop presentation when Ian was not available!

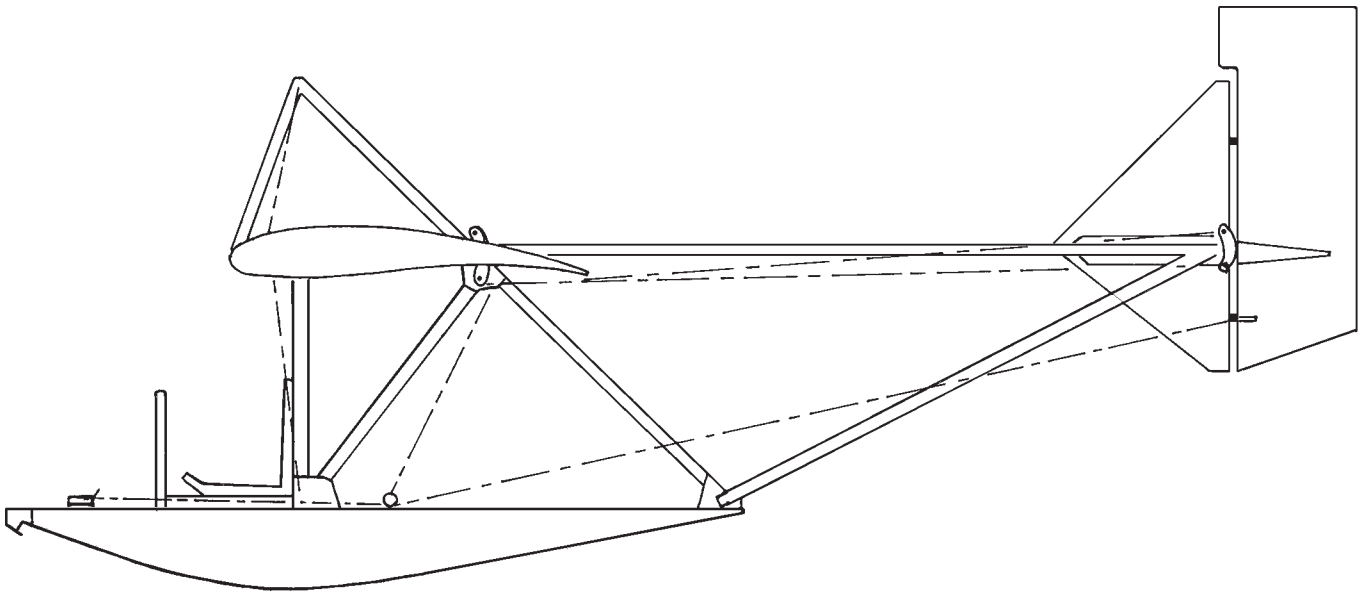
An evening invitation to Winnipeg's IMAX theatre presentations of "The Dream is Alive" and "Hail Columbia" was a welcome diversion from talking into a recorder in flight and having your instructional technique dissected later. Thanks to SAC for making the special arrangements.

On Friday evening near the end of the course we were treated to a barbecue by the club members where wine and beer was flowing freely, and I have seldom seen a friendlier bunch of people — they didn't even seem to mind when their guests excused themselves one after another soon after supper was over to do some final cramming for the exam which was to be given the next morning. Our apologies to Paul Moffat who prepared the food and drink, but studying came first after all. We, and ten other Winnipeggers who wrote an instructor's upgrading exam, all made it alright.

Even though all of us were dragging our tails at the end, I think I can speak for all that it was an intense but very worthwhile experience. As for me personally, I can only say that my respect for instructors grew tremendously. Every glider pilot could benefit from attending an instructors' refresher course even if they weren't going to teach — you learn a lot. The people on the course were Peter Barnett and Ivan Fedyna from Calgary, Ian Bell and Mike McKay from CFB Cold Lake, Dave Woodcock from Medicine Hat, John Toles and Doug Campbell from Saskatoon, Randy Stoykewich and Mark Brown from Winnipeg, and myself.

On my way home, the fox family of four couldn't escape my camera as I sneaked up on them. It was a nice reward, especially since nobody else had been that fortunate before. How smart can one get in one week? □

CHECK-OUT ON THE ZÖGLING



Harold Eley
Regina Soaring Club

During a visit to Black Forest Gliderport in Colorado in 1979, we had a chance to check-out on just about everything they had. One thing I missed out on, however, was the Zögling primary! The owners had taken it away about six months ago! The Zögling isn't exactly a wave machine, but would it have been so "far-out" for me to fly it if I really had the chance?

Let me take you back to "once upon a time", and "down on the farm" where we once had a Zögling glider for real! How did this come about? Well, in the early thirties and for the magnificent sum of $35, brother Norman managed to buy a partly built glider from a would-be aviator in Winnipeg. It was no picnic getting the glider completed due to time, money and workshop constraints. I could tell a whole story about the building period but in spite of everything the glider was ready to fly by the late thirties.

Let me describe the Zögling! Set a kitchen chair astride a 2x10 keel placed on edge; add a pylon on which to hang wings; add some 2x2 outriggers to suspend the tail; brace the whole thing with steel piano wire and you should have the general picture.

The controls were conventional, with the stick standing right out in front of you. The rudder bar was a piece of 1x2 oak with notches for your feet so they wouldn't slip off. The release ring was held in your left hand and connected by free cable to the hook in front, so you'd better not drop it!

The instruments never failed because there weren't any; the wind in your face told you all you needed to know. Overall you couldn't complain of a cramped cockpit; it was nice and airy with perfect visibility. Just don't fall off!

The performance was not spectacular: on a good day at 30 mph you should get a six to one glide angle at six ft/sec sink. The drawing above shows a side view of a Zögling primary.

Once the glider was finished we had to learn to fly it. Naturally Norman learned first! He was the oldest, the bravest, the builder, the chief engineer, and most important, he was the owner, so the first trial was up to him. In all fairness, however, we all got a shot at it; even us kids! Even the hired man got a crack at it. Unfortunately, he never graduated because Norm washed him out after a bad landing on his first hop-flight.

As standard practice, the trainee was required to "wind-practice" until he could hold the glider level in a breeze. Next he graduated to ground slides behind our faithful Ford Model A. The driver made sure to drive just below flying speed until the pilot got the "feel" of it. From there on it was just a little more speed and you were up, up, and away. What a feeling!

Because of the low power of the Model A, we weren't able to achieve great heights; most flights went to about 150 to 250 feet. When you consider the marginal glider performance you can see we weren't able to do much maneuvering (such as spins and outside loops!) and, in fact, we only had time for the gentlest of turns.

I can remember a few other highlights, and one of these seems incredible today. On one or two occasions a smaller passenger — say a 10 or 11 year old boy — was fitted in the V under the wing with feet placed on the flying wire fittings. He was obliged to hang onto the vertical framing for support. Today this method of taking dual would probably be frowned upon. For my own part and being rather small, I was obliged to carry ballast to keep the c of g within limits. For this Norm found some suitable steel plates which he bolted near the front of the skid. I was also provided with extension blocks on the rudder bar.

There was a lot of work involved before we ever got to fly. (Things haven't changed so much after all, have they?) Even the rope was homemade: we were fortunate in having a rope making machine and managed to "borrow" enough binder twine from dad to make the 400 feet or so of 1/4 inch sisal rope. There was also lots of running wing tips especially for bringing the glider back to position.

Norm devised an extended carrier on the back of the Model A pick-up so the glider could ride back in comfort. The Model A is a whole story of its own and even though underpowered, it made a good many tows — too bad we didn't keep logs. Many visitors were also lured into trying out their Chevys or Grey Darts etc., so the Model A did get a few breaks.

But like all things, our primary gliding days came to an end when the Zögling suffered wind damage one night. Shortly after that, Norman and Art went into the service and the glider never did get fully repaired. The Zögling is now little more than a pile of tattered parts. We all have this vision of restoring it some day, then making that one last flight and then donating it to the museum. Who knows, maybe history will repeat itself! □

KEVIN GOES TO CAMP

Misadventures in going to fly . . .

Kevin Bennett Cu Nim

It's Friday and it's time to go to the annual Cowley Summer Camp. Both Joanne and I leave work at four, rendevous, and head home to finish the last minute arrangements. Check the oil, transmission fluid, window washer fluid, brake fluid, power steering fluid, tire pressure, water the plants, grab the perishables, pack the suitcases, grab the coat, and it's off to Black Diamond to collect the house trailer at the club. Check the lights, safety chain, and we depart at 6:00 pm. After stopping in Black Diamond to gas up, we were finally on our way — for the first trip.

The plan was to drop the house trailer and Joanne at the Cowley campground and then return to Black Diamond for "X-ray One". The total round trip would take me about 4-1/2 hours (or so I thought), so I expected to be in Cowley with the Ventus around 1030. I had decided to take the back road (the direct route) instead of the main highway via Claresholm — Fort Macleod (the indirect route). Since it hadn't rained in some time (drought, you see), the back road was reported to be in reasonable condition despite an 18 km stretch south of Longview that was under construction to be actually paved at long last. This route cuts about 60 km off a one-way trip, so I figured I'd save about two hours for the total trip.

Our '81 Chevrolet Caprice was slightly sluggish with the house trailer behind, particularly on the uphill climbs. The road was clear with very little dust except for the blue smoke from my exhaust. Well, after 180,000 km on the engine, I guess I shouldn't complain too much about the "fill-up the oil, check the gas" routine. The trip was uneventful, the sun was shining, with the normal spectacular scenery of the mountains and the Porcupine Hills, the wind was *not* blowing, and there was very little traffic. In fact, one has to beware at nights on this road since if one gets stranded (no service stations, no human beings) one would have to either walk a long way to civilization or sleep in the car.

We arrived in Cowley shortly before 8 pm to a still sparsely populated airstrip. Linda and Stu Tittle had arrived from Oregon. Andrew Jackson from Regina (formerly of Edmonton, and longing for Calgary) were also there. I pulled the trailer over to my normal spot next to the Tittles. After the hellos, we unpacked the car, piling the stuff on the ground, and I unhitched the house trailer, planted the pink flamingos, kissed Joanne goodbye and left for Black Diamond at around 8:00. Without a trailer behind, one can travel at warp speed. I arrived at the glider club, latched onto X1, filled up the oil and checked the gas, and was on the road again for the third time at about 9:30.

What a difference towing the Ventus rather than the house trailer. I could now travel at least the speed limit, and settled in for the trip. The sunsets in this valley can be fantastic, and this evening proved to be one of those cases. What do they say, "red sky at night, sailplane pilot's delight"... well, maybe tomorrow will be a good day, typical of Cowley Summer Camp with ten knot thermals, 12-14,000 asl cloudbases, the mountains, the cross-country, the ridge flying, the Porkies, the Livingstones, Waterton Park ...

I hadn't seen any traffic for a while when, BANG!! What was that, as I came back to reality? The car swerved a bit and as I decelerated, everything came back under control with the rear right tire making an awful racket. Flat wasn't the word — it looked like it hit a land mine. All that was left was a little rubber around the rim. Whew! Okay, no big deal, I've changed a tire before. It'll only take me five minutes and I'll be on my way.

I looked around to pinpoint my location .... Oh yea, there's the airstrip at the north end of the Chain Lakes, just down below me (I landed there last year). From here to Cowley was about 70-75 km as the soaring pilot flies. Open the trunk, get the jack and tire iron, jack up the car, off comes the hub cap, loosen all five nuts, and remove the ex-tire. Back to the trunk, grab the spare — damn — I forgot, I've only got one of those fake little doughnuts for a spare. I guess I'll be driving slowly the rest of the way. Wheeling it around to the side of the car, I realize the spare is flat. It was now almost dark; time check – 10, traffic check – don't waste your time. I managed to get my head kickstarted, and then a great idea — I can use the spare off the trailer.

A quick check under the trailer to try and remove the wing nut holding the trailer spare in place revealed that it probably had *never* been removed. Time for a little force. Back to the car and grab the Vicegrips. Under the trailer, stones jabbing my head, back, and behind, I couldn't see a thing. After skinning two knuckles, I found the wing nut, and with all my strength managed to torque it off. But, to my surprise, the tire didn't drop. Now what? I grabbed it and shook it, then I reefed on it again. No luck. Finally, I sat down beside the trailer and laid my size 11s across its tread. Success.

The trailer spare had the five stud holes to match my Chev, right? Wrong. It was sooo close. This must fit. I can't believe it try rotating it 90 degrees — I need some light. I can't believe it. Try again. No way, no how. In a fit, I grabbed the tire and pulled it out of the way and tossed it aside, resigned to the fact that my only choice was the flat doughnut. This is going to be a slow drive to Cowley. Meanwhile, my discarded trailer tire decided that the nearby steep terrain looked inviting for a midnight roll. I jolted to my feet and started after the tire as it disappeared through the ditch into the black surroundings. Visibility was about three feet as I tore off through the ditch, only to stumble over my tire, flat on my face in the rhubarb.

As I got back to the road edge with the tire, I saw a set of headlights finally heading my way (luckily going the same way). Before I had a chance to flag him down, he was already pulling over to see if there was a problem. Nice truck — early sixties. Looked like a Ford, but I couldn't tell in the dark. After the introductions, I explained my predicament with some embarrassment. I could read his mind. Typical city slicker, helpless in the bush. It turned out that Jim here was going my way. He had been rebuilding this old truck and it was on its maiden voyage. Jim was quite proud of this beast and took about ten minutes to show me his new toy. Finally, he dug up a 1-7/8" ball and we put it on the bumper of his truck. We moved the Ventus trailer around and hooked it up, and I parked my car (with the doughnut on) about two km further down at a roadside turnout.

I grabbed my coat, wallet, and car keys, locked up, and hopped in with Jim, who offered to pull the Ventus to the airfield for me. He was on his way home to Beaver Mines, just west of Pincher Creek as he commuted weekly to Calgary to work. Turns out that his parents live adjacent to our airstrip at Black Diamond, and he'd been out to the field for an intro ride a couple years back. Hence, when he saw the glider trailer on the road he immediately pulled over.

Jim had done a nice job with this truck. The interior was mint, three-speed on the floor, all the gauges worked except the gas gauge (or so I thought) — it had been sitting on "E" ever since I hopped in. Jim told me not to worry about the gauge because he had two fuel tanks and he had just filled the other one up at Longview. Sure enough, about two milliseconds later the engine coughs, lurches, and dies. Jim is madly scrambling around with his left hand down by the side of the seat, cursing all the while. I assumed he was looking for the switch to change tanks.

Jim had forgotten to hook up the second tank to the switch before he left Calgary.

We coasted to a stop along the side of the road and I sat and watched Jim rummage through the back of his truck — all the while not saying a word. He was now as embarrassed as I had been 20 minutes earlier. I offered my services, for no other reason than to just find out what the problem was, but more importantly to see if

continued on next page

there was a solution. We attempted to connect the tank fuel line into the switch in the dark crawling underneath the truck (I was starting to get used to his now), but to no avail.

Plan two was then initiated, which was to connect the second tank directly and bypass the switch. After more fiddling around, we found that the fuel line was about four inches too short to make a splice. Now what? Hey Jim, will this help, as I handed him a BIC ballpoint pen out of one of his ten tool boxes in the back of the truck. For a split second he didn't acknowledge, but then he figured it out. He took the pen, pulled the ink cartridge out, taped up the air hole in the pen housing, and it worked perfectly as a connector. Within minutes we were on our way again.

We arrived at the Cowley airstrip at 12:40 am minus the Chev, but none the worse for wear. I thanked Jim immensely, invited him out for an intro flight, which he promised to take me up on. I tied down X1 and trailer.

Walking over toward the house trailer, I thought that, no doubt, Joanne will be asleep by now. But as I approached I could make out what appeared to be our luggage and food sitting right where I had put it when I unpacked the car. Try the doorknob. Locked. Well, where is she? There was a light on a few trailers over — knock, knock, and enter.

"Hello, everyone."
"What took you so long, Kevin?"
"Long story, I'll tell you later. How come the trailer's locked, Joanne?"
"You locked me out when you left!"
"It doesn't matter, let's just open it and go to bed ... wait a minute, I don't have the keys."
"Where are they?"
"They're in the car."
"Where's the car?"
"It's at Chain Lakes."
"Where's the glider?"
"It's here safe and sound."
"..?.."

Time for explanation. You see, our miscellaneous keys (glider trailer, house trailer, mailbox etc.) all reside on a separate key ring which normally stays in the car. Of course, I never thought to bring them when I parked the Chev. Now what? I had originally planned to seek some assistance in the morning to retrieve my car, but it appeared like there was no time like the present. Where's Jos so I can borrow the real spare out of his Chev. I found his tent and luckily he was still awake. The Flying Dutchman had just gone to bed. After another long-winded explanation, Jos said he'd drive me back to Chain Lakes.

The trip to Chain Lakes and return took another two hours including the tire change, so we both got back to Cowley at about 3:00 am — Jos got a little lost in the dark — but not much. The car retrieve was uneventful.... Well, the pilots' meeting will begin at 9 am so we better get some sleep after the ten-hour odyssey getting to Cowley. This "arrival" adventure beat any retrieve I've ever had — and the Camp was sure worth it. □

THE FORGOTTEN PIONEERS

Canada's earliest gliding expedition and the Boeing Steel Truss Glider

Lloyd Bungey

Many of today's glider pilots think nothing of driving vast distances to attend national competitions, friendly meets, and wave flying camps. Back in the late '20s and early '30s, the young enthusiasts who started the first Canadian gliding clubs were largely limited to flying in their local area. The poor performance of the early primary gliders and the rough state of the country's roads made any gliding excursion a major undertaking.

Norm Bruce, of Alberta, "The Father of Gliding in Western Canada", and two associates made a major expedition across the prairies in 1935. His 1948 account of the excursion by "The Canadian Glider Boosters" has been published both by SAC and the Canadian Aviation Historical Society. However, some recent research has brought to light an even earlier expedition of major proportions which covered some twelve hundred miles within British Columbia. This expedition took place in 1930, when Willard Purdy and Leo Ducoffre took a Boeing primary from Vancouver through the Okanagan Valley and across to Trail.

Like the later expedition by "The Canadian Glider Boosters", the trip consisted of much travel by road followed by a little flying at stops along the way. The purpose of the expedition was to promote interest in the sport of gliding but, whereas Norm Bruce and his associates were to make their trip purely for the love of the sport, Purdy and Ducoffre's was tainted by commercial considerations. Their expedition was made under the sponsorship of Boeing Aircraft of Canada, who were attempting to offset the ravages of the onset of the Depression by catering for the new latest fad for the aviation enthusiast, the primary glider.

In the late 1920s Lindberg's trans-Atlantic flight had brought aviation to the forefront. The contemporaneous development of the simple, rugged primary glider enabled impecunious teenagers to enter the realm of flight by constructing one of these devices in a group venture. Out of such a project came Canada's only mass produced glider. According to the June, 1930 issue of "The Boeing News":

> "During a series of free evening training classes operated by the company for the benefit of its apprentices, a group of boys in the aircraft plant built themselves a primary glider."

The company, which had been established in 1929 as a subsidiary of the Seattle-based Boeing Aircraft Company, was not slow to see a potential new product in this glider, especially since orders for their C204 flying boats had disappeared with the drying up of the economy and with it the cessation of much mining activity. By June, 1930, the "Boeing Steel Truss Glider" was being advertised for sale at the low cost of $495.

The services of the Aero Club of British Columbia's chief instructor, Hal Wilson, were obtained for daily demonstration flights at the 1930 Canadian Pacific Exposition held in Vancouver in August. As a result of these flights, the company was invited to fly its glider at the Salmon Arm Labour Day Community Sports, the organizers offering a little financial inducement. The offer was accepted and the company sent Purdy and Ducoffre off to Salmon Arm and points beyond, to exhibit and demonstrate the glider and possibly obtain some sales.

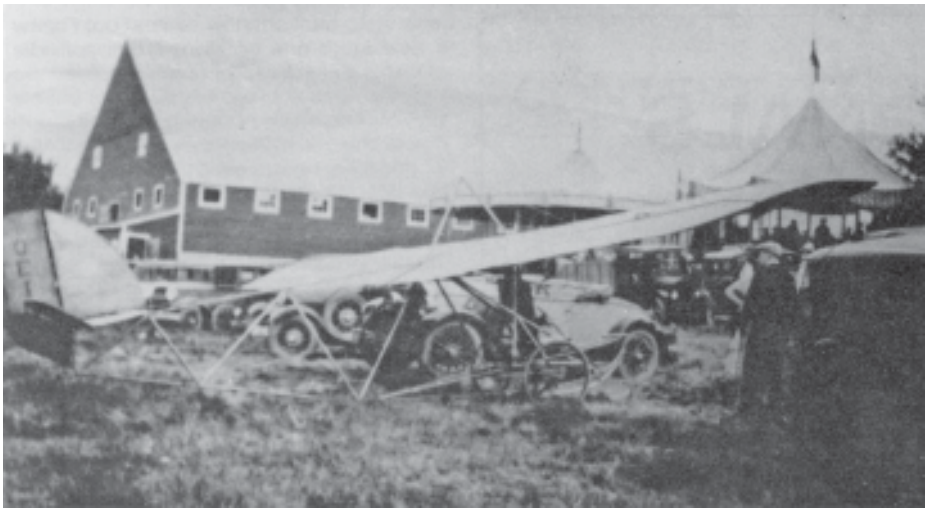
Purdy's report published in the "Vancouver Sun" after the pair's return, ignored the commercial motives, which were undoubtedly a major reason for the trip, and skillfully used his appraisal of the excellent gliding prospects for the various areas to distract from the paucity of flights actually made:

"We had often heard that the interior of British Columbia offered a number of ideal gliding sites, with rolling hilly country, free from vegetation and with fairly uniform and dependable winds." These reports were so consistently favourable that we deemed a practical investigation would be in order. An expedition was therefore sponsored by the Boeing Aircraft of Canada with a little financial assistance from air-minded citizens of Salmon Arm.

On a sunny afternoon last summer, we left Vancouver. "We", besides myself (Willard Purdy), included Leo Ducoffre, a young German chap who had considerable experience in flying gliders, a green roadster, and an orange-coloured trailer, on which was packed a steel truss primary glider.

After two days of wonderful motoring along the beautiful Fraser Canyon Highway *(which we cover in about three hours today. LMB),* we arrived at Salmon Arm, our first port of call, where we were asked to put on a display as the feature of their Labour Day sports. In conducting our test flights the day before, the glider made five flights of around 300 yards.

On the big day, fate befell us in the form of a nasty cross-wind and, on our first flight, swung the glider into a fence .... The accident was not serious, and with a few spare parts from the factory and the help of a couple of high school girls to patch fabric, the glider was put back into commission.



Cliff Renfrew

The Boeing primary on display at the 1930 Armstrong Fair.

On the following Sunday, we took the glider to a more open field to give her the required tests.

Three flights were put on before a large crowd, which was thrilled at seeing, for the first time, what this mysterious looking thing was able to do. Salmon Arm, although not particularly suited to the land type glider, is an excellent spot for water gliding. *(Purdy was obviously a good PR man, not missing any opportunity at all. The Boeing primary had been tested on a set of pontoons, towed behind a speedboat and promotion of this form of flying might also bring in work for Boeing's Vancouver boat building operation. LMB)*

Armstrong presented the same terrain as its neighbour, so we put the glider on a standing exhibit at the local fair. After the fair was over, we packed the glider away on our two wheel trailer, hooked it on to the car and were off to Vernon, the northern portal of some ideal gliding country extending south to the border, and I can't say how much further.

Vernon possesses a wonderful airport within a stone's throw of the city. Through this airport a lovely stretch of straight highway, void of telephone poles, runs north and south. Here is an ideal spot to "kite" a glider with a car. This we did with a wonderful glide a mile long. The towing line came dangerously near some parked cars which forced the pilot to cut loose and glide free. As a result, our expected distance was cut short, but it was a good glide anyway. We then tried her out from a small hilltop in the vicinity, but the wind conditions were not very favourable.

Each district we visited presented a different gliding terrain. At Kelowna, for instance, we found a 100 foot bluff, on top of which was an excellent take off place. The prevailing wind, which blows against the bluff, is deflected upwards... The motorless plane was launched well back from the bluff and in sailing over it was suddenly lifted in the upcurrent and then passed out of it and drifted to a far-off landing spot near a Chinaman's tomato patch. We wished we could have spent a week there, but time was precious, and we left the following morning after endorsing Kelowna as a practical gliding area. Kelowna, like Salmon Arm, has excellent water gliding facilities.

Penticton was next. Here we found land and water conditions similar to those at Kelowna and, naturally, we were able to assure the residents of Penticton that there would be no trouble in carrying on with a glider club successfully. After Penticton, we made the long trip over Anarchist Mountain to Grand Forks.

Cliff Renfrew

Preparing to launch on 14 September 1930 at Knox Mountain near Kelowna during the tour through the Okanagan Valley. Two flights were made.

On the western slope of this mountain is a series of benches or gigantic steps all the way up to the summit, affording an abundance of fine take-off places with numerous landing fields below. Once again, we wished for more time.... Our time was running short, however, and we had to go on to Grand Forks.

In Grand Forks we found an interested trio and had a long chat with them.... Like Vernon, the city has a large natural airport. On Sunday, we staged a glide from the top of Hardy Mountain to the airport, a distance of nearly three and one half miles. Due to rainy weather and the consequent lack of useful air currents, the glider fell slightly short of its goal. The circular path which the glider took would, if straightened out, have extended past the airport. In our travels over two more mountain ranges to Trail and Rossland we found fair roads with some rough spots in and around the last mentioned. These places, I am afraid, will never have glider clubs. The country is rough and landing spots are few. Water gliding would not have much of a show there either. Enthusiasts of Nelson, where the country is mountainous and wooded, will find a wonderful spot on the Arrow Lakes.

After our visit to Rossland, we started to retrace our steps to Vancouver, visiting Penticton and Kamloops en route. From our experience on our summer trip, I have no hesitancy in prophesying that in a few years, non-stop glider flights from Grand Forks to cities in the Okanagan and even up to Salmon Arm will be quite general.

In spite of the enthusiasm with which Purdy spoke of the possibilities of long gliding flights becoming commonplace along the Okanagan Valley, we have yet to see this become a reality. Indeed, the Purdy/Ducoffre expedition must be judged a failure considering its lack of long-term results. It was left for a later generation to establish gliding clubs in the area visited and no sales of the Boeing glider are known to have resulted from the expedition.

The Boeing glider did, however, influence the future of gliding in BC. As far as is known to the author, this is the only glider to have been in commercial production in Canada. A fuller account of its history is published in the CAHS Journal, Vol. 26, No. 2 (summer 1988).

Although only small numbers of the Boeing glider were produced, several remained active in BC until the late 1940s. Only one complete glider is recorded to have been actually sold by Boeing, and that as a kit to a buyer in Quebec. Two more went as door prizes at the 1930 Canadian Pacific Exposition and one was given to the Aero Club of BC as payment for Hal Wilson's services as demonstration pilot at the same exposition. Parts for several more were stored until 1937 when Boeing Aircraft of Canada sold them off as a single lot to clear factory space for military work. □

1988 NATIONALS

Paul Moffat

A PERSONAL PERSPECTIVE

Jim Oke
from Winnipeg "Soar Tails"

My crew Paul Moffat and I made the long trip down and back to Hawkesbury from Winnipeg trailering my ASW-20, "77", so that I could fly in the contest. Having done this trip quite a few times, I knew well that there are no shortcuts available between Winnipeg and Eastern Ontario: it is simply a long, long drive. Starting out, we made the run from the Manitoba border to Thunder Bay under a lovely sky with lots of great looking cumulus clouds: typically, these were the last good soaring conditions we were to see for two weeks. Paul and I decided to follow the north shore of Lake Superior to at least catch a little scenery. Apart from some fog banks rolling in off the lake it was a nice, uneventful trip and after two fourteen-hour days, we rolled into Hawkesbury. The MSC field was covered by a dense layer of radiation fog when we arrived at midnight, but fortunately I had flown there before and knew my way around so we were able to drop off the trailer and find the clubhouse where we unrolled our sleeping bags for the night.

The Montreal Soaring Council is one of the older clubs in Canada and has been at their Hawkesbury site since 1957, so they are well set up with a comfortable clubhouse and even a nice new in-ground swimming pool. The club fleet includes ten gliders (including a Twin Astir, two single Astirs, and an LS-1) and three L-19 towplanes, which somehow get stuffed into a single smallish hangar (among other tricks, they hang three gliders from the roof of the hangar). The hangar was partly emptied out during our stay for use as a daily briefing area. The club has quite a large trailer park contingent and an active social committee so there was always something going on in the evenings. There was some sort of organized cookout or meal most evenings which took some of the cooking load off those camping out.

The whole idea was to do some flying so everyone was eagerly awaiting the practice day. This began with the overnight fog lifting to a low overcast which didn't promise too much until it suddenly broke up about noon leading to a scramble for everyone to rig and fly. Paul and I were caught in town doing some shopping and hurried back to get airborne. Pretty well everyone got up for an hour or so until a high overcast moved in and cut off the heating wherein there was a mass landing back at the field.

This was a pattern we were to see repeated for the next ten days. A quasi stationary front simply parked itself a little ditance south of the US border and a series of tiny, rapidly moving systems moved through the area giving a very mixed weather situation. These systems were rather too small to properly track on the normal surface analysis charts which made weather prediction and task setting more uncertain than usual.

The contest began with a couple of weak days with short tasks that nobody was able to complete. When even a Nimbus 3 has trouble doing a 100 km triangle, it has to be weak! The second day in my class was quite interesting with a 310 km task set. After taking off, conditions turned out to be quite weak with it proving difficult to get over 2500 agl for a start. Then a line of showers moved in, and by catching the leading edge of this disturbance it was possible to get a few better climbs and move off on course where the weather got quite nice for a while (five to six knot lift to 6000 feet).

For myself this was the best weather of the contest as I had quite a nice run with several other ships to the second turnpoint. There the weather changed again and the air was absolutely smooth as I searched in vain from 5000 down to circuit height for another climb to make it home. The smart ones simply flew out on course from the last thermal to win the day. I landed at a farm that had been settled by Empire Loyalists about two hundred years ago, one of their original buildings was still to be seen. (I also remember the cold beer in the frosted mug that I was treated to there.) The Standard class had a different task that day and despite some heroic flying in and out of the rain showers, not enough pilots made the required distance to make it a contest day.

On another day, weak conditions saw several large gaggles creeping cautiously along under virtually a solid overcast. Poor visibility (perhaps five miles in haze) and several large forests (swamps ?) added an extra element to the decision-making process. I found myself at the bottom of a gaggle about ten miles from Pendleton where the Gatineau Gliding Club flies from, getting rather frustrated as people joined above me, worked a few hundred feet up and then scraped into Pendleton. Since I wasn't too familiar with the final glide possibilities into Pendleton, and there was a

convenient farm strip nearby, I decided to simply hang on in zero sink or whatever I could find. My patience was eventually rewarded as the overcast broke and some good cumulus developed, allowing a climb to the amazing altitude of 3400 feet (amazing only after spending most of an hour below 1500). Thus, I was able to photograph the next turnpoint, Pendleton, and glide off into still air — again — to a landing within one kilometre of the winning distance for the day.

Several days followed in which the launch grid was formed up with everyone set to go, but the task was cancelled without launching due to a lack of soarable conditions. This was just as well, as by this time a wheel bearing had disintegrated on my glider trailer, the fuselage support cradle had broken, and a brake control rod had also snapped: oh yes, I also had to put a new thermostat and a set of motor mounts into my Volvo! Paul did a lot of good work in chasing down these minor repairs when I was busy with other things.

The Standard class made up their missed day when a rain shower moved in as the 15m class was about to be launched. We held as the last few Standard class sailplanes were towed off into the rain and gloom. Most landed back, but a few intrepid pilots managed to stay up and set off on the course. Eventually, enough Standard class sailplanes made the required distance for a contest day. I spent some time in the MSC swimming pool (the weather had turned sunny again) watching as sailplanes came in to photograph the nearby clubhouse which was one of the turnpoints for the day. It is amazing how much cross-country flying can be done in marginal weather conditions with persistent effort and a reasonable sailplane. The day's winner, Bob Fletcher, attributed his success to his extensive practice "soaring in the rain" in England.

The second to last day was another interesting one with a short task and rapidly changing weather. There was a five minute window to get into the first turnpoint after which the weather went flat and it was very difficult to get high enough again to make it home. I was in the "too late" group that day which cost me quite a few points. To simplify things a little bit for the retrieve, I ended up using the same field (even the same part of the same field) as I had landed in several days before. The farmer whose place I had called from before didn't bat an eye and took up our conversation where it had left off a few days before. There had not been one finish in the contest prior to this task, so the pilots each chipped in a dollar as an informal door prize for the first pilot actually to make it across the Hawkesbury finish line. This was won by Ulli Werneburg to the relief of the organizers (that someone won it).

The last day dawned with a heavy ground fog and little apparent hope for a soaring day. However, we were told to get out onto the grid and prepare for a task. The weather broke as predicted and the task was

continued on next page

CONTEST DIARY

John Bisscheroux
MSC

The competition, held at the Montreal Soaring Council field at Hawkesbury, Ontario 19-28 July proved once more to reduce the probability of good soaring days. There were 39 contestants flying in three classes, although the Open class ran "hors concours" due to only three entries. However, all participants qualified for contention for the Bacardi Trophy for best overall pilot. Specific daily results may be gleaned from the scoresheet.

July 17-18 The two practice days did not materialize but there was at least some local soaring on the 18th.

July 19 No task. The weather is typical of weather systems "bouncing" off an established Bermuda High resulting in mixed and hot conditions which would dominate the entire period except for the last day.

July 20 Task — 128.9 km triangle
MSC-Pendleton-Russell

Weather — Forecast 5000 foot cloudbase. 3/8 cu and soaring conditions to last only two to three hours.

As could be expected from the forecast, the first aircraft through the gate landed the furthest, making it to Russell and environs with later starters landing anywhere in-between.

July 21 No task.

July 22 Task — 310.5 km triangle
MSC-Arnprior-Kemptville

Weather — Forecast bases at 3–4000 feet, two to four knot thermals, occasional six knots, winds northerly ten knots.

This day saw a number of thunderstorms and rain squalls in the task area. Again the results depended on being in the right place at the right time. Some pilots deviated considerably from course and were rewarded with flying into improving conditions towards Arnprior, only to be "aux vaches" (with the cows) on the return to Kemptville, and it was a no-contest day for the Standard class. No one made it home.

July 23 Task — 167.2 km quadrilateral
MSC-Russell-Pendleton-Alexandria

Weather — Again the weatherman Sepp Froeschl didn't appear optimistic, as he sported an umbrella while giving a picture of the expected marginal soaring conditions. Thermals one to four knots, light winds, chance of cu-nim development.

Those early through the start gate (a time clock) were at an advantage and found some soaring between Pendleton and Alexandria, thus making it past Alexandria. Again none finished.

July 24 No task.

July 25 Task — 2 x 71.6 km triangle
MSC-Lachute-Rigaud

Weather — More of the same.

The Standard class ships make it a contest day for themselves only, the others being grounded due to a growing rain cloud over the field. Eight Standard pilots never get away.

(Bob Gairns adds a note here.)
Bob Fletcher did very well. Launched under an overcast, he flew towards Lachute, which was clear, found a thermal at 800 feet, climbed and flew back to Hawkesbury for a start photo, flew towards Lachute, again finding a thermal at 800, carried on to Lachute and Rigaud. Finding the weather still overcast at Hawkesbury at the end of his first circuit, he flew 20 miles south to better weather, climbed, flew back in to take his photo in rain and headed out on course once more, finally landing between Rigaud and home, having completed 1-3/4 circuits. The only other competitor to make more than one circuit was Tom Knauff, with 1-1/4 turns.

July 26 No task

July27 Task —107.1 km triangle
MSC-Pendleton-Maxville

Weather — Short periods of localized soaring conditions are forecast with a chance of overdevelopment.

Flying directly towards Pendleton looked futile and most competitors flew well to the south and found themselves making a 30 km out and return glide to take a photo of the Pendleton turnpoint. Most outlandings resulted from not making contact with soarable conditions again heading south out of Pendleton. Those that started early got the benefit of the last thermal near Maxville before that area died also. Some, therefore, were lucky (?) enough to gain sufficient height for the first finishes off the contest. Ulli Werneburg was the first pilot to make it back to Hawkesbury, and collected the $34 pot which was the brainchild of Tom Knauff (though if each pilot threw in the dollar they were supposed to, we won't let Tom do the collection in our congregation!)

July 28 Task — 225.9 km triangle
MSC-Iroquois-Summerstown

Weather — We left the best weather to the last day. The forecast was for drying conditions and thermals to 5000 feet with two to four knot thermals below 3500 and five to eight knots above.

Today was the best of all the days and saw most contestants return to Hawkesbury. Soaring conditions were steady enough to provide a nice flying day for all.

THE TROPHY WINNERS ARE ...

Bacardi Trophy — Best overall pilot
2125 points of a possible 2343 (handicapped): **Colin Bantin** (3B)

Mix Trophy — Standard Class Winner
2322 points of a possible 2726:
Bob Fletcher (90)

Mix Trophy — National Std Class Champion
1748 points of a possible 2726:
John Featherstone (5J)

MSC Trophy — 15m Class
2859 points of a possible 3129:
Ulli Werneburg (MZ)

SOSA Trophy — Best novice pilot
1365 points of a possible 2343 (handicapped): **Dave Mercer** (HZ)

Dow Trophy — fastest Std Class triangle
77.6 km/h (Day 5) **Tom Knauff** (KG)

Dow Trophy — fastest 15m Class triangle
80.2 km/h (Day 5) **Ulli Werneburg** (MZ)

announced on the grid. The day was not an especially strong one, but lasted well into the afternoon allowing most of the forty contestants to finish the 233 km task. The second leg led along the St. Lawrence River and was very scenic with ocean-going ships in the locks on the Seaway, power dams, and islands in the river making for quite a different landscape from the prairies. A fast climb to cloudbase at the last turnpoint and an easy run home also helped make up for some of the previous mediocre weather.

That evening there was a nice steak barbecue, followed by the presentation of prizes outdoors on a pleasant summer's evening to wind up the contest.

The next day saw everyone packing up tents and gliders for the trip home. It was time to say goodbye to our hosts at the Montreal Soaring Council and our fellow visitors. Paul and I visited for a few days in the Montreal area and then headed west with a stop near Toronto for Paul to buy some materials for his Ka6 repair job. We also stopped at Rockton where SOSA has its field. This was just as well because a joint in the exhaust system broke as we were on the 401 through Toronto. A very helpful SOSA member was kind enough to weld it for us so we could press on the next day. Stu Young, thanks again!

To round out our technical difficulties for the trip, we also had to do a bit of fiddling with the trailer wiring and put a new set of brake pads into the car. Finally we were back home in Winnipeg, having put about 7500 km on the car and a bit less on the trailer.

So those generally are my memories of the 1988 Nationals. It was nice to see again many of the people I had met before at contests and make a few new soaring acquaintances. Yes, I believe it really is true that it is the people you meet that make this sport unique. The facilities that MSC put at our disposal and the strong effort they had put into the social side of things made for quite a pleasant contest apart from the vagaries of the weather. The weather certainly offered a wide variety of conditions and in fact was pretty good on a few days. I considered the flying interesting and don't regret having made the trip (although I wish there had been more flying and less driving involved). □

15 METRE			Bacardi Cup		DAY 1			DAY 2			DAY 3			DAY 4			DAY 5			Total
			pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	score
1 Ulli Werneburg	MZ	ASW-20	2039	3	(37.8)	89	14	(228.0)	750	5	(112.1)	461	6	76.7	559	1	80.2	1000	1	2859
2 Wilf Krueger	K2	LS-6b	1880	7	(62.3)	212	8	(240.5)	p754	4	(84.3)	322	13	69.4	532	4	76.6	937	3	2757
3 Jim Oke	77	ASW-20	1759	9	(48.7)	144	13	(225.4)	741	7	(115.6)	478	3	(81.2)	294	7	72.9	872	7	2529
4 Harry Pölzl	KC	ASW-20B	1514	19	(37.8)	89	14	(248.0)	822	1	(91.1)	356	10	(76.9)	274	8	74.3	897	5	2438
5 Chris Wilson	W2	Mosquito	1554	16	(65.8)	229	2	(211.5)	691	10	(35.9)	80	17	64.2	513	6	70.7	p783	12	2296
6 George Green	05	Ventus	2000	4	(73.3)	267	1	(78.4)	211	12	(115.4)	477	4	72.7	544	3	66.9	767	13	2266
7 Colin Bantin	3B	ASW-20	2123	1	(65.8)	229	2	(40.7)	75	14	(116.2)	481	1	69.4	532	4	76.7	939	2	2256
8 Nick Bonnière	ST	PIK-20B	1365	24	(65.4)	227	6	(248.0)	822	1	(64.2)	221	14	(48.8)	139	15	69.3	809	10	2218
9 Walter Weir	2W	ASW-20B	1217	27	(56.9)	185	9	(248.0)	822	1	(42.0)	110	16	(45.9)	125	17	73.3	879	6	2121
10 Dave Mercer	HZ	RS-15	1365	24	(37.8)	89	14	(215.6)	705	9	(116.2)	481	1	(53.8)	163	10	56.4	583	15	2021
11 Bob Gaims	TZ	ASW-20	1437	21	(53.2)	166	12	(214.8)	p496	11	(112.4)	462	5	(55.1)	169	9	59.0	628	14	1921
12 John Seymour	SM	ASW-20B	1076	29	(65.8)	229	2	(228.0)	750	5	(115.4)	p369	9	75.9	556	2	dnc	0	17	1904
13 Robert DiPietro	DZ	ASW-20B	1384	23	(37.8)	89	14	(61.4)	149	13	(91.1)	356	10	(53.0)	159	12	72.8	870	8	1623
14 Andy Gough	94	Mini-Nim	1549	17	(37.8)	89	14	(24.7)	17	16	(110.2)	451	7	(53.0)	159	12	74.8	905	4	1621
15 Karl Doetsch	EB	ASW-20	1563	14	(65.8)	229	2	(6.7)	0	17	(91.1)	356	10	(50.2)	145	14	72.1	858	9	1588
16 Dave Frank	SR	ASW-20	1519	18	(65.4)	227	6	(6.3)	0	17	(115.7)	p371	8	(49.0)	139	15	68.7	798	11	1535
17 Dave Hogg	VQ	ASW-20	321	37	(56.9)	185	9	(229.4)	p714	8	(48.9)	145	15	dnc	0	19	dnc	0	17	1044
18 Jean-Pierre Mathieu	BP	PIK-20B	379	36	(56.9)	185	9	(36.4)	59	15	(35.9)	80	17	(27.5)	36	18	(72.7)	76	16	436
19 Frank Vaughan	OR	ASW-20	242	38	(37.8)	89	14	dnc	0	17	dnc	0	19	(53.4)	161	11	(0.0)	0	17	250
OPEN					Note: There were too few competitors for an official contest in this class.															
1 Brian Milner	GJ	Nimbus 3	1832	8	(81.2)	306	1	(245.8)	267	1	(129.2)	546	1	(97.4)	387	1	72.2	1000	1	2506
2 John Bisscheroux	YW	DG 202/1	1403	22	(37.8)	89	3	(12.2)	0	3	(91.1)	356	2	(95.3)	377	2	58.2	806	2	1628
3 Jim Henry	2C	Nimbus 2	685	33	(55.1)	115	2	(35.6)	18	2	(125.9)	p312	3	(0.0)	0	3	(214.1)	471	3	916
1 Bob Fletcher	90	DG-300	1951	5	(80.7)	304	1	(112.4)	460	1	(126.1)	531	1	56.4	308	3	57.0	719	10	2322
2 Tom Knauff	KG	Discus	2105	2	(37.8)	89	11	(128.8)	p445	2	(82.3)	312	2	72.4	343	2	77.6	1000	1	2189
3 John Featherstone	5J	Discus	1562	15	(65.8)	229	2	(91.1)	354	3	(71.6)	258	3	(50.2)	93	7	64.0	814	3	1748
4 Ed Hollestelle	A1	Discus	1951	5	(65.4)	227	8	(84.3)	320	8	(0.0)	0	9	75.6	350	1	66.5	849	2	1746
5 Jörg Stieber	JS	LS-4	1751	10	(65.8)	229	2	(63.5)	216	9	(56.4)	182	5	55.9	307	4	61.6	782	6	1716
6 Ian Spence	WW	LS-4	1660	11	(53.2)	166	9	(63.5)	216	9	(71.6)	258	3	48 .5	291	5	61.7	783	4	1714
7 André Pepin	DB	Std Jantar	1603	13	(65.8)	229	2	(91.1)	354	3	(22.1)	11	6	(48.6)	88	9	61.5	780	7	1462
8 Stewart Baillie	B1	Std Cirrus	1607	12	(65.8)	229	2	(91.1)	354	3	(0.0)	0	9	(44.5)	75	12	61.2	776	8	1434
9 Stan Janicek	DW	Hornet	1475	20	(37.8)	89	11	(109.5)	p349	7	(0.0)	0	9	(54.0)	105	6	61.7	783	4	1326
10 Ian Grant	XR	Club Lib	1316	26	(22.1)	11	14	(91.1)	354	3	(0.0)	0	9	(49.9)	92	8	53.1	666	12	1123
11 Walter Herten	SX	Std Jantar	1173	28	(65.8)	229	2	(34.3)	71	14	(22.1)	11	6	(37.8)	55	13	57.5	726	9	1092
12 Paul Thompson	T2	LS4	938	30	(46.6)	133	10	(6.6)	0	16	(0.0)	0	9	(37.8)	55	13	56.3	709	11	897
13 Robert Binette	DC	Libelle	867	31	(65.8)	229	2	(35.9)	79	12	dnc	0	9	(45.9)	80	10	(184.5)	376	15	764
14 Bryce Gormley	GO	LS-4	762	32	(0.0)	0	15	(63.5)	216	9	(22.1)	11	6	(44.9)	77	11	(216.2)	448	13	752
15 Tom Okany	TW	Std Cirrus	455	35	(14.5)	0	15	(28.7)	43	15	(0.0)	0	9	(8.1)	0	16	(214.1)	444	14	487
16 Dugald Stewart	HG	Std Cirrus	461	34	(37.8)	p28	13	(35.9)	79	12	(0.0)	0	9	(37.8)	55	13	(122.8)	234	16	396
17 Günter Geyer-Doersch	DG	DG-300	0	39	(0.0)	0	15	(11.8)	0	16	(0.0)	0	9	(0.0)	0	16	(2.1)	0	17	0
STANDARD					( ) values in brackets are distances in kilometres. "p" preceding a score indicates a penalty was applied.															

A RELIGEOUS EXPERIENCE

Outlanding with the Hutterites

Hans König, '24'
Cu Nim

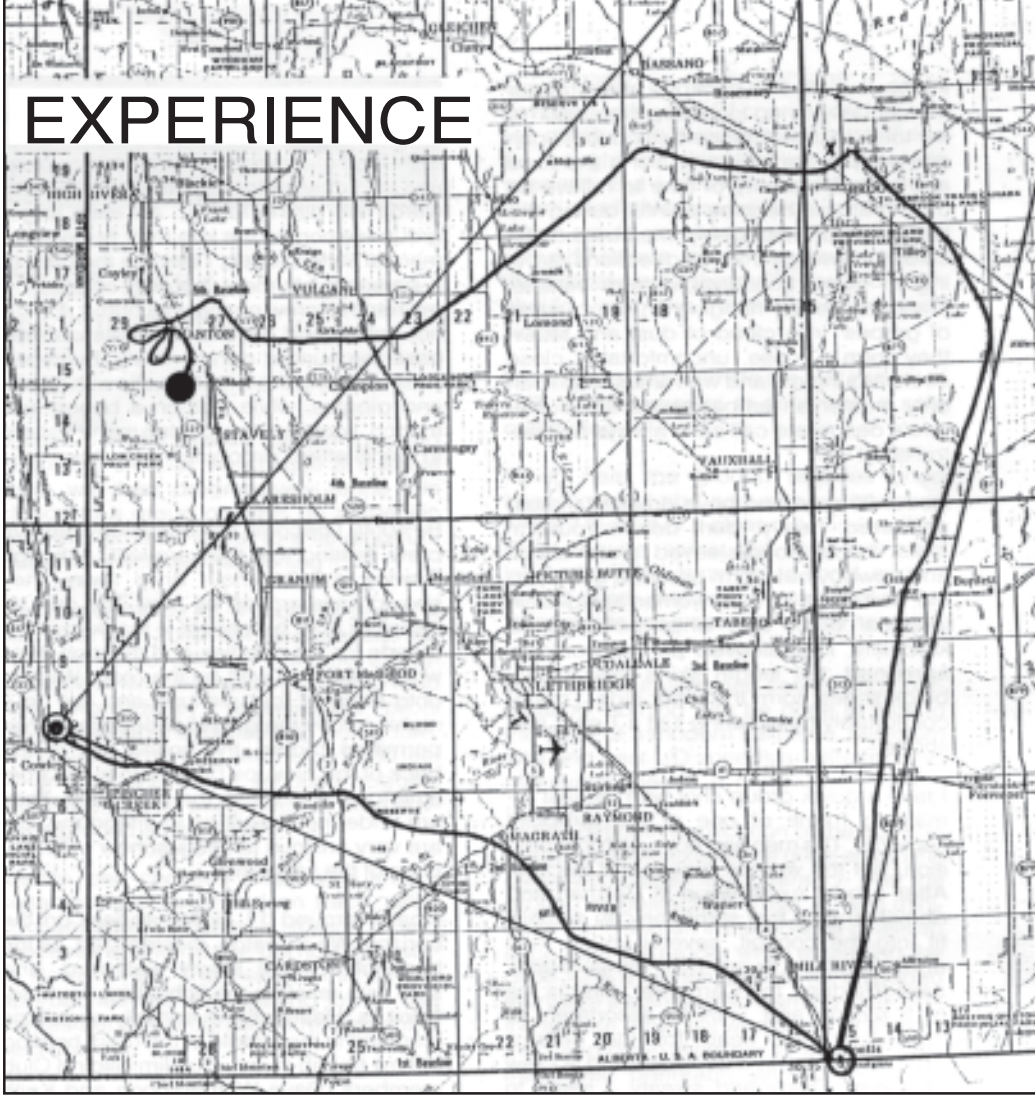
Tuesday, July 26 promises to be *the* best soaring day of the year. Each previous day has been stronger than the next, with both wave and convection present. The 9 am pilots' meeting at the 1988 Cowley Summer Camp bubbles with excitement as tephigram results and forecasts are announced. Cloudbase is predicted to be 16,000 asl, average thermal strength from 800 to 1000 ft/min, with cumulus development expected right across southern Alberta.

Feverish activity among many cross-country pilots ensues as preparations for ambitious flights are completed. By 10:30 excellent cu are forming over the Rockies and tempt adventures over the mountains to the west. However, it seems more prudent to set long tasks over the prairies to allow safe high average speeds. Kevin Bennett and Dick Mamini settle on a joint 750 km O&R to Hardisty. I gamble on better conditions to the southeast and declare 172 km to the Coutts border crossing, 345 km north to Consort, and 354 km return, for an 870 km triangle.

We wait impatiently on the flight line for convection to trigger. Dick (ASW-12), Kevin (16.5 m Ventus), and I (Mini-Nimbus) are launched into the first workable lift shortly after noon. Dick soon announces excellent lift over the south end of the Porcupine Hills. He is quickly joined by Kevin, and they are en route.

After release, the Mini and I drift southeast along course in weak lift, overflying the Oldman River Dam construction site, eventually connecting with an uninspiring 400 ft/min thermal over Brocket. Much to my surprise, a duck joins me! I never knew those things soared (not very well at that)! Weak and elusive lift persists as I press on. A line of small cu, originating near Waterton Park far to the southwest, implies that conditions might soon improve. Over the mountains far behind me now, idyllic cumulus clouds fill the horizon. But to the north and east a murky brown inversion has set in. Dick and Kevin radio that conditions over the prairies are disappointingly poor.

The Stand Off cliffs prove frustrating, as does the area around Magrath. After a low save over the hostile Milk River Ridge, we achieve the highest altitude of the day about 20 km west of the town of Milk River, 12,300 feet. Off to the southeast, scraggly short cycle cu form here and there. I push into the first turnpoint, taking photos two minutes after my latest ETA. We must pick up the pace.



While circling in modest lift over the US border I resist a strong urge to backtrack. A swig of water and a granola bar revives my courage, so we roll out north into the murk. The lift has been most reliable over inhospitable and unlandable terrain, and that forms the strategy for remaining airborne. Occasionally the odd small cu far ahead teases by popping above the inversion. The intense afternoon sun and high heat refuse to kick off any good thermals from the drought-parched monochromatic fields. Alkali dry lakes and infrequent farm complexes provide several last-minute saves. Progress is very slow.

I scratch past Grassy Lake on Highway 3, avoiding the local irrigated farms like the plague, and push into the no-man's-land between Vauxhall and Medicine Hat, hoping that this desolate area of oil wells and rattlesnakes will improve my speed. But the lift remains inconsistent and weak. '24' and I press on.

I arrive over Tilley, west of the Suffield Military Reserve, below 1500 feet at about 5:00 pm. Progress had been terrible with less than half the second leg covered. I decide to abandon the task. The Brooks airstrip to the northwest looks almost reachable. We follow Highway 1, turning here and circling there, overflying anything that might kick off a thermal, and hang on. Down to circuit height near the airport, I overfly a huge feedlot as a last resort. We experience a violent surge, a terrific odor, and impact by a million bugs!

Saved by the cattle stench! The rough thermal quits at 3500 agl, so I venture west. Radio transmissions from other sailplanes confirm that the day over the prairies is dying. The "retrieve reduction" task of 190 km has now begun.

'24' and I scrape southwest over the moonscape east of Milo, eventually cross the McGregor Reservoir, and tip-toe at very low altitude east of Champion. We manage a few sweaty saves over the moister cultivated fields south of Vulcan, and execute a rough smokey save off a stubble fire east of Nanton. High cu over the north end of the Porcupine Hills tease and encourage me to hang on. Regaining some altitude over Nanton, I make several forays under the clouds west into the foothills. Much too low, each attempt to contact better lift is unsuccessful and we are forced back to the weak lift over the town. Frustrated, I head south toward Claresholm and the remote possibility of an aero retrieve to Cowley. All the familiar coulees, ridges, sandy areas, and other reliable thermal sources, including the highway, are dead. West of Parkland, I overfly a Hutterite colony's buildings.

Several large exploratory circles later I set up in a low circuit and turn final over the colony into a stubble field beside the road. Someone has conveniently cleared a perfect 20 m wide runway from the clutter of hay bales scattered everywhere. Touchdown, 7:20, 7-1/4 hours from takeoff. The flight is over — the retrieve has begun.

I leap out of the cockpit, and stagger momentarily trying to restore circulation to my toes. In the distance behind me, I can see people approaching along the road and estimate plenty of time to relieve an urge that has become painful during the last few hours. Suddenly, members of the colony converge from all directions, arriving in every conceivable farm vehicle. They are literally hanging on like clusters of grapes. In a cloud of dust and straw, they form a loose, uncomfortably close circle around me and wait amusedly. I can only muster an embarrassed smile. Nature's call can't always be controlled at will!

About 25 men and boys dressed in suspendered, heavy, dark denim trousers, black boots, long-sleeved plaid shirts, and cowboy hats form one side of the circle and about 15 to 20 women and girls, in identical black and white polka-dotted handkerchiefs, long-sleeved printed bodices, apronned, full length skirts, and heavy black shoes, form the other side. I'm uncomfortably hot wearing just a T-shirt and shorts!

I take a quick group shot with the last remaining frame of one of the turnpoint cameras. The men and boys rush into position, but the women giggle and decline. After a brief explanation in German and demonstration that someone can actually fit into the cockpit, several young men agree to stand guard over the sailplane. Jake Waldner, the Carpenter, directs me to a pickup and, with an assortment of spectators, we head for the nearest phone. Cowley is contacted, and a crew arranged. Dusty and sweaty, I seem to have no trouble being permitted a shower?

The Hutterites submit to a very disciplined and austere lifestyle. They are highly religious, extremely diligent, and virtually self-sufficient. Their communal buildings are simple and impeccably maintained. I enjoy the opportunity to try my German although their heavy dialect makes it very challenging. From time to time the elders break into High German or English to improve the communication. It is a very curious mixed language conversation!

We soon charge back to the glider, still under 'protection', and find it completely covered in fingerprint-smeared dust. Hardly a square inch remains 'uninspected'. I muster my best tact to convince my hosts to keep off the aircraft. The kids persist in wiggling wings and controls, only to be admonished and be clipped behind the ears. I don't argue.

I suggest we move the glider half a kilometre to the south gate of the field to simplify derigging in the dark. No problem! Four or five chaps help me lift the tail while a gang pushes on the wing leading edges and nose. The evening wears on as my company of 30 or so people and I sit patiently waiting for my crew. We chat about farming, grasshoppers, soaring, animals, crops, and life on the colony. The sun sets slowly over the foothills in a deep blue, crystal clear sky. From time to time the young girls break into song, to be joined by the boys, harmonizing German hymns. It is absolutely delightful.

Finally one of the elders offers food, coffee, and warmth as a cool night falls around 10 pm. I had little to eat during the flight, so I gladly accept. We pile into pickups and charge through the darkness towards the dining facility. An even larger group welcomes me into their huge commercial style kitchen. I decline the offer of a personal hot meal, figuring on feeding my retrieve crew on the way home. Piping hot coffee and several delicious cookies ease the hunger pangs nicely. Everyone lines up along the kitchen walls with stares and giggles, while I sit on a bench and munch. I doubt if they get too many visitors in tennis attire "dropping" in on them.

By 10:40 I become anxious for my retrieve crew, fearing that they are lost. Although Cowley is a two-hour drive away, they should have arrived by now. The only alternative is to be patient. I thank my new friends for the goodies and mention that I would prefer to wait by the road. We pile onto three or four pickups and set up a night vigil by the gravel access road. Not permitted radios, the young folk in the back of the pickups break into hymn from time to time to break the monotony. They are under no obligation to attend me, but are very anxious to see just how I will dispose of the sailplane.

Finally around 11, lights appear on the horizon. We all watch, mesmerized, as the headlights move slowly westward, and sigh with relief as the lights turn south toward us. Headlights eventually engulf me standing in the middle of the road, holding out my thumb in jest. Cu Nim Gliding Club members Dave Wotherspoon and Keith Hay are startled to see the mob-encrusted vehicles looming beyond the glare. No lack of help here! In the floodlights of several vehicles, much to the amazement of the onlookers milling about, we position the trailer, derig '24', and are ready to leave within 20 minutes. I thank my hosts profusely and promise to forward photos.

They too are delighted, thank me for the evening's entertainment, and enthusiastically encourage me to drop in again? ...

Very tired, dusty, and hungry, we charge off into the night toward Claresholm in search of food and fuel. Now after midnight, we find everything closed, and proceed on, only to find Fort Macleod asleep as well, except for the Greyhound bus terminal. With the short-order kitchen shut down and the tuna fish sandwiches in the cooler looking soggy, we resort to pop and candy bars supper! Now we head west looking for a service station with diesel. Not one is open. The fuel gauge is solidly in the red as we pass Brocket, Pincher Station, the Town of Cowley, and with the engine definitely sucking fumes, pull bleary-eyed into Cowley airstrip at about 2 am. Instant wonderful sleep!

During the past four days my shortest flight had lasted 6-1/2 hours, the others were seven each. In spite of good conditions, I declare Wednesday a rest day. A number of other pilots also landing out on the previous day are suffering burnout. Dick Mamini doesn't return from his flight to the vicinity of Edmonton's club at Chipman for three days! But that's another story.

This had been a demanding, memorable flight, and although I was unsuccessful in completing the task, I covered 512 km in very weak, murky conditions. The last 150 km, between Tilley and my landing at the Parkland Hutterite Colony, were flown largely between 500 and 1500 feet agl. It really is astonishing how far one can fly in marginal conditions.

My hosts' intriguing company and gracious hospitality made this my most interesting outlanding by far. I am also very appreciative of the ad hoc crew who came to my rescue. They were later afforded a proper meal — the training of future cross-country pilots continues. □

Safety

IS FALSE PERCEPTION OF PILOT SKILL A FACTOR IN OUTLANDING ACCIDENTS?

Bob Hall
from Australian Gliding

Over the past three seasons, we have had far too many outlanding accidents. Besides their sheer number, these accidents are disturbing because of the absence of any acceptable cause. By and large, they happen to experienced pilots, regarded as competent and responsible, and under conditions which must be regarded as unexceptional. Why?

I am reminded of the earlier spate of groundloop accidents during attempts to aerotow out of fields containing long grass. These accidents were caused by a general perception that adequate skill could make these attempts safe. It took many bent sailplanes to prove to most of us that, independent of pilot skill, the risk of an accident was unacceptably high.

The anatomy of these accidents is now well known. The attempt was made, knowing that a safe take-off is dependent on keeping the wings level.

Early in the ground run, the glider drops a wing low enough to catch in the grass. Many take-offs include some wing drop but this is not noticed at home because ground clearance is not reduced by long grass. The wing catches, but an instinctive attempt to level the wings often works and the pilot, mistakenly, does not pull the bung and thus seals his fate. The glider, now unbalanced by the difficulty of retrieving the tip from the long grass, frequently drops a wing a second time, but this time it drops firmly into the grass and stays there.

The glider has also accelerated by this time and the result is now inevitable. The other wing accelerates and lifts driven by the glider's energy — releasing will do no good — and the glider cartwheels, usually destroying most of the structure. Fortunately, the pilot is not injured (at least, I do not know of any injury from this scenario).

The clear cause of these accidents was pilot skill — or, more precisely, the perception of pilot skill — which prompted the pilot to attempt an exercise which, because of limited controllability, cannot be made safe by any level of pilot skill: one which actually depends on luck.

What has this to do with outlanding accidents? Let us examine what we do and what we say we do during the planning of an outlanding. Our training should have taught us that planning an outlanding is a process of progressive refinement. At a suitable height above terrain (around 2000 feet usually) we choose a suitable area; we then progressively refine this choice to a group of fields, to a specific field with an alternative, to a landing run. But what is actually happening?

The performance of a modern glider is such that from 2000 feet the glider can travel 20 km or so, and that is without the assistance of kind air and any possible wind drift. Accordingly, experienced pilots have modified this outlanding procedure. We now keep moving well below 2000 feet — and no one would seriously suggest that experienced pilots need to stop covering ground at this height.

Ideally, one chooses a landable area a suitable distance ahead on track, while concentrating on potential lift sources and proceeds economically, but not necessarily slowly — yet. The theory is that as one approaches this area getting lower, one carries out this progressive refinement of field choice.

The scenario ignores two realities.

1 We have all had the excruciating experience of watching a "hot shot", already below us, going and going after we have slowed up, and we have thought, "how weak am I? Why did I stop? I can fly as safely as he. He might fly faster than me, but more safely...?" The pressure is increasingly to concentrate on keeping the sailplane moving on track and the emphasis has gradually changed.

2 We also frequently strike kind air and weak, broken lift which we, correctly, fly through because it is not worth turning in; maybe it would not produce any net climb — but it will extend our glide, even considerably. What we do is keep moving — we pick another group of fields further on track and so on.

The performance of a modern glider is such that mostly we eventually find a core and climb away, happy and confident that safety was never compromised. We always had an out ...(?) Eventually, one day, we don't find that core: the field we are now about to land in, we picked only a few moments ago while we concentrated on that indication of lift which was dissolved into sink ... — Gosh! That ground is close — I cannot get into that field because ... — If I just sneak carefully over those trees, I can turn ... — Must be careful to fly clean: extend that glide: with my experience I can fly near the ground — What was that bump? — A thermal? Try a turn into it — Yes — No — Gosh! What now...?

Good, solid, conventional stuff! It could not happen to you? Of course not! You are too careful, too experienced, to skillful to be caught by this familiar instructor's scenario. But just where would you have interrupted this progression of events? When would you have stopped covering ground? Where would you have ignored the indication of a thermal? How and when should you make these life-saving decisions?

Let us seriously examine the real impact of skill and experience in achieving a safe outlanding.

Flying near the ground requires good speed control and accurate coordination without the aid of a clear-cut horizon. This does require some skill, however this level of skill is common to most experienced pilots and is not a justification for "the few" to progressively shave heights.

Beyond accurate speed control and coordination, nothing can be done to extend the glide of a modern sailplane. Minimum sink and best L/D speeds are around normal circuit speeds — certainly not lower.

Skillful, smooth application of the controls in an attempt to extend the glide or turn the glider with insufficient clearance over the ground or obstacles — that is, with minimum bank and an irresistible bit of assistance from the rudder while extending the glide — is a certain formula for a sudden entry into a spin with no warning at all until it is too late. Any pilot who does not believe this deep down in his bones should try the maneuver, preferably with an instructor familiar with this reliable and insidious spin entry.

Pilots need to believe they would be better to crash land the glider in a fashion which will save life and limb rather than attempt this seductive scenario. I digress. The point I was making is that beyond accurate speed control to normal circuit speed and accurate coordination, there is nothing more that can be done.

An experienced pilot can cope with the workload of simultaneously searching for lift and field selection down to a lower height. Experience will allow a pilot to pick the best option in a shorter time. Clearly, this leads to a limiting condition where the decision time is reduced to zero. This still leaves an irreducible minimum: the height required to maneuver the glider from where the search for lift placed it to where it has a safe landing option. However, no matter how experienced and decisive the pilot, particularly in difficult but not necessarily exceptional conditions, decision time is not zero. A large proportion of outlanding accidents involve inadequate choices made by competent pilots inevitably because of lack of time and high workload.

The bottom line is that, except for the reduction in time required to make the necessary choices, we again have a situation where contrary to the perception of even our most responsible pilots, no amount of skill has any real impact on the height required to execute a safe approach. It must

be accepted that under any given set of circumstances, independent of flying skill, there is a minimum height required to execute a safe approach. But there is more to it than this. The decision at what height to stop moving and then to break-off and land must be made objectively before these heights are reached and once reached, never varied. That is, once break-off height is reached that "clear indication" of a thermal must be ignored.

I know as I write this, that many readers will say "Rubbish! That sort of rule is okay for the less experienced, but for me? There is no way I am going to pass up a thermal just because I am low. I can do a careful turn, and if I'm higher at the end of that turn, why not another, and so on?" The error of this reasoning is that with no definite break-off point, the decision to break-off is never made. If a net climb fails to occur, the temptation to position the glider so that it might, remains too real.

Break-off must be chosen objectively: it can be chosen realistically given pilot experience and the local conditions. But, if it is to be shaved to the minimum, then when that height is reached the decision must be irrevocable. Given the level of temptation and the time available, the finality of that decision must be essentially a reflex action, or it will be ignored when the chips are down.

Like so many such circumstances in flying, the attitude that it is okay to investigate a good indication of lift at almost any height is reinforced by the fact that frequently nothing does go wrong: sometimes we even get away. But, worse than that, most of those who do get bitten are not here now. The result of these cases is so horrific, we push the memory away: we look for, and find, reasons — any reasons — which allow us to avoid the cold, hard fact that "There but for the grace of God go I" to avoid the fact that accepted standards, accepted by responsible pilots, are inadequate.

This brings us to where we came in. It is the perception of pilot skill which is leading pilots to place themselves in a position where skill can have no impact. The outcome depends on the position the glider happens to find itself in as a consequence of actions taken to find lift. Eventually, one day, that position leaves the pilot without an achievable option.

What do we need to do? No amount of rules or regulations will help — the movement needs to face the fact that the most likely result of too little caution is better competition performance with, in all probability, not even any warning that safety has been compromised:

1 Progressive refining of outlanding decisions while continuing to keep moving will only work in good outlanding country (at least, consistent outlanding country) provided the second consideration below is met.

I can understand and sympathize with those of us who would like to see the skills involved in flying in difficult terrain be part of competition flying, but with gaggle flying, which is now an essential part of competition flying, speed flying and tactics are largely what it is all about. More significantly, I cannot think of any way of changing the fact that the pilot who is prepared to compromise safety will fly faster — and the more difficult the terrain the greater the margin.

I can see no safe alternative to the conclusion that serious competition should be over good terrain only.

2 All pilots, especially the most skilled and experienced, need to be convinced that they must make a decision based on the conditions and terrain, when to stop moving and when to break-off. No clear-cut rules can be made to replace this decision — it is airmanship. The decision can be made realistically but it must be made before the heat of the moment and then it must be adhered to, no matter how good the indication of a thermal. Not to make this decision, and follow it, may be final. □

SCOUT U-BOLT FIX

For several years, the Central Ontario Soaring Association has been aerotowing with a Scout towplane. Each year we have had to replace several "U" bolts supporting the landing gear due to stress cracks at the bend in the bolt. This was caused in part by our rough runway, but is a known design weakness. The Scout manufacturer supplied heavy duty U-bolts before going out of business, so they are no longer available.

Our AME suggested a new clamp to replace these bolts (consisting of home-made crossbar and two standard 7/16" AN bolts) and thanks to some club members, we made up some and submitted them to the MoT, and obtained a "one-time" type approval. Perhaps other clubs may want to do the same mod if they operate Scouts or Citabrias. As each aircraft is approved separately, clubs will have to duplicate our procedure with the MoT, and can refer to our approval number as a precedent (0-87-529, dated 11 Dec 87).

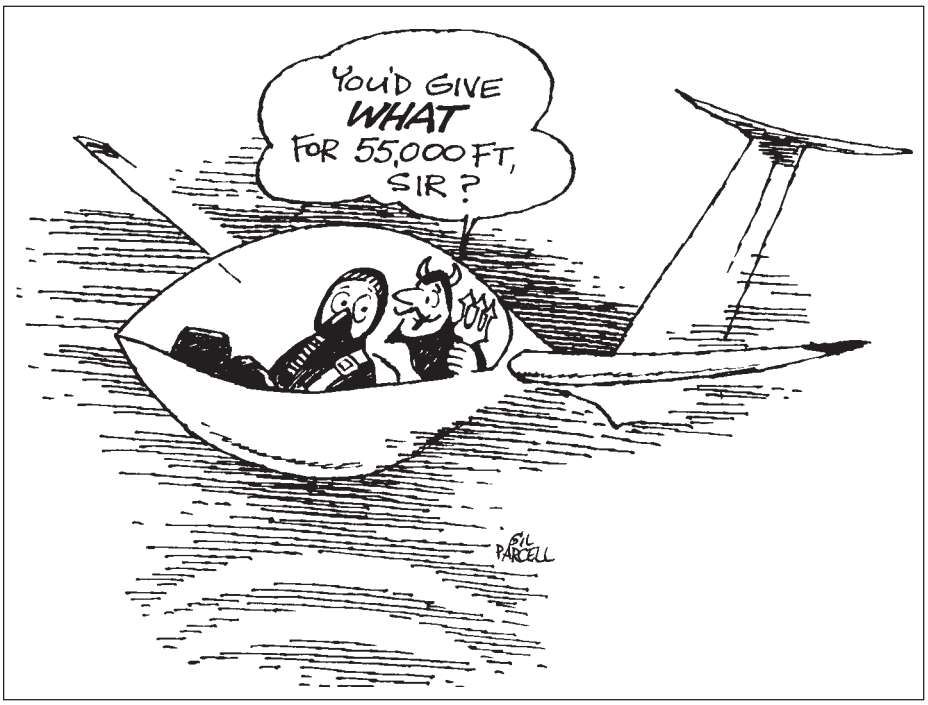
Harold Yardy, COSA

Walter Weir adds:
Our modification is still working and my fingers are tightly crossed. Installation is very important. The nuts must not be allowed to bottom out on the bolt threads — flat washers may be required to prevent this. A tightening torque which brings the bolts close to yield would not be excessive. Threads should be lubricated to prevent high torsion load during tightening.

To check installation, lock the brakes and while one person vigorously rocks the tail back and forth laterally, another feels the leg/fuselage/U-bolt interface. There should be no relative motion. Do this during the DI once in a while.

Where is the load that breaks U-bolts coming from, assuming they are not flawed or improperly heat treated? A vertical load on the wheel puts load directly into the fuselage — it does not load the U-bolt. A longitudinal horizontal load (from braking) could put a high tensile load on the front leg of the U-bolt, but our bolts broke in the rear leg as many times as the front! *(Jerry Vesely, Cu Nim's Scout AME, suspects that there is a good possibility that fatigue cracking may come from load reversals from rolling shocks or from high frequency vibration caused by wheel vibration from mud on the tires, etc. In the latter case, he recommends that pilots apply the wheel brake following takeoff if gear vibration is noticeable. Tony)*

After all this work. I hope our mod doesn't break this weekend. A copy of all the correspondence and drawings related to U-bolt breakage has been passed to the SAC Technical committee.



TOWPILOTS BE AWARE!

I would like to let you know what happened to me (and what could to you) if you tow without a weaklink at the towplane end of the rope. Coming in for a landing in our PA-18 I was suddenly stopped in mid-air — a loud bang as the rope snatched back — right wing dropped with no airspeed for flight or control —the aircraft just mushing down! What happened, and why?

The approach to land was over rough ground with shrubs and rocks — no problem — we have done it a thousand times, and the 1/4 inch towrope has always broken if snagged. Not this time. A quick application of power helped raise the wing with the added torque, but it still took some time before I had recovered airspeed to finally land the towplane.

After this frightening experience, we do not tow anymore without a weaklink on the towplane end of the rope. We use a piece of 3/16 inch polypropylene. Don't forget that we have an obligation to make flying as safe as possible for everyone, and that includes the towpilot and his aircraft. *(This* requires some thought — the towplane end weaklink must still be stronger than the one for the glider, ed)

Oscar Boesch
Air Sailing Club

SAFER TAKEOFFS

You can skip this section if your glider has a nose hook.

I've never liked CG towhooks on gliders, even though three of the gliders I have owned have had them. They work just fine during takeoff with a headwind, a decent wind runner, and a wide runway. They don't work so well when there is a crosswind, the wing runner goofs, or you must launch unassisted (wing on ground). The typical runway with landing lights (or weeds) makes any swerve a potential groundloop.

The problem is the CG hook position does not allow the tow rope to provide any straightening force. Once a swerve starts, you must either release and stop, or wait until the airspeed is high enough for the controls to be effective. A nose hook will provide an aligning force, tending to keep the glider pointed at the towplane in spite of the weeds.

"But what's the solution, I can't very well add a nose hook, can I?" Ah, but you can! Australia and England have banned the importation of any glider without a "forward-mounted" tow hook, and (at least in Australia) required gliders already in the country to be retrofitted with them. These two countries hope to eliminate towplane upsets caused by the glider "kiting" on the towplane, a big problem in countries that do much of their training on winches. As a consequence, most glider manufacturers now offer retrofit kits for their gliders, even the older ones.

I had such a kit installed on my ASW-20C early this year. The CG hook is retained, an additional hook is mounted up near the nose, and both operate simultaneously with the original release handle.

For me, the results are well worth the cost and bother. The first hundred yards of the tow are much less exciting now, and crosswinds and inexperienced (or no) wing runners have much less effect. The difference after takeoff is smaller, but the glider does follow the towplane with less effort and concentration. This is especially so in turbulence.

There are some other benefits from using the forward hook: the glider is unlikely to roll over the tow rope and back-release, and the gear can now be retracted on tow, reducing wind noise during an aero-retrieve or other long tow.

Eric Greenwell
from Seattle Glider Council "Towline"

AIRCRAFT CORROSION

Dr. Gerry Marsters of the National Aeronautical Establishment has prepared an in-depth paper on corrosion and its affects on aircraft. If you would like to learn more about this subject, write to the address below and ask for the paper, "Corrosion and Your Aircraft" Dr G. F. Marsters, Director, NAE, National Research Council, Ottawa, ON K1A 0R6.

from "Aviation Safety Letter"

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3298 Lone Feather Cres.
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Mbrs: Hal Werneburg
Bruce Finlay

Hangar Flying

ONTARIO PROVINCIAL CHAMPIONSHIPS

After last year's Provincials at SOSA, the law of averages should have ensured that the 1988 Provincials at the Gatineau Gliding Club would manage a few more competition days. However the *other* law of averages, the one that says if you have 20 days without rain you are going to have to pay for it, almost washed out the contest. What we got was a practice day, three days of rain (scattered showers the weather office was calling for — continuous rain with thunderstorms was what we got), a day where the sniffer almost had to landout a mile from the field, and finally, two contest days.

Monday, the practice day, looked good but not great. A task of 183 km was called (Pendleton, Alexandria, Lachute, and return). Walter Weir won the day, averaging close to 100 km/h and was heard to say the task was undercalled. The task committee landed out, so what can we say?

The next three days got wetter and wetter. The new aeronautical museum got lots of visitors, people drove over to Hawkesbury to check out the site of the '88 Nationals, and two of the more enterprising, or desperate, pilots went by car to check out a new airfield nearby as a potential landout field. This resulted in a three-car, six person retrieve crew being sent to rescue them from the mud. A day without landouts is a day without fun?

Finally, on Canada Day, the weather improved, a task was set, pilots and crew pushed the gliders to the far corner of the airfield, marshalled, sent up a sniffer, watched the black clouds roll in again, heard the sniffer might not make it back to the field, and hastily took cover as the rain poured down yet again. End of Day 1 – though a few desperate pilots launched for some local scratching.

However, the weather finally relented and we managed 2 contest days. The task set for Day 1 (part 2) was a 326 km triangle (Brockville, Lachute, and return to Pendleton), with 183 km being set for the Sports class. First home was Peter Sully in a slow and stately Skylark 3. First home because he left early and flew the shorter distance — but there is something special for a fellow Skylark owner running the finish gate to be able to say "Good finish, ZDH", even if the ASW-20s and LS6s and the like are going to come whistling in very soon, very fast. As in fact they did to the extent that at one point, five of them landed within 30 seconds of each other. It isn't often that you get photo finishes in gliding contests. Peter won the day in the Sports class and the Open class winner was Ulli Werneburg in his ASW-20. On the final day, those pilots who finished reported that conditions were good to the first turnpoint, got worse on the second leg and even worse on the last leg — which accounted for the landouts between the second turnpoint and home. The winners were the same as the day before which, of course, makes Ulli Werneburg the provincial champion, and Peter Sully the Sports class champion. The last two days compensated somewhat for the miserable weather of the previous week — at least people got to fly and, of course, there were still the Nationals to look forward to, with hopes of better weather and great flying. If you are a glider pilot, you have to be eternally optimistic. Anybody who was at Hawkesbury knows how misplaced optimism can be, but maybe next year will be better.

Christine Futter
GGC

L-23 IN PRODUCTION

The new Blanik L-23, whose prototype construction was described in the 5/87 issue, is now in production. The North American dealer for the Blanik, Mark Petru (Zlin of Canada), stated to the editor of **free flight** that there are now about 20 units flying at Czechoslovakian clubs and that the first L-23 will be coming to Canada in November to private owners. At the time of this writing, the price imported into Canada has not been fixed, but it is expected to be in the range of $40,000

The dealer noted that L-13 spares will remain available, and that he is interested in finding all Blanik owners in Canada to ensure that information is made available to them. He is in contact with SAC to generate an owners list. Blanik owners not using SAC insurance should contact the dealer directly.

The dealer is:
Zlin of Canada, 11 Plaisance Road, Unit 17, Richmond Hill, Ontario L4C 5H1, (416) 884-4686.

Hans König

Manfred Radius at the end of his aerobatic performance at the Cowley Summer Camp. Manfred was on hand as a Master Coach giving a course to Alberta instructors on "unusual" attitudes (pre-aerobatic flying skills) to be passed on to post-solo students.

Club News

MAGIC IS AFOOT

You just never can tell what kind of a season we're going to have, can you?

Southern Ontario is surrounded by the Great Lakes. Consequently, we at SOSA see weaker soarable weather than many drier parts of the world. However, the real go-get-'em types like to show up at the field in early April. That's when the checkrides begin. We get to calling the place Lake SOSA and after a while you stop hearing the squish-squish of the wet turf as you walk. That's okay. It'll dry out.

Walking out over the runways on a brilliant, blue, early spring day sharpens the sense of anticipation; that's when you can imagine the whoosh as a 1-26 comes in and the windy whistle of a glass slipper touching down at the end of one of those flawless blue, green, and gold summer days. You know you'll be in the cockpit soon.

For years now, there has been a large poster on the SOSA clubhouse wall. You're supposed to enter your flight achievements on it, meaning anything in the way of a badge attempt or a "significant" flight. I always looked at that chart with slack-jawed reverence because entries on it meant a certain amount of magic was afoot, and I wasn't even a sorcerer's apprentice yet.

In past years, the flight achievement chart has looked dreadfully thin. You'd see a five hour flight written up, or a Silver C distance leg; then in mid-summer, you might find a weekend or two where a couple of 300 km attempts happened and the other 25 lines on the chart remained empty. It was disheartening. Sad. Perhaps the club was in serious decline. But ...

After winter, things thawed and southern Ontario had the driest, warmest spring in memory. Crops wilted in the fields here as they did in the west and it got hot, dry, and a bit scary for everyone but the glider pilots, who just had a pip of a time.

By the end of June, 1988 it became obvious we'd need a second chart. So far, there have been several 300 km flights including the first one done in our Club Astir, by Rod Crocker; a pile of five hour attempts, some successful, some missing the last ten minutes; Silver C height gains, and many kilometres of unusually long cross-country flights, including a 500 km by Larry Springford and a flight of nearly 400 km by Ian Grant in the Club Libelle. I happen to know of several personal bests from various flyers at the club, including Silver height gains and Silver durations which were not written up due to shyness.

We had a day in early May where cloudbase was up at 9600 feet, and thermals were often over ten knots, which is almost unheard of in this area. Things finally slowed down in July when it got hot, wet, and stable.

At SOSA, we've had some troubles in the past few years, but we're still here and we're still flying! This year, Mother Nature gave us a good time. I suspect that although the weather may have cooperated, it really has just as much to do with initiative, determination, and plain old love of flight and flying machines. I know that because I see it in people's eyes.

Terry McElligott
SOSA

COSA CLUB NEWS

With the recent addition of another HP-18 we have 18 aircraft on the field including our Scout towplane, a Baby Ace homebuilt, five club gliders, and 11 private gliders. As of August 15 we have 31 members. Does any other club have such a high ratio of gliders/member?

Wintario grants have been a big help! We rent our field and therefore spend next to nothing on "homes and gardens". Our annual dues are only $250 and a 2000 foot tow is $9 — how could flying be cheaper? Does anybody out there know how to make a Scout quieter? Our neighbours are complaining. Happy flying.

Walter Weir

THE VSA PEMBERTON CAMP

The planned (June weekend) camps began June 4 with the arrival of the club Blanik, Grob Twin, and Jantar, plus a private ship. Much earlier that morning, I had caught a flight from Pemberton to Hope to get the towplane. Once it was brought back to Pemberton, it would remain there for the length of VSA's stay.

When we left for the flight south, a check with flight service confirmed a 5000 foot ceiling through to Hope, but upon arriving at the south end of Harrison Lake, we found ourselves ducking under a 1000 foot overcast. By skirting the low scud, we were able to get into Hope airport, and another check with the local weather station told us conditions were worsening. Needless to say, a thorough but quick DI and AUJ got us into the air before the weather could drop, stranding us in Hope and cancelling the planned operation in Pemberton, at least for that day.

The return north up the Harrison Lake corridor proved uneventful and upon arrival at Pemberton airport, we found the Grob and Blanik being rigged in anticipation of some good flying. The Jantar arrived later and willing hands quickly prepared it for the flight line. Unfortunately, Saturday was short on good soaring conditions, but that changed for Sunday. Thermals were the predominant source of lift during the club's extended stay and they gave the pilots some great flying with altitudes of 8-9000 feet being the norm. Club ships almost always flew to their time limit, more often than not the pilot being politely requested to return to earth.

Similar conditions lasted throughout June and only one or two days of the weekends proved to be unsuitable for soaring. Now and then, we had reports of pilots spending time looking down on the major development taking place in the resort area of Whistler Mountain — one pilot and passenger having a close up view until sufficient lift was found to get them home. Others commented on the magnificent snow fields and glaciers in the rugged mountains that they were able to photograph.

During the last weekend, 25 - 26 June, the VSA took part in the local Canada Week parade with a couple of tows over the parade route. Parade spectators confirmed it was a welcomed and unique addition to the annual event. Air traffic at the airport remained light so we were able to enjoy the use of the runway virtually unopposed. Airfield spectators were at a minimum as the camp was not advertised locally as in the previous years, so most members got their fill of flying time. Everyone going agreed they had some good flying and said they would make a point of doing more in the area in the future.

Jim Watson
from Vancouver Soaring Scene

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 July 1988 to 31 August 1988.

GOLD BADGE

240	Richard Officer	Gatineau
241	Bruce Anderson	Cu Nim

SILVER BADGE

757	Gerhardt Dittbrenner	Winnipeg
758	Bruce Anderson	Cu Nim
759	David St Jean	SOSA

DIAMOND GOAL

	Richard Officer	Gatineau	309.0 km	Austria SH-1	Pendleton, ON
	Roger Hildesheim	York	308.5 km	Open Cirrus	Arthur, ON
	George Wilson	London	302.0 km	Ka6CR	Embro, ON
	Jane Midwinter	RVSS	317.6 km	Pik-20D	Kars, ON
	Stephen Barnes	York	307.6 km	Open Cirrus	Arthur, ON
	Bruce Anderson	Cu Nim	327.1 km	Ventus B	Cowley, AB
	Darren Grant	Regina	325.0 km	Open Cirrus	Strawberry Lake, SK
	Doug Bremner	SOSA	317.2 km	LS4	Rockton, ON

SILVER ALTITUDE

	Toni Lindshinger	York	1188 m	2-33	Arthur, ON
	Gerald Rosner	Winnipeg	1433 m	2-33	Starbuck, MB
	William Friend	USA	1463 m	1-34	Highland, IL
	Christopher Gadsby	Cu Nim	1650 m	Tern	Black Diamond, AB
	Csaba Gaal	York	1555 m	Blanik	Arthur, ON
	Lorna Novosel	SOSA	1585 m	Astir G102	Rockton, ON
	Samuel Whiteside	York	1280 m	Cirrus	Arthur, ON

SILVER DISTANCE

	Tom Coulson	SOSA	80.0 km	1-23	Rockton, ON
	Bruce Anderson	Cu Nim	327.1 km	Ventus B	Cowley, AB
	David St Jean	SOSA	62.0 km	SOSA	Rockton, ON

SILVER DURATION

	Toni Lindshinger	York	5:27 h	1-26	Arthur, ON
	David St Jean	SOSA	5:48 h	1-26	Rockton, ON
	Gerhardt Dittbrenner	Winnipeg	5:27 h	SF-27	Starbuck, MB
	Christopher Gadsby	Cu Nim	5:17 h	Tern	Black Diamond, AB
	Alexandru Popa	York	5:08 h	1-23	Arthur, ON
	Bruce Anderson	Cu Nim	5:44 h	Ventus B	Cowley, AB
	Iain Colquhoun	Cu Nim	5:30 h	Std Jantar	Black Diamond, AB
	Richard Grocholski	York	5:13 h	Jantar	Arthur, ON

C BADGE

2119	David St Jean	SOSA	2:50 h	1-26	Rockton, ON
2122	John Van De Broek	COSA	1:12 h	2-22E	Chemong, ON
2123	John-Paul Johnson	Base Borden	1:07 h	2-33A	CFB Borden, ON
2124	Denis Bergeron	Blue Thermal	1:54 h	Blanik	Medicine Hat, AB
2125	Stevan Hulan	Air Cadet	1:56 h	2-33	Arthur, ON
2126	David Watson	COSA	1:17 h	2-33	Chemong, ON
2127	Adolf Degen	MSC	1:24 h	1-26	Hawkesbury, ON
2128	Lorna Novosel	SOSA	4:45 h	Astir G102	Rockton, ON
2129	Al Scarth	Cu Nim	1:08 h	2-33	Black Diamond, AB
2130	David Buttery	Base Borden	1:16 h	2-33	CFB Borden, ON
2131	Tom Coulson	SOSA	3:15 h	1-23	Rockton, ON
2132	Bruce Anderson	Cu Nim	5:44 h	Ventus B	Cowley, AB
2133	Iain Colquhoun	Cu Nim	5:30 h	Std Jantar	Black Diamond, AB
2134	Adrian Kensley	Air Cadet	1:14 h	1-26	Arthur, ON
2135	Ernest Szelepcsenyi	RVSS	1:18 h	1-26	Kars, ON
2136	Richard Grocholski	York	5:13 h	Jantar	Arthur, ON

BADGE APPLICATION ERRORS

There are some common problems with badge claims which I have encountered. The following list of points describes items upon which the rules will be applied inflexibly on all badge claims received after 1 January 1989.

Ref A FAI Badge and Records Procedures, edition 4
B Sporting Code — Sections — Gliders, 1981 edition

1 Requirements for submission must be complete per Appendix E or Ref. A.

2 Time must be shown on the declarations. Note: these must be the actual times of the photos both before and after the flight. The reason is to guarantee that the film cannot be tampered with before or after the flight. Ref. A Sections 8 and 16, Ref. B para 2.2.1.

3 Turnpoints must be a point, not an area. Ref. B para 1.6.1.

4 New film must be unwrapped by the OO. Therefore, partially used film is only acceptable with Instamatic-type film cassettes. Ref. A para 8.2.

5 Diamond and World record flight attempts must use new film only, and the entire negative strip must be submitted with the claim — nothing can be cut off. Ref. A para 8.2.

6 Difference of Height certificates are required even when returning to the Departure point as goal. Ref. A Appx. E.

7 Landing certificates are required unless a photo is taken of the goal. If witnesses have not seen the glider land, they must state where and when they saw it. Ref. A Appx. E.

8 The fees and prices required are listed on the back page of free flight. The processing fee is currently $10 for SAC members, $20 for non-SAC members. For Air Cadets who are not members of SAC, it is $15.

Claims should be sent directly to me. My address is above.

RECORDS APPROVED — Russ Flint

300 km Triangle Speed - Open, 113.1 km/h, 15 July 88, Kevin Bennett, Ventus B, C-GIJO. Flown from Black Diamond, AB with turnpoints at Fort Macleod A/P and Milo. Exceeds previous territorial record of 110.1 km/h by Dick Mamini flown in 1973.

ACCIDENTS

ASTIR CS, C-GIZY, 9 Jul, Gatineau. Canopy run over on the ground. $4,000.

STD CIRRUS, C-GCTW, 28 Jul, Hawkesbury. Hard off-field landing during contest. Uncertain structural damage. Est. $8,000.

LARK IS28M2, C-GBEO, 31 Jul, Mont Valin. Engine lost power, substantial damage on outlanding. $20,000.

BLANIK L13, CF-TUH and C-FCXC, 5 Aug, Beaver Valley. Windstorm damage. $3,000 and $1,000.

STD ASTIR, C-FVHJ, 11 Aug, Hawkesbury. Hangar sling locking mechanism failed and glider fell to floor (none parked underneath!). Undetermined structural damage to date.

2-22, C-FPHQ, 20 Aug, Outardes. Overshot landing, hit ditch, and groundlooped at far end of strip. Possible write-off, $7,000.

ASW-19, C-GKEJ, 3 Sep, Cu Nim. Avoiding birds, pilot crashed on mountain at Fairmont, BC. Glider destroyed, pilot uninjured! $30,000.

STD LIBELLE, C-GPRS, 7 Sep, SOSA. Late selection of landing field on XC. Heavy, downwind landing, breaking tail off. Possibly repairable, $15-20,000.

K-13, C-FBQN, 10 Sept, Gatineau. On intro ride, spoilers deployed during tow. Pilot released believing towplane lost power. Glider landed in trees near airfield, major fuselage/wing damage. No injuries. Possibly repairable. $10,000.

MORE ON DONATIONS

The "Personal Finance" column of the 5 August Financial Post properly describes the benefits of charitable donations under the new taxation rules. Dixon More's note in the 3/88 **free flight,** p23 tells only half the story as he forgot the added beneficial effect of the reduction in provincial tax liability.

The cost of a $1000 life membership to SAC is as follows:

'87 fed/prov tax rate	1987 cost	1988 cost
27%	$730	$610
38%	620	610
52%	480	610

There is clearly greater benefit than before to folks who have lower income tax rates. The best off will be those in Newfoundland and Quebec, and the worst off in Alberta. Such is the price of prosperity.

Bob Carlson
SOSA

SAC TROPHY NOMINATIONS

— Received by 20 September —

200 Trophy	May 1— Rod Crutcher Cu Nim 94 km XC flight May 21 — Chris Gadsby Cu Nim 1500 m height gain
BAIC Trophy	No applications
Canadair Trophy	No applications
Stachow Trophy	Noapplications

Clubs are also asked to forward details of any unusual or "significant" flights made this year. *Significant Flight Certificates* will be presented to those truly significant — that is, not necessarily eligible for a badge or trophy, but unusual considering the age of the pilot, the type of glider, the area where it took place, etc.; in short, any flight that makes one think, "That's really something!" I know that some have been made, help give recognition to pilots who deserve it.

SAC Trophy Chairman
George Dunbar
1419 Chardie Place SW
Calgary, Alberta T2V 2T7

COMPETITION CONFLICT

I am getting sick of all the bickering. Every time I pick up a soaring magazine, it's the same old story, east vs. west, west vs. east. The competition pilots are at it again! You guys are making quite a name for yourself.

I started off in this sport as did many, with the desire and determination to fly sailplanes, and fortunately overcame the typical initial indifferent hospitality shown by many clubs to new members.

I bought my own sailplane, became an instructor to entice others into enjoying what I had discovered, and even entered the Nationals against my better judgement (I thought flying competitions were inherently dangerous). Not so, and they were fun: the pilots knew what they were doing and did it well — but they still bickered. I even bought a Ventus — but I am certainly not going to drive six or seven days across Canada and back and fly in the Nationals. My holidays are valuable enough to be spent flying, not driving.

Perhaps consideration should be given to having the Nationals at a more central location, say Virden, which could be reached with relative ease from either side of Canada and is known to be a good site. The Canadian team, I am sure, would benefit from having a larger base and not be comprised of pilots from one extremity only.

I competed in international competition in my chosen sport (shooting) in the UK for ten years, from European championships to Olympics and Commonwealth Games — so I speak with some experience of world class competition. Our attitude as an organization in trying to field the best team possible is, to say the least, poor. The bickering and one-up-manship has to stop nationally before we can hope to foster a winning attitude and pick the best team.

It is a ridiculous state of affairs that major soaring events consistently clash, eg. Cowley and the Nationals. Whether it is appreciated by many or not, the Cowley camp is certainly *the* most popular soaring event in the Canadian calendar. It averages 75 pilots against a typical Nationals of half that amount. To deprive pilots who live in the east from attending it if they so wish, and to deprive the pilots who live in the west from competing in the Nationals by picking conflicting dates each year when the traditional camp date is fixed and known just doesn't make good sense. A solution to this clearly must lie in a policy decision by the SAC Directors to the Sporting committee.

Soaring does not exist because of competition — competition exists because the soaring movement exists. Let's get our attitude in shape. If is does not, there won't be a sport to enjoy.

Andrew Jackson
Regina

SAC AGM

3 - 5 March 1989

Prince Hotel
900 York Mills road
Toronto

work is underway for a very good show organized by SOSA and Paul Thompson. More information will be available in the next issue.
Of special interest is the

Guest speaker:

Vance Brand, NASA
Shuttle commander
on two flights

WHO'S ON FIRST?

In a letter I wrote to the SSA a couple of months ago, I complained in SOARING magazine, giving a short error analysis, that the last nine feet registered in Harris' 49,009 foot world altitude record was meaningless since there is no way the barograph accuracy, the methods used to measure a height from it, or the "non-standard" state of the atmosphere could allow anyone to be precise to five figures in certifying the height.

The point of the analysis was to show that it is proper to round a result to within the measuring limit of the least precise data used, which is standard scientific and engineering practice. In the case of the altitude record example, it's pure nitpicking, but this brought to mind a parallel example which has just fallen out of our recent Nationals which has a real effect.

Our contests are being scored using camera start time data which is recorded to the nearest minute. The resulting mean error in a recorded task duration may be calculated using the usual statistical formulas, but for the sake of argument let's call the error plus or minus 20 seconds over, say, a 3-1/2 hour task. The resulting uncertainty in the achieved speed is about 1/3 of a percent. Not much, but this is equivalent to over 20 points in a 7000 point contest.

A contestant ought to be seeing a daily score listed as say, 947 +/- 2; sort of fuzzy, but that's all you can really say about the real world the flight was made in. Regardless of the ability of a computer to spit out scores in one thousandth parts, *one is just not certain* to anything like that accuracy — so, in how many recent Nationals in Canada and elsewhere should the second place finisher have been sharing the winner's trophy?

Figures do lie. Let's hear it for truth in mathematics!

Tony Burton
past SAC FAI Badge Chairman

Trading Post and back page (pp20-22) omitted