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POTPOURRI

ACROSS THE COUNTRY our clubs are functioning well with the reports of flights and records sounding encouraging. From an administrative point of view, all is very well, as insurance and membership information arrive at our office with few if any mistakes. A point of concern is a lack of information from Sport Canada on government funding for this year. In the past, confirmation has been received by the end of March which gave sufficient time to plan for the year *(late news from National Office no funding this year – ed)*. Some suggest that government funding isn't worth the administrative bother – raise the fees by $10 is the answer. The resulting moans to such an alternative will answer that suggestion.

Incident/accident reports so far received represent about $70,000 in insurance claims. Amongst the accident details are the too often repeated unlocked canopies, spoilers popping open on takeoff and wheel up landings. One wonders if we all shouldn't gather at random times at club erected piles of old rock and swear everlasting attention to thorough daily inspections, out loud pre-takeoff and pre-landing checks, which – if effectively done – should substantially cut our annual glider insurance claims. Keep up the completion of the incident/accident reports for they are the fuel needed by the Flight Training and Safety Committee to review and perfect our training methods and instructor course content.

Transport Canada is concerned that at times our members are not reporting accidents to them, which is a violation of their regulations. Many of us assume that we are immune to these regulations because we are required to report all accidents to SAC. The latter requirement does not release any of us from informing Transport Canada of any aircraft accident. Please be serious about this for our friends in Transport Canada, who give us great support, are responsible for ensuring that the air regulations are followed; certainly where accidents are concerned they expect, as they should, that we will promptly and accurately report all accidents to them.

The SAC insurance policies for clubs will be mailed out this month. Our office fax machine has cut our phone bills and improved communications markedly. We need a fax number of someone in each club of which we now have about 50%. Our *free flight* is now being printed by Dave Puckrin's "ASAP Printing" in Edmonton which will reduce our production bill by approximately $300 per issue. The latter move and its administrative details was accomplished in short order principally because of the rapid transmission of information through the fax machine.

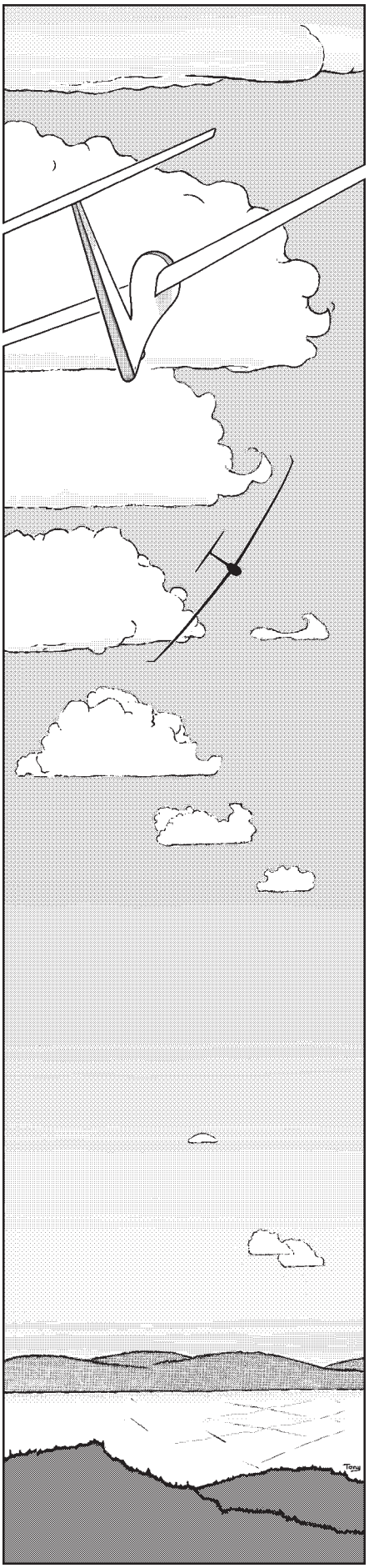
Dennis Miller who has been our Statistician for a number of years is resigning from this task. He brought the collection and recording of our statistics up to date and has all the SAC flight statistics on a disk which should be of great assistance to a new incumbent. Thank you Dennis very much. In addition we also require two others to fill the Meteorology and Treasurer's positions. If you are interested in any of these tasks please let your Zone Director know or inform our office.

Two books of history of gliding and soaring in parts of Canada have been written by two members of our association. Both are very readable and give intimate details of the early days of gliding in our land and bring you through the past up to the present in a lively and fascinating manner. Both have been reviewed in free flight and are indeed a fine addition to a gliding library. Ursula Wiese is the author of "Stalking the Mountain Wave", reviewed in *free flight* 2/88 by Walter Piercy. Ursula, an accomplished cross-country pilot, has compiled the history of wave flying in Alberta. In particular she relates the story of the trials and tribulations of establishing the Cowley site which today hosts the largest annual soaring event in Canada. In addition, mountain wave meteorology is documented with numerous supporting tables and graphs. Lloyd Bungey, an Australian who lived in the Vancouver area for 12 years and is an accomplished glider pilot has written "Trying their Wings", reviewed by Ursula Wiese in *free flight* 2/89. He relates the facts and stories from the beginning in 1920 to the 80s of gliding and soaring in British Columbia. Their mountainous territory is the background to persistent efforts to organize themselves and enjoy their sport in very difficult terrain. All the areas where gliding took place in British Columbia are covered, including Vancouver Island. These histories include over 35 photographs in each volume from the earliest days to the present. Hopefully scribes from other provinces will record in such loving detail their histories of gliding and soaring so we will remain aware of this portion of our flying heritage.

Someone said, "If your organization is doing well, boast about it, talk about it, it helps – everyone likes a winner." Generally speaking we are doing well except in convincing more people to join our clubs. A few more members would make a significant difference in our cost per member to operate SAC.

Fly safely and enjoy our too short summer.

Gordon Bruce



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4/89 Aug – Sept

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

ISSN 0827 – 2557

Cover

The Winnipeg Gliding Club Lark soars over the prairies near the club at Starbuck. Photo by Susan Maskell

INTRODUCING AIRSPACE

Recently I was asked by SAC to become Chairman of the Airspace Comminee, so I would like to take advantage of this excellent magazine to introduce myself to our members and ask for their support.

As everybody knows, our sport, and recreational flying in general, is under bureaucratic attack like never before in our history. More and more airspace is being unreasonably denied us entirely, or made so restrictive either by procedural or equipment requirements as to be unusable. Unfortunately we probably cannot turn back the clock, but maybe with coordinated effort throughout the gliding movement, and with the help of other sport aviation bodies we can get exemptions, airspace reservations, or special procedures, etc. and bring some relief from the more onerous regulations and restrictions.

One thing we can be sure of is that Transport Canada will not just go away. We must work within the system to get changes we want. This means research and education, both of ourselves and of Transport Canada, and a coordinated, reasonable, and well presented plan of alternatives.

If any club is directly affected by any of the new airspace or transponder regulations, let me know, but please, only in writing. I need facts, locations (maps are great), actual problems encountered (eg. overflying heavy traffic), and other incidents and problems experienced or anticipated. I must have it in writing. Don't bother to phone, you will be wasting your money.

If you write directly to Transport Canada, send me a copy of your letters and any replies from them. I suggest that each club nominate one person as their airspace person. Your club safety officer would be a logical choice.

Please do not deliberately violate restricted airspace just because you are mad at the system, or because conditions were so good, or bad, that you "could not resist it". It does not help our cause and you put yourself and perhaps hundreds of innocent people at risk. If you do violate restricted airspace and get caught, don't expect any sympathy from SAC. Get yourself a lawyer. At my club (Vancouver) we are lucky, our main problems are related to flying into mountains rather than restricted airspace. This introduces a certain obvious immediacy as to how far our airspace extends, but at most sites it is not so obvious.

Does your club have clearly marked maps or models for the newer members, showing how high or how far they can go? Do your new members, just venturing beyond the circuit for the first time, have the map reading skills to recognize the limits of "free" airspace? Do they have a map? If Transport Canada comes after you with a big stick for violating airspace, they won't care if it was deliberate or accidental. Don't put your junior pilots at risk.

What about radio and circuit procedures at other airports you may wish to use on a cross-country? Perhaps a review of your own club procedures for the newer pilots may help to keep some innocent out of trouble with the law. My experience has been that the newer pilots are the most careful and conscientious, and only need correct instructions, but every club has its cowboy or two in its cross-country group. These are the ones who think the rules don't apply to them, especially government rules. Perhaps the club safety officer should have a little heart-to-heart with them out behind the hangar before they give your club a bad name with the enforcement troops.

Remember, it takes ten "Attaboys" to cancel one "Dumbtwit".

It will take me a few months to get up to speed on what is going on all across the country, and I will only know if your club is having problems if you write and tell me. Meanwhile I wish you all a fabulous soaring season. Be safe and have fun (in that order).

Cheers, **David Baker**

The SOARING ASSOCIATION OF CANADA

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

free flight is the official journal of SAC.

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

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

For change of address and subscriptions to non-SAC members

5 Deadline for contributions
5th day of each ODD month

Opinions

L'ASSOCIATION CANADIENNE DE VOL A VOILE

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

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

vol libre est le journal officiel de l'ACVV.

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

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 la revue.

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

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

Pour changements d'adresse et abonnements aux non membres de l'ACVV ($18 par an, $EU 18 dans les Etats Unis, $EU24 outre-mer) veuillez contacter le bureau national.

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AN IMPROVED SCOUT SPAR

Readers of the above article (in *free flight* 2/ 89) should be aware that whereas the described modification is a significant improvement and greatly increases the safety of the aircraft, it most likely still does not cause the aircraft to meet the requirements of FAR 23. In the "ferry configuration" in which C–GPCK is operated as a towplane, type approval is given in part on the basis of:

"US Certification to FAR 23 dated February 1, 1965, including amendments 23-1 through 23-6 in the NORMAL category."

In the Normal category/ferry configuration the maximum weight is 2150 lbs (976 kg) and the limit load factor against yield is 3.8 at a maneuvering speed of 112 mph (97 knots).

Recent calculation on the stresses in the Scout main wing spar indicate that it is significantly understrength for the published gross weights and maneuvering speeds. The limit margin of safety provided by the described modification increases from -0.66 to -0.42 as compared to the basic spruce spar. Another way of interpreting these numbers would be to say that PCK is now 42% over the allowable stress at maximum load with the modification, and was 66% over the allowable stress without it. The situation in fact is worse for Scouts used in the Restricted Agricultural category where the allowable maximum weight (at the same maneuvering speed) is 2600 lbs (1180 kg).

Until a complete solution is found to the spar problem, PCK is being operated at a maximum weight of 1750 lbs (795 kg) and a maneuvering speed not exceeding 90 mph (78 knots) .

Iain Colquhoun
Chief Towpilot, Alberta Soaring Council

REPORT CORRECTION

You may wish to indicate to your readers that the paragraphs in the Treasurer's report which appeared in the SAC AGM insert in the Apr/ May issue of *free flight* were not in the correct order. The last six paragraphs in the middle column of page 6 should follow the first paragraph in the section entitled, "Look ing further ahead". It seems that the report tabled at the AGM was also scrambled. On the other hand, I know that the version which left the Treasurer's desk was correct.

As my former neighbour in Texas, Selñora Juanita Morales used to say, *"De manos a boca se pierda la soupa"* – "From hand to mouth the soup is lost".

Sincerely,
Elizabeth J. McCollum

CANADIAN AVIATION SAFETY BOARD LETTER

Attached please find a Canadian Aviation Safety Board (CASB) "Aviation Safety Advisory". The Advisory, as you will note, relates to a glider accident that occurred near Vankleek Hill, Ontario on 28 July 1988.

Although the pilot reported the accident to the Soaring Association of Canada, the report, apparently, did not reach the Minister as required by the Air Regulations. The CASB has suggested that SAC publish (in *free flight*) an explanation of the requirements with regard to the reporting of aircraft accidents.

We have spoken with Mr. Gordon Bruce, who agrees with this proposal and suggested you should be contacted directly. To enable an appropriate response to the CASB a copy of the relevant article would be rnost appreciated.

Yours truly,

James P. Stewart
Director, Aviation Safety Programs

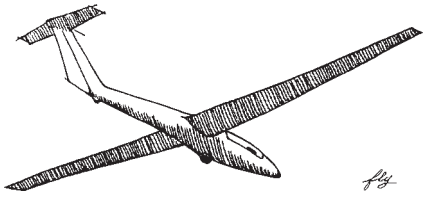
All members of SAC are directed to review the requirements for reporting aircraft accidents which is to be found in GEN 4.0 of your AIP manual.

Any incident in which the pilot sustains serious or fatal injury, or which causes damage sufficient to ground the aircraft is reportable. Para 4.3.1 details the accident information which must be passed to the CASB "as soon as possible thereafter and by the quickest means of communication available."

As gliders are designed to be readily movable, it is sometimes forgotten that, following a reportable accident, the aircraft must not be moved from the accident site or the site disrupted in any way without first having obtained permission from an investigator. If the glider must be moved, the condition of the aircraft and accident site must be recorded by the best means available.

Every Department of Transport Region has a work and after-hours telephone number. It is suggested that this number be displayed at your club.

editor



THE WAR PRIZE GLIDERS

Hitler's contribution to Canadian gliding

Lloyd Bungey

The development of the sport of soaring in Canada received a dramatic boost immediately following World War II when four rather worn gliders, seized in Germany on behalf of the National Research Council, were brought to Canada for "technical evaluation". Through the efforts of the Soaring Association of Canada these gliders were spared consignment to destructive tests and were made available to Canadian soaring clubs.

Although these four sailplanes were not on the leading edge of technology, being ten year old designs of modest performance, they were still a vast improvement over practically all other gliders in Canada at that time. Surprisingly, in view of their performance by the standards of the following decades, three of these machines are still in existence today.

IN 1944, shortly after the invasion of Normandy, Dr. Don MacClement, a founding member of SAC, was tipped off about the scouting teams which were to follow the US Forces and "liberate" from the Germans, persons and items of technical interest.

MacClement, who was working on the development of Arctic clothing for the RCAF, was fortunate in having a US Navy counterpart in Norfolk, Virginia, who was also interested in soaring. As well as developing Arctic clothing, this US glider pilot had managed to get the acquisition of German sailplanes included on the list of wanted German technical items. He advised MacClement that it might be possible for Canada's small soaring community to get representation on an Allied team. As MacClement was extremely interested in the tailless sailplanes developed by the Horten brothers, he found this suggestion intriguing.

Upon return to Ottawa, MacClement broached the matter with the RCAF but aroused no interest. However, since the National Research Council was involved with a tailless glider program, the matter was taken up with them. The NRC (in particular Jim Simpson and A.O. "Shorty" Boudreault, both prominent members of the Gatineau Gliding Club, Ottawa) were quite interested. Some senior officials saw merit in the idea and gave their approval.

Locating someone to insert into a scouting team was not such a simple matter. Fortunately, Bev Shenstone, the first president of SAC, and later a director of British European Airways, was working in England. He located a suitable individual in the Canadian Army and arranged his assignment to the team. However, quite a lot of time had been lost and all the existing Horten gliders had been snapped up by the teams from the USA. The only sailplanes left were the older designs, such as the Grunau Babies, which had been produced in large numbers for training purposes. Since something was better than nothing, three of these were seized, then Bev Shenstone heard of that a Mü13 had been found by the British forces and was available. He phoned Don MacClement to ask if the NRC was interested in that. Don's first reaction, "What's a Mü13?" followed by, "Send anything!"

With all the immediate postwar shipping space from Europe given over to the return of servicemen, it was some time before the Royal Canadian Navy was able to transport the NRC's war prizes across the Atlantic. The three Grunau Babies and the Mü13D finally arrived in Ottawa in 1946, but the NRC was somewhat at a loss to know what to do with them. The fledgling Soaring Association of Canada, however, was not without ideas. These gliders were much superior to all but a few of the gliders then being operated in Canada. An eighteen page brief was submitted, proposing that they be turned over to the existing gliding movement. This proposal met with the approval of the NRC and the gliders were loaned out to selected gliding clubs across the country.

As the gliders had been obtained for "research" purposes, a façade of technical investigation had to be maintained. Three of the four aircraft were, therefore, loaned out to university gliding clubs to maintain the illusion of being research equipment. The fourth machine, one of the Grunau Babies, was assigned to the Gatineau Gliding Club, which had a large number of NRC employees among its members.

Only two of the machines, both of them Grunau Babies, were in reasonable condition. The Gatineau Gliding Club, being Johnny–on–the–spot, naturally got one, while the other went to the Queen's University Gliding Club (Kingston), predecessor of the current Rideau Gliding Club. The third Grunau, somewhat knocked about but repairable, was assigned to the club furthest away, the UBC Thunderbird Gliding and Soaring Club (Vancouver), while the Mü13D, which was in extremely poor condition, went to the McGill University Gliding Club (Montreal), a constituent part of the Montreal Soaring Council.

These dispositions were arranged in 1947, but ownership of the gliders was retained by the NRC. Agreements were drawn up with the various universities stipulating the terms of use. When problems arose with the maintenance of the gliders during the early fifties, these 1947 agreements had to be first cancelled before the NRC was able to rid itself of the gliders, which were then sold to the clubs.

The Queen's University Gliding Club Grunau, CF-ZAR / ZCP

The Grunau which was assigned to Queen's University Gliding Club needed considerable repair work which was undertaken between 1 May and 28 September 1947. It made its first Canadian flight on 28 September 1947 in the hands of Don MacClement [1], who had been instrumental in obtaining the war prizes in the first place. A further 25 flights were completed before the year's flying ceased at end of November.

During the winter a ski, 12 inches wide and 6 feet 6 inches long, was fitted under the fuselage. This enabled flying to resume at the snow covered Norman Rogers Airport at Kingston and helped fulfill the "research" requirement of the loan agreement with the NRC. A report was duly published about this "research" even though only two flights had been made with the glider so equipped, both on 21 February 1948. The second was a soaring flight of 1 hour 13 minutes duration. The pilot Gordon Spafford reported, "The conditions encountered on this flight indicate a large area of slowly rising air over the lake ice at the east end of Amherst Island."

With the departure of the snow, the Grunau was returned to normal configuration and proved very popular. On 18 July 1948, the first cross-country flight was attempted, but ended in disaster. The glider spun into the ground destroying the cockpit area of the glider back to the front bulkhead and dam-

1 The information regarding the flying history of CF-ZAR (later CF-ZCP) has been taken from its three Canadian logs, all of which are still in existence.

aging the wings. The pilot, W. Curran, escaped with both his ankles broken. Damage to the machine was so substantial that the DoT cancelled the registration (CF-ZAR) in 1951, but this action was somewhat premature, as the pieces of the glider had been collected and the long laborious job of rebuilding the machine had already begun.

To restore the fuselage, Earl Morris and Don MacClement laboriously fitted the broken pieces together like a jigsaw puzzle, then used the "paste up" to make the drawings they needed for reconstructing the destroyed sections. By May 1953 the fuselage had been repaired and was temporarily loaned to the Gatineau Gliding Club to enable that club to keep a Grunau in the air for the Kitchener Meet (see section on ZBH).

ZAR's wings which required a mainspar splice four feet from the tip, were repaired by Walter Piercy and Hank Janzen. It took them until 1956 to complete the job. The Grunau, given the new registration CF-ZCP, returned to the air on 9 September 1956. It was no longer the property of the NRC, but was now owned by the club.

Reborn as ZCP, the Grunau was soon back under repair again, however. On 9 June 1957, at the start of an aerotow, the elasticity of the nylon towrope caused the glider to surge forward, stop, then surge ahead again. Between surges, a wingtip dropped into tall weeds and before Walter Piercy, the pilot, could release, the glider was towed off, slewing sideways due to the drag of the weeds. The sideways forces were more than the skid undercarriage could withstand and it was torn off carrying part of the keel with it. Back to the workshop (Walter's basement)!

Re-emerging repaired on 8 June 1958, ZCP remained with Queen's Gliding Club until 1963. Owing to the transient nature of many of the members (university students), Hank Janzen and Walter Piercy were the main pilots to fly it, as the majority of club members departed before acquiring the skill levels needed to solo the Grunau. Janzen and Piercy, however, were so busy instructing that the ship was little used. Finally, it was put up for sale, being bought by Hans Berg of the Windsor Gliding Club on 20 April 1963.

Berg retained the Grunau until 23 June 1968 when it once again became a club aircraft being bought by the Central Ontario Soaring Association. At that date it had only flown 136 hours since arriving in Canada 21 years previously. (Its German flying history is unknown.) COSA was to add 263 hours to this total over the next six years. By 1974, however, the aspirations of the COSA club members could not be met by the low performance of the Grunau so it was sold to a club member, George Matthias, and replaced with a more modern sailplane. Matthias continued to fly ZCP until 1981, during which time he moved to Victoria, British Columbia, basing his flying activities with the Vancouver Soaring Association at Hope. Midway through 1981, however, he purchased a Ka6E and put the Grunau up for sale. Unable to find a purchaser with sufficient respect for the glider's historical value and being unwilling to put the machine in less appreciative hands, Matthias donated the still airworthy sailplane to the Victoria Branch of the Canadian Museum of Flight and Transportation in mid-1982, thus preserving it for posterity.

The UBC Thunderbird Gliding and Soaring Club Grunau, CF-ZBD

Vancouver's UBC Thunderbird Gliding and Soaring Club was the most distant from Ottawa of Canada's three university gliding clubs. It was also the newest, having been formed only in 1946. For these two reasons, it received the tattiest of the three Grunau Babies. Perhaps it was considered that it would not be collected – but such was not the case.

In the summer of 1947, two of the UBC club members, Frank Woodward and Barrie Jeffery, were working in Toronto. On learning that the NRC had approved the club's request for one of the NRC gliders, they hurriedly constructed a trailer for it and purchased an old car to tow it out to Vancouver. At the end of their summer vacation, they drove to Arnprior, picked up the glider and headed off to the west coast with high hopes.

Jeffery had financed the purchase of the car in the expectation that, upon arrival in Vancouver, it could be sold at a profit, thus recouping their costs. The two students, however, were to receive an education in the hard facts of life, as Frank Woodward later revealed:

> "By the time we reached Montana, oil consumption was up to the astonishing figure of over four quarts per hundred miles. Then the engine finally welded itself together and we stopped, once and for all, just short of the Great Divide. At this point, the economics of driving a used car from Toronto to Vancouver took a beating. The cost of the new engine more or less dictated that C.B. (Jeffery) sink all of the profits back into the business. Nothing daunted, we made the best of it, while the local garage squeezed the last shekel out of our friend. We got going again and struggled in to Vancouver after two weeks on the road."

As the club was in need of new members, the glider, still in its original wartime German finish resplendent with black crosses and Luftwaffe identification codes (LN+5R), was displayed at the UBC grounds for publicity purposes, then moved into the club workshop at Boundary Bay and completely refurbished prior to the 1948 soaring season.

With the necessary work completed, it was registered as CF-ZBD and test flown at the old Sumas Prairie emergency strip on 14 March 1948. Thereafter it had an active summer of soaring around Sumas with occasional appearances at other locations to publicize the sport. On 17 July 1948 it was aerotowed to Vancouver Island behind a Cessna Crane to appear at the Victoria Airshow held at Patricia Bay Airport. The twin engined Crane made the trip with wheels and flaps down but even so "the Crane more or less forgot about the GB and Woodward had to use both hands to keep the nose down – no trim tab." In contrast to the tows behind the Crane, overpowered and a little too sophisticated but offering twin engined safety for overwater crossing, the tows performed in August behind a 65 hp Aeronca were, in the words of the towpilot Chuck Wilson "a little hairy," especially as the Aeronca was "a little sick." On 27 August 1948, Frank Woodward made a notable flight off one of these tows, soaring for an hour over Hollyburn Ridge before landing in the UBC grounds where the glider was to go on display.

The NRC project which had been assigned to the machine was to obtain flight performance data, but it is doubtful that much effort had been applied to this before the machine was damaged in the summer of 1949. Since around this time many of the original club members were graduating and moving away, with few newcomers replacing them, ZBD was left neglected.

At he end of 1949, a co-existing gliding club, the Gulf Gliding Club, expanded and re- organized as the Soaring Club of BC, taking over the assets of the prctically defunct UBC

Still in its Luftwaffe markings, the Grunau Baby loaned to the UBC Soaring Club is displayed prior to repairs. Barrie Jeffery is seated, Frank Woodward stands beside. SAC photo collection

club. This club took possession of the damaged Grunau and commenced negotiations with the NRC to obtain use of the machine. In 1950, approval was obtained but with the proviso, that it be used to investigate soaring conditions in British Columbia, hardly an arduous restriction. A report was submitted in 1952 which described the flights made and speculated about future expeditions, thus fulfilling this obligation.

The Soaring Club of BC had taken possession of ZBD in damaged condition and it was not until late in 1951 that it was restored to airworthy condition, just in time to be used by Ralph Coates to win the 1951 Pacific West Coast Soaring Meet held at Sumas over the Labour Day weekend. It was the host club's sole airworthy glider at the time, with the other five gliders taking part coming from Washington state.

The glider was used for the remainder of 1951 but was then grounded. Barrie Jeffery, who had graduated from UBC and gone to work for the NRC in Ottawa, had come across a report on the deterioration of German wartime urea-formaldehyde glues in the course of his work. Having been closely involved with the acquisition of ZBD and aware of its general condition, he had forwarded it to the club as a matter of grave concern. Members undertook a very thorough examination of the structure and, as Frank Dashwood graphically recalls:

> "We had been flying that Grunau with a casein glued patch on the mainspar, disintegrating with age – the wing only holding together and supporting loads with plywood skin top and bottom of the said main spar. Ye gods! Shudders! Good thing we didn't do any pullouts from steep dives."

Before investing in a major repair on the Grunau, the club wanted to obtain title to the aircraft. Negotiation commenced with the NRC to achieve this. Although protracted they were finally successful, but it was a club member not the club which ultimately owned the aircraft.

As repairs to ZBD would have required a complete rebuild of the wings, efforts were made to obtain a replacement set, without success. When, in May 1953, the Gatineau Gliding Club damaged the fuselage of their Grunau, CF-ZBH, the fuselage of ZBD was bought from its Vancouver owner and shipped to Ottawa for use with the still serviceable wings of ZBH for the remainder of the 1953 season.

The Gatineau Gliding Club Grunau, CF-ZBH, 1947-53

The Ottawa based Gatineau Gliding Club, with several NRC employees among its members and well represented on the board of the Soaring Association of Canada, was ideally placed to obtain the pick of the war prize gliders for its own use.

The machine in the best condition was a Grunau Baby (serial number 1533), which was quickly put into airworthy condition and registered as CF-ZBH. Originally fitted with a skid landing gear, in 1951 it was modified to incorporate a landing wheel to ease ground handling. Becoming available to the GGC during 1947, ZBH was used by "Shorty" Boudreault to earn Canada's first Silver C badge. He flew the altitude leg on 2 May, the distance leg on 2 July and on 1 August, in spite of a severe attack of air sickness, completed his five hour duration flight.

Of all the machines loaned out by the NRC, ZBH was the one which most closely met the requirement of being used for technical research purposes. During the summer of 1947, the GGC members fitted the aircraft with several experimental angle of attack indicators for test purposes. The results of these tests were published in the SAC 1948-1949 Yearbook.

Between 11 May 1947 and 25 August 1951, ZBH was probably the most active sailplane in the country, making 832 flights for a total of 315 hours. On the latter date, however, it suffered its first accident when it was damaged in an off-field landing and was out of service for the remainder of that year. The real cause of the accident was water in the towplane's fuel which had led to the glider having to release from tow prematurely in an unsuitable position to return to the airfield. The damage was made good over the winter and ZBH was back into service for the 1952 soaring season.

CF-ZBH and CF-ZBD, 1953-56

In May 1953, ZBH was again seriously damaged. With an important soaring meet scheduled for the following weekend (the May 22-24 Kitchener Meet), the Gatineau Gliding Club took unorthodox steps to quickly restore its Grunau to service. The wings, which had been only superficially damaged, were hastily repaired and mated to the repaired fuselage of the Queen's Gliding Club Grunau (originally CF-ZAR), which was still awaiting repair of the wing damage from its 1949 accident. The ZAR/ZBH hybrid was presumably flown as ZBH since ZAR's registration had been cancelled in 1951. After the Kitchener Meet, the borrowed fuselage was returned to Kingston and the wings of ZBH were mated to the fuselage of the ex-UBC Grunau, CF-ZBD, obtained from Vancouver. The ZBD/ZBH hydrid flew in this form for the remainder of the1953 soaring season.

From this point in time the wing/fuselage combinations which flew as ZBD and ZBH become a little obscure. ZBD and ZBH were both retained by the Gatineau Gliding Club for some years, but until 1956 the club was only able to keep one Grunau in flying condition and the available evidence suggests this was ZBD. Certificate of Airworthiness records show that ZBH did return to service before 1956, but flew very few hours, so it was apparently pranged at least once more during the period 1954 to 1955.[2] Whether ZBH's original wings were ever refitted to the original fuselage cannot be established with certainty but some evidence exists suggesting that this did happen, with the ZBD fuselage receiving substitute wings.[3] Adding further confusion to the issue, however, is the possible cannibalisation of another war prize Grunau Baby which had been "acquired" by enthusiasts in the Royal Canadian Navy. This machine passed into the hands of the Gatineau Gliding Club around 1952 and major pieces of it may have been incorporated into ZBD or ZBH during repairs (see under "The Navy Grunau").

ZBD, 1956-64

The Gatineau Gliding Club retained and flew ZBD until 1959 when it was sold to the Quebec Soaring Club, who flew it regularly until 1964, at which time Mother Nature stepped into the picture. After making only a few flights at the start of the 1964 soaring season, ZBD suffered "considerable damage in a violent storm."

A replacement left wing was sought without success, forcing the club to undertake the task of repairing the left wing during the winter of 1964-65. Then disaster struck for a second time:

> "The Grunau was wrecked in the first hurricane that swept the country, just a week or so after (the club) got it out in the open. The Grunau was unfortunately torn from its moorings by the wind. It was anchored at the wingtips only and the lift was so strong that the wing broke in the middle. It landed on its back and was damaged beyond repair."

As a result of this storm damage, ZBD became the first and, so far, the only of the NRC war prize gliders to totally disappear.

ZBH, 1956 ...

Although it is not completely clear in what shape ZBH emerged from the period 1953 to 1955, its subsequent history is much easier to discern. From 1956 to 1962, it was in regular use by the Gatineau Gliding Club, although by the end of that period it was a dated design. In 1963, having provided club members with 579 hours of soaring flight over a period of 15 years, it was sold to make way for more modern equipment.

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2 The No.2 (1956 to 1964) and No.3 (1965 on) logbooks for ZBH are held by the current owner. The No.1 logbook is missing. The history of the machine from 1947 to 1955 has therefore been deduced from reports in *free flight* and the DoT files. While the period 1947 to 1953 is well documented, a degree of mystery surrounds the period 1954 to 1956. ZBH's C of A was renewed in 1954 and regularly thereafter, however, it must have been out of service for much of the 1954 and 1955 seasons since in April 1952 it was reported to have flown a total of 315 hours, yet its No.2 logbook shows it had only flown 350 hours by April 1956, a mere 35 hours flown in four years. Gatineau Gliding Club reported to SAC that 39 Grunau hours were flown in 1953, 51 hours in 1954, and 40 hours in 1955. This suggests that ZBH spent much of the 1954 and 1955 seasons idle.

A report from the *"Gatineau Glider"* reprinted in *"free flight"* February 1955 states, "This year we will have two additional machines, namely a second Grunau Baby and an LK," which indicates the club had just one active in 1954. The Christmas 1955 issue of *"free flight"* contains a report of Gatineau Gliding Club activities to November first which indicates there was only a single Grunau in the club's active fleet in 1955, but that two would

The new owner, John Beverly Woslyng of Cardston, Alberta was a member of a Lethbridge based group which initially called itself the Chinook Gliding Club, but later, in the mid–70s, referred to itself as the Serene Soaring Club. The Grunau was used by all members of the group and was their "deluxe machine, used on the better soaring days."

During the 20 years that Woslyng owned ZBH a mere 128 hours airtime were added to its airtime. Part of the reason for this was that the Chinook Gliding Club was a small group, flying only occasionally. In addition, Woslyng was not often in Lethbridge to fly his sailplane and his flights were not necessarily at time favourable for soaring, as was revealed by A.R. Hansen in 1971:

> "One member, Bev Woslyng, who lives in Inuvik NWT, comes out only once a year. He was down for Christmas and so we started the New Year outright by going out flying on January 1st, 1971."

By 1982, the Serene Soaring Club was disbanding so Woslyng's glider was placed up for sale along with the other equipment used by the club. A newly formed gliding club at Medicine Hat, the Blue Thermal Soaring Association, purchased it along with a 2-22 and winch owned by the club in a package deal, thereby obtaining everything they needed to get started. In 1985, Blue Thermal Soaring Association still possessed ZBH, but in view of its age and the suspect condition of its ancient glued structure, were contemplating finding a suitable home for it with a museum. *(ZBH was sold to Dave Fowlow of the Cu Nim Gliding Club in 1987. His goal is to restore the aircraft to as–new condition, using original materials where possible. ed)*

The McGill Gliding Club Mü 13, CF-ZPQ

Of the four gliders obtained by the NRC, the Mü13 potentially had the best performance, however, it was badly weathered and in the worst shape. It was therefore assigned to the McGill Gliding Club whose members were considered the best qualified to undertake a difficult repair job. *(A detailed account of the repair work is found in ff 2/89, "The Mü Affair. editor)* Although the McGill Gliding Club was a university club, it had access to the expertise of Canadair Ltd., since MGC and the Canadair Employees Soaring Club formed the two major constituents of the Montreal Soaring Council under whose umbrella both clubs operated.

Commencing the repairs in 1947, the McGill students found that the more they probed, the more they found in need of repair. The Mü13 owed its superior performance to an extremely lightweight structure. Repairing such a structure presented special problems if excess weight was to be avoided and distortion prevented. Even in Europe, no one had figured out how to repair the ultra-thin (less than .016" wall thickness) steel tube fuselage without buckling the frame. It took two of Canadair's best welders "eighty hours of hysterical welding and straightening" to complete this portion of the work.

Repairs to the wing required development of unorthodox methods in order to salvage the existing plywood which would have otherwise had to be replaced with thicker and heavier substitutes. Delaminated areas of the spar were restored by injecting catalyst and glue through hypodermic needles and clamping the sections until the glue set.

Over a thousand manhours and $600 (then a princely sum) were required before the Mü13 was anywhere near flying condition. It was mid 1952 before the Mü13 took to the air with its specially chosen registration, CF-ZPQ, signifying the Province of Quebec. (This was an unusual concession by the DoT since prior to this all gliders had been given registrations sequentially in the CF-Z series. By 1952, they were just getting into the CF-ZC_ series.

The Mü13D rapidly showed itself to be a superior sailplane. Within two months of the restoration, Ron Claudi used it to become National Champion at the National Soaring Meet held at St. Eugène, Ontario during August. During the meet, he also set a new Canadian goal flight record of 120 km (achieved jointly with Jack Ames who made the same flight in the Loudon).

Proof of superior performance was again demonstrated at the 1953 National Soaring Meet at Kitchener when Stan Rhys flew it to become National Champion. In 1954, there were three national meets held at regional locations. Although Stan Rhys won the Arnpior Meet in the Mü13, the winner of the Kitchener Meet scored more points overall and became National Champion.

By 1955, however, the members of the Montreal Soaring Council, of which the McGill Gliding Club was part, were becoming concerned about the condition of the wing structure. The poor quality, wartime German glue was deteriorating rapidly, especially since the glider had been left tied down outdoors each summer. Walter Piercy recalls that about this time the glider carried a placard with the following statement:

> "Do not do any aerobatics in this glider – you should see the inside of the wings."

At the end of 1955, the Mü13 was put into storage pending repair. The repair kept getting deferred until 1959 when Walter Piercy purchased the remains, took them back to Kingston and proceeded to build a completely new set of wings. These wings were built from the plans of the later Mü13E model (Bergfalke) which had been obtained from Germany. The new wings were thus both stronger and heavier (by about 30 kg) than the original ones. The new wings took almost four years to build and the Mü13 did not take to the air again until April 1963.

Piercy retained CF-ZPQ until 1966 when it was sold to Walter Chmela for use by the York Soaring Association. Many Silver C badges were completed in the Mü13 until 19 August 1973, when it was damaged by a pilot who overshot the runway and landed in a pasture, kinking the fuselage, breaking the canopy and tearing off the nose skid. The wings and tail, however, were undamaged.

Two York Soaring Association members, Peter Masak and Teo Talevi, purchased the wreckage and set about yet another restoration, which they completed in time for the aircraft to appear at the 1974 Antique Glider Regatta at Elmira, New York.

Several excellent flights were made while this partnership owned ZPQ but, by 1976, they desired something better. The Mü13 was put up for sale and eventually bought by Bryan MacDonnell of Kelowna, British Columbia, a member of the newly formed (and short–lived) Okanagan Soaring Club. Following the division of that club, the Mü13 was flown out of Kelowna with the Kelowna Gliding Club until this club's demise in 1980. Subsequently the Mü13 has been flown at various soaring sites in British Columbia. In 1981, several flights were made by MacDonnell from a hill in the Okanagan Valley using a bungee cord for launching, a method that had probably not been used in Canada for over 30 years, yet a method of launch for which the Mü13 was originally designed and ideally suited. Don MacClement, the man who had been instrumental in getting the Mü13 to Canada over 35 years earlier, was instrumental in obtaining the bungee cord and witnessed these flights.

The "Navy Grunau" CF-ZCB an additional (non NRC) war prize

During the early 1950s the Gatineau Gliding Club had access to yet a further Grunau Baby, another war prize. This machine had been in the possession of the Royal Canadian Navy, having been rebuilt from 1947 to 1950 by Rear Admiral H.G. deWolf from the remains of two Grunau Babies scavenged from the aircraft dumps in Germany:

> "When I first sighted them I thought some of my Naval pilots had walked through the wings, kicking out the ribs! The machines had been damaged in transit and

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be active in 1956: "Certain to fly again is another Grunau Baby; the wings and tail unit are finished. Leo Smith is de-crashing the fuselage." It would seem that, in spite of the C of A for both ZBD and ZBH being maintained from 1954 onwards, ZBD did the bulk of the flying in 1954 and 1955 with ZBH suffering further accident damage.

3 In view of Admiral deWolf's remarks that GGC later sought his permission to dispose of "his" Grunau (see under "The Navy Grunau — CF-ZCB) it can only be supposed that major pieces of it were incorporated into another Grunau, either CF-ZBD or CF-ZBH, since these were the only ones active with the club in the late 1950s. ZBH was sold to a private owner whereas ZBD went to the Quebec Soaring Club. As Admiral deWolf has stated that "his" Grunau was "sold to another club – with my blessing." The indication is that ZBD was the aircraft which utilized portions of ZCB. As GGC initially flew the fuselage of ZBD with the wings borrowed from damaged ZBH, it is possible that these wings were restored to ZBH following the fuselage repair and ZBD was fitted with the wings of ZCB, which had presumably suffered damage sufficient to discourage a full repair.

J.J. Audette –

First soaring pilot in Canada's Aviation Hall of Fame

Ursula Wiese

THE LATE JULIEN AUDETTE of Regina, Saskatchewan is the first soaring pilot, amongst 129 members to date, honoured by Canada's Aviation Hall of Fame. He has been a true ambassador of non-powered flight – carrying a peaceful message of capturing the thermals, travelling the endless cloud streets, riding the mountain waves to space, whistling by tree tops on ridges, and soaring with the eagles, hawks and the sandhill cranes. He has proven his leadership and innovation in the many fields of our sport, in navigation, meteorology, education, airmanship, and physics. To the power pilots this feat seems awesome – kind of fiction; well, on Friday, 2 June 1989, the word went out that there is useful but invisible power in the air. It just needs to be understood...

This peaceful message became instilled in me more than ever before when I was wandering around in the Hall of Fame, "this only place in the nation where you can find under one roof all the biographies of our aeronautical luminaries", the foremost of the pilots on duty in both World wars, bush pilots daring the wilderness and adverse conditions of our high north for mapping (and perhaps their own curiosity), engineers of aircraft control and instrumentation, businessmen in the world of aviation travel, but also a few dedicated instructors and scientists, pioneers of the skies.

The Hall of Fame is located in the Convention Centre in Edmonton. "Entering from Jasper Avenue, the Curtiss JN4 Canuck (the 'Jenny') comes into view, suspended from the ceiling. Yet it is not out of place dangling from the high-tech triangular trusses, for its egg-shell thin wings, geometric braces and lacy flying wires mirror the cantilever design of the Convention Centre. It is also a fitting introduction to the Hall and a symbol of her most famous pilot, 'Wop' May."

I was, with other soaring friends, invited to the 15th Investiture of the Aviation Hall of Fame to celebrate the honours extended to Julien. The excitement of this evening was carried by the many guests who had come from afar to gather in joy and respect for aviation achievements and excellence which was presented to Julien and the other three inductees from the 'power' world.

In an ambience of twilight and black ties, Julien's citation panel was read:

Julien Joseph Audette was born at Radville, Saskatchewan, June 6, 1914. Following graduation from Regina's Campion College, he successively worked in his father's grocery, Canada Packers, Gray Insurance and finally from 1937, for the Saskatchewan government Audit Department.

In May of 1941, he joined the RCAF and received his pilot's Wings and Commission at Yorkton on February 27, 1942. Following instructor positions at Trenton and Saskatoon and operational training at Comox, he was posted to the Far East where he flew Douglas DC3s for the "Canucks Unlimited" 436 Burma Star Transport Squadron.

Following the war, he assisted in the formation of the Saskatchewan Air Ambulance Service and was its second pilot. In 1949, he became the first pilot with Kramer Air Service and eventually became Kramer Tractor's General Sales Manager. At the same time, he was active in the Prairie Road Builders Assocation and was President of the Regina Flying Club. He was Chairman of the Regina Chamber of Commerce's Aviation Committee and lobbied for improved air service, particularly for cross-border connections to North Dakota. From 1976 until 1984, he was Sales Development Manager for Saskmont Engineering. He was also Director of the Roughriders Football Club for 27 years. Other associations to benefit from his energies were the Royal Canadian Flying Clubs Association, Ducks Unlimited, YMCA, Royal Canadian Legion, Air Force Association, Knights of Columbus and the Saskatchewan Western Development Museum. It was, however, in the field of non-powered flight that Julien Audette made his major contribution to Canadian aviation.

In 1952, he was one of three founders of the Regina Gliding and Soaring Club and served as the Chief Tow Pilot, Chief Flying Instructor and President. He was instrumental in establishing a gliding scholarship for the Regina Air Cadets and for bringing three National Soaring competitions to Western Canada.

In 1962, he was awarded Canada's first Diamond Badge by the Fédération Aéronautique Internationale (FAI), #240 in the world. He was the first Canadian to earn this badge while establishing Canadian Soaring records and was the first Canadian to break 9144 metres (30,000 feet) in a sailplane.

On the national level, he held positions as President and FAI Awards Chairman of the Soaring Association of Canada. He was the only Canadian to hold all eight competitive awards available, six simultaneously.

1958	Dist. to Goal and Return	322 km
1958	Distance to Goal	380 km
1961	Absolute Altitude	9336 m
1961	Gain of Height	7108 m
1961	200 km Triangle	72.6 km/h
1962	300 km Triangle	65.0 km/h
1962	Free Distance	603.8 km
1964	100 km Triangle	85.0 km/h

For the 1958 Distance to Goal, he won the Barringer Memorial Trophy of the Soaring Society of America – the only Canadian so honoured. The 1961 altitude flight earned him Canada's first Symonds Wave Memorial Plaque and Lennie pin.

During his soaring in the Cowley, Alberta area, 1960 to 1975, he worked closely with the Federal Meteorology Department. Recognizing that the soaring prospects in the Pincher Creek area could be enhanced by a better knowledge of the climatology of wave clouds, he initiated a data collection program. This "Audette Project" provided the foundation for studies for others including the University of Calgary's Environmental Science Centre. In 1962, he was awarded the SAC Certificate of Honour; in 1967, the FAI awarded Julien Audette the Diplôme Paul Tissandier Certificate of Honour; in 1977, he was inducted into Saskatchewan Sports Hall of Fame; and in 1982, the Alberta Soaring Council presented him with a Certificate of Achievement Plaque.

He is named a Member of Canada's Aviation Hall of Fame in 1989 with the following simple citation:

> "His dedication to the development of the art of soaring has been of outstanding benefit to Canadian aviation."

This induction was followed by investiture as a Companion of the Order of Flight, presented by the City of Edmonton.

Following each speech for the four new members, their "panel" was unveiled. On Julien's panel, FAI badges "C" to Canada's Diamond No. 1 are silent symbols of his pioneering flights – however concealed his actual work as inspirator, teacher, scientist ...

Messages from the Premier of Saskatchewan and the president of the Saskatchewan Sports Hall of Fame were read to the Audette family and together with the Air Cadet League who received the Orion belt, gliding and the sport of soaring were much valued this evening, perhaps all too new to the hundreds of guests present. Finally, Dr. Robert Audette, "Julien's middle son", addressed the illustrious assembly with the evening's keynote speech (on opposite page), reminiscing on his boyhood, the dreams of flight, the growing up as crew chief for his dad.

"It was the third Induction dinner in March 1973 that the proposal to form an aviation Hall of Fame was made" and shortly after incorporated federally as a charitable non-profit association. Many problems had to be resolved such as who should become members of the Hall. It was finally agreed that all the airmen who had won the Victoria Cross (would) be so honoured. The 38 McKee Trophy winners would be added, and also the 33 Companions of the Order of Icarus [no longer presented].

Now many people in many locations had to be informed about our national heroes and a

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Quotes and Hall of Fame material extracted from "the Flyer", Pacific Western Airlines, Aug 1986, by Arnold Vaughan.

ON ROOTS AND WINGS

The 1989 Aviation Hall of Fame keynote speech

Robert Audette

As the son of one of the inductees, it is indeed a privilege to address you this evening when we are gathered to honour these four great Canadians who have joined other Canadian heroes as Members of Canada's Aviation Hall of Fame.

A couple of months ago I was taken back to my youth in a rather unexpected way. My 13 year old daughter came home in a state of ecstasy. Apparently, that afternoon, she had gone to an airfield north of our home in St. Albert. There, her friend's father took her flying in the open cockpit of a biplane. The joy and excitement she experienced from flying for the first time reminded me of those thrills we have all had. I was only 8 years old when my father took me flying with him. It was in a Tiger Moth while he towed gliders aloft over Regina. My daughter's excitement reminded me of some of the interesting experiences I had with Dad in those early years of his soaring career. I would like to share a couple of them with you ...

Like all children of aviators, I was fascinated by airplanes. Our first family trip to Pincher Creek, Alberta in the summer of 1956 whetted my father's appatitie for wave soaring. When we carried on to Wenatchee, Washington for a soaring contest I became, "at the ripe old age of 11", hooked on being his crewman. From then on, like most sons or daughters of aviators, I spent many happy hours helping Dad with his gliders and generally hanging out at the airport. This included building his Schweizer 1-26 sailplane during the winter of 1957-58. Like all teenagers, my father was my idol. My mother, however, tells me that in the spring of 1958, just as Dad was taking his new sailplane for its first flight, he complained to her about how I always followed him around like a puppy-dog. Apparently, no matter where Dad went at the airport I was always just a step or two behind him. In fact, one day I followed him right into the stalls of the men's washroom. This rather set both of us aback. Well, like all wise mothers she told her spouse to start training me for something useful. So, during that summer of 1958, at the budding age of 13, Dad again took me with him to Pincher Creek for wave soaring. There he began training me to be his crewchief. That summer Dad set two Canadian soaring records and got his first Diamond on his Gold badge. He taught me that if something was worth doing it was worth giving it your best and to constantly strive to extend the boundaries of what can be achieved. We began to dream and plan that summer for soaring flights to over 30,000 feet.

A week or so ago I was looking at some of my old memorabilia from those days and I came across a report I wrote in Grade 8. It described a ficticious conversation between my father and his gliding partner on how Dad had just broken the Canadian altitude record by climbing to 31,000 feet. Well, two years later, in 1961, it happened. Dad had just purchased his new Schweizer 1-23G. I had just turned 16 and we were again at Pincher Creek enjoying the comraderie of other soaring pilots. Everyone was trying to break the altitude record. Dad found his "Dream Wave" that morning, but when he was at 31,000 feet ascending at over 600 ft/min he discovered that his barograph had stopped. Bitterly disappointed, he reluctantly returned to the ground, never knowing how high he could have gone. There was an air of excitement around as I helped him refill his oxygen tank. He got the necessary certification to record his next flight (which was) to 30,000 feet and he obtained his second Diamond. We were ecstatic. This vividly reminds me of parts of John G. Magee's poem "High Flight" which Dad carried in his sailplane:

Oh, I have slipped the surly bonds of earth
And danced the skies on laughter–silvered wings.
Sunward I've climbed, and joined the tumbling mirth
Of sun–split clouds...

.. I've topped the windswept heights with easy grace
Where never lark or even eagle flew.
And, while with silent lifting mind I've trod
The high untrespassed sanctity of space,
Put out my hand, and touched the face of God.

That summer, I received my driver's licence and much to my mother's horror set out alone with Dad for the US National Soaring Championships in Wichita, Kansas. Well, Dad had taught me that if you failed at a task – don't quit, carry on and try harder. That lesson was brought home vividly one contest day. Dad was launched for his task and landed a short 10 miles away. He called back to the airfield and I went out to retrieve him. It took us 15 minutes to dismantle the sailplane and put it on the trailer. Rapidly we returned to the field, reassembled the sailplane and launched again. Thirty minutes later I got a call saying he'd landed just off the airfield. Out I went to pick him up. Off he went again and, you guessed it, he landed short. Five tries later ... we could take apart and put together that sailplane in under 5 minutes. Needless to say everyone at the contest headquarters was laughing at these crazy Canadians – but – Dad persisted and finally made it around the course. We both learned a lesson that day. It taught us patience, perseverence, and the value of teamwork – something not every 16 year old learns. Much to my surprise, and my father's great pride, that day won me the BEST CREW AWARD at that National contest.

Throughout his life, flying was one of Dad's reasons for living. He dreamed of using the mountain waves, to connect into the jetstream which would carry him from Pincher Creek hundreds of miles east to Winnipeg or Minneapolis. On the Easter weekend in 1962 he had an opportunity to do just that. With the lenticular waves dissipating in the morning air Dad declared Indian Head, Saskatchewan as his goal. After briefing me to leave for the retrieval downwind if he hadn't returned within an hour, he was towed into the mountain waves. When the towpilot returned the consensus amongst the pilots was that the wave conditions were not suitable and that Dad would soon be back. The other pilots dismantled their sailplanes and got ready to go home. After that hour when Dad didn't return I got our 35 foot glider trailer ready to head for Regina to retrieve him. Considerable discussion took place among the pilots – all of whom tried to persuade me to stay and wait for him at the airfield. But, Dad had trained me well and I had faith that an aviator's constant striving to extend the bounds of his excellence would prevail. So, my 12 year old brother Doug and I set off undaunted. I was proud of Dad that day for the faith he had in a young 17 year old. He concentrated on attaining his goal. He climbed to 27,300 feet in the mountain waves before heading east. Almost 8 hours later he landed 10 miles east of Moose Jaw with a new Canadian distance record and the completion of Canada's First Diamond soaring badge.

I could relate to you the story of how, in 1962, while trying to fly his sailplane and navigate my car at the same time, Dad accidently scrambled the military jets from Minot Air Force Base. He almost got shot out of his sailplane and I got a lesson on international diplomacy. We spent hours that night at the US border trying to prevent his sailplane from being seized for being illegally in the USA. However, I know that all of the sons and daughters of this evening's inductees and other honoured Members of the Aviation Hall of Fame have their own fond memories of the times they have spent with their parents.

So, on behalf of the sons and daughters of all the Members of the Hall, I would like to conclude by saying that our lives and our country have been enriched by these pioneer aviators. We have a saying tacked to our fridge: "There are only two lasting bequests we can hope to give our children – one of these is ROOTS; the other WINGS."

To all the honoured Hall of Fame Members I would say thank you for truly giving us our roots and a rich heritage of which we, your children, can be proud. As our parents you gave us "silvered wings" so that we can climb skyward and give our children – their roots.

WORLD CLASS EXPERIENCE

THE CANADIAN TEAM MEETS THE ALPS

VICKY STAMISON
– AN OVERVIEW –

Heri arrived in Austria early April to pick up his brand new LS-6 (KC) from the factory. In Weiz, the team's initial training site, Heri managed to fly about 25 hours. Jörg arrived a couple of weeks later with an LS-4 (JT) he borrowed from Thomas Pylls, a consultant who works at the Rolladen-Schneider factory. Peter arrived a few days later with a Nimbus 3T (TT) owned by Otto von Gwinner of Hamburg. (TT was flown by Ingo Renner at Rieti). The weather, up to this point, had been cold and wet over the entire of Europe.

Weather conditions started looking much better in the southern part of Austria. Rather than wait for the better weather to arrive, Peter and Jörg cancelled the following week of planned training at Turnau and instead, decided to trailer their sailplanes to a gliding club in Notsch located not far from Villach. While it was off the beaten track as far as racing routes were concerned, Jörg and Peter were to experience fine mountain and wave flying from this area over the next few days.

There were problems initially with towing because Notsch has a short field and the day was hot with unpredictable winds blowing from any direction. While the club was anxious to assist the Canadian team, the towpilot had never towed a Nimbus before! However, Jörg diplomatically took the first launch to gain the confidence of the towpilot and Peter followed next without incident.

The reason for the towpilot's caution became manifestly clear later in the afternoon when we experienced, with great regularity, hurricane velocity windbursts. I learned this was the effect of rotor descending to ground level.

The next day, after Jörg and Peter launched, the same local pilot who flew Bruce in a motorglider the day before, shyly offered me a flight that I will never forget. We motored to Villach and flew up a valley into the Alps to circle over the Grossglockner (Peter and Jörg had apparently attempted to fly to the Grossglockner but were unable to because of cloud) and then followed another valley along the Dolomitenstrasse.

The entire flight was four hours long and was my first flight ever in mountains. Everything about mountain flying leapt into focus for me. The pilot was a sensitive and knowledgeable flyer and took advantage of all soaring possibilities: ridge flying sometimes, thermalling at other times and, once we were high enough, continued climbing in wave to over 13,000 feet. The pilot pinpointed prominent physical features but for me the most impressive sight was not the Alps, but the Dolomites. It was a cloudy day but periodically the sun would showcase a mountain in the distance. As we continued up the street, this breathtaking view would disappear as the cloud passed over the sun.

That evening we had dinner with the Norwegian team who also came to do some training. Peter and Jörg, flying *hors concours*, took the first launch the next day. They flew a task of some 300 km. Peter made it back; however, Jörg landed off field a hop, skip and jump from the airfield back at Notsch. Both pilots were happy with the flying that day because they learned a lot from the locals regarding flying over the main spine of the Alps. Jörg discovered a new and quicker route over the mountains.

THE CANADIAN TEAM

Jörg Stieber, Standard class, LS-4, 1150 hours, in his 1st World Championships.
Dave Webb, Standard class, DG-300, 3000 hours, a veteran of eight contests.
Heri Pölzl, 15 m class, LS-6b, 1600 hours, in his first competition.
Peter Masak, Open class, Nimbus 3, 900 hours, also in his first Worlds.

FINAL RESULTS

Standard (43 pilots): 1 Aboulin (F) 8854 pts, 2 Davis (GB) 8819, 3 Kuittinen (Fin) 8671, 33 Webb 5983, 42 Stieber 4916.

15 m (40 pilots): 1 Gantenbrink (FRG) 9041 pts, 2 Wills (GB) 8761, 3 Garton (GB) 8570, 23 Pölzl 6506.

Open (23 pilots): 1 Lopitaux (F) 9148 pts, 2 Renner (AUS) 9123, 3 Schramme (FRG) 8795, 11 Masak 7756.

Finally on Sunday evening the Canadian team met in its entirety for the first time over dinner at the Schererwirt Gasthof which was located in the hills about 15 minutes from Wiener Neustadt. This lovely Gasthof would become a welcome respite for the next three weeks from the hectic, dusty, noisy environment of Wiener Neustadt. It was also going to be my first night camping as I had elected to stay on the airfield. Needless to say, it was blowing up a helluva hurricane when I turned in.

On the last practise day a task into Hungary was attempted, but a strong inversion destroyed all hopes of anyone succeeding. There were landouts. It seemed that now was as good a time as any to test the system the officials had arranged for retrieving pilots. All the retrieve cars were given a large contest logo which was taped to a car window. Apparently one had merely to go to the diplomatic lane at the border and we were to be given easy access into and out of Hungary.

– CONTEST DAY 1 –

The first three days were rained out. Meteorologist Hermann Trimmel: *"The low to the south of us is still there with rain 50 km away. The drier air, and so the best task route, will be east into Hungary."*

1230 hours marked the occasion of the first launch, by Jarmo Forssten of Finland in his Nimbus 3, of the 21st World Soaring Contest. Twenty towplanes launched the entire grid of 108 sailplanes in an hour with only one small incident: one of the towplanes, after releasing its sailplane, had to make an off-field landing a few miles away as a result of an engine failure.

Within half an hour, the first outlanding telephone call reached Wiener Neustadt offices, heralding events to come. 94 sailplanes land out! Over Hungary, the spotter plane used to relay messages back to contest headquarters was inundated with pilot calls. Jörg had a disappointing start to his contest, landing very early in the task. Peter was aerotowed back from his landout near Sopron in Hungary but mistook a local airport for Wiener Neustadt! Heri landed near a town with no phone and didn't get home until 3 am.

– DAY 2 –

"The occlusion over the Mediterranean Sea (otherwise referred to as the "Adriatic Low") is still very close to Wiener Neustadt and some clouds will be over the departure area. Local overdevelopment brings risk of rainshowers over the higher mountains."

The unusual conditions (unchanged from yesterday) formed a definite line of weather: blue skies to the north, thunderstorms to the south and west. Conditions were reasonable for the first half of the first leg but became blue from there to the first turnpoint. Most pilots found an average rate of climb of about 4 knots with the best rate of climb of about 6 knots. The best height was about 6500 feet. The first half of the second leg provided extremely good conditions with a cloudbase between 5500–6000 feet until after crossing the Danube. North into the hills were developing cumulus clouds and normal lift. However, the last leg was to doom many pilots to outlandings. Showers and TCUs blocked the passage. After passing the Schneeberg, pilots had to have enough height in hand to make it home as there were no thermals the last 50 km!

One pilot, flying the third leg up the Hainfeld valley to avoid overdevelopment, passed through a rainshower complete with diminishing visibility such that he couldn't distinguish

the tops from the valleys. His radio started crackling. He changed it from off to on without success. At the same time there was a strong static discharge between his right knee and the battery behind the instrument panel followed by smaller discharges between his hand and stick! When the rainshower stopped, he backtracked some 20 km by ridge soaring to an outlanding field where he was joined twenty minutes later by two other sailplanes.

Jörg and Dave landed out: once again at Grabensee, and just past the second turnpoint respectively. Heri and Peter completed their task placing 10th and 8th respectively in their classes.

– DAY 3 –

"A slight movement of the six day old Mediterranean low towards the east caused a displacement of the occlusion over this area. A very moist and unstable airmass will develop much cloud and reduce the heating. Later on, overdevelopment will cause showers and thunderstorms.

Finally, after two weak contest days, most pilots made it home. Maximum cloudbase was 4000 AGL with the lowest bases at 2500 feet over Hungary with also the weakest lift. The best rate of climb was 7 kts with an average of 5.5 integrated. The 6/8 cu at the start soon became 3/8 ... and no thunderstorms.

At the finish, sailplanes came in, whole herds of them – some even in fine formation. In the haze, only the silver-grey water ballast mist announced their arrivals! The finish line was absolutely overwhelmed and apparently disorganized with so many finishers. Even while the Standard class was coming in, very high in the sky some of the long-winged birds flew over on their way to the last Open class turnpoint at Seebenstein.

– DAY 4 –

"Thunderstorms and heavy rainfall passed through our area from northeast to southwest during the night. The remaining cloud layers are the last sign of the occlusion's life."

Some pilots find wave. The French are doing very well at team flying, and Lherm and Lopitaux come in first and second in the Open class even though Lopitaux's instruments are useless as a result of water in the system from the previous night's big storm – he flies very close to Lherm for the whole task.

– DAY 5 –

Hermann Trimmel: "Increasing high pressure influence and advection of cold air from the northeast with mostly blue thermals. Over mountains and in areas with moist soil, small cumulus will form at 6000 to 7500 feet."

There are several ways of attempting a task. One method is to join a gaggle and accept communal decisions. But, it is important to select the right gaggle. The "happy" gaggle in the Standard class delayed too long but set off at 1417. However, they found that the thermal strength did not improve as they approached the Alps, nor was the northeast wind as strong as it had been near Wiener Neustadt. There was a low inversion near the Danube and it was a struggle to get to the turnpoint and back to higher ground. There were no clouds to help and they lost ten minutes contacting better lift which seemed to come from deep valleys where a northerly wind blew. The next gaggle departed seven minutes later but were unable to catch the one ahead as often happens.

Another option is to pair fly, and the remaining option is to "go it alone" which some pilots are temperamentally suited to doing even though they know that gaggle flying or pair flying is "safer". However, if you come unstuck, it can be a lonely, frustrating matter.

At the end of the day, the cumulative position of the team is: Peter 10th in the Open, Dave 12th and Jörg 32nd in Standard, and Heri 38th in the 15 m class.

– DAY 6 –

"High pressure influence over the Alps. Good convection up to a significant inversion at 6500 feet. Only the thermals over the higher mountains are able to break through the inversion – mostly blue to over 10,000 feet."

108 sailplanes were launched in 53 minutes! The Open class pilots started early for their cat's cradle, the first time a distance task is called in this contest. (Safety is increased with a 6 hour time limit and a 5% distance bonus awarded for landing at an airfield.) The 15 m class, with a 515 km task ordered, also didn't delay. Hungarian's Sandor Papp and Bela Guraly left at 1214 and all others within 23 minutes.

Many pilots found it difficult to get past the Grimming area, half way to Zell am See, turnpoint for the 15 m class and the objective of many in the Open class. Some sailplanes were circling at the bottom of the mountain and others ridge soared. It was very difficult, if not useless low down, and many outlandings occurred here. Once one climbed above the tops of the mountains, it was much better. However, a choice had to be made whether to divert towards the north or towards the south. An any case, a diversion meant lost time.

The 15 metre class pilots appeared to have a better run than the Standard. In the Open class, one pilot found that the better lift was on the southern side of the mountains capped by cloud and he reached a maximum altitude of 11,500 feet. Later, though he got a fright when he was only 1000 feet AGL. He decided that the fastest way back from Zell am See was towards the south and he flew with some 15 metre ships to the Leobon area. He took a photo of Seebenstein and then of Wiener Neustadt and found he had 15 minutes of his six hours to spare. So back he went and photographed Seebenstein again three minutes before "time was up." The winning distance for the Open class was 714 km each by the pair-flying French.

– DAY 7 –

"High pressure influence, southeasterly flow at 15 knots. Inversion at 7000 feet. Only small cumulus at 6000 feet over the flatland. Over the mountains, mainly blue thermals. In the southwest, more humid air is moving in and will develop towering cu. Cloudbases over Central Alps will be up to 11,000 feet."

A good day and long tasks set: 508 km for Standard, 566 for Open, and the 15 m class gets a cat's cradle (won by Justin Wills of Great Britain with 688 km).

For the Canadians, the Open class was our best showing to date: Peter puts in a blistering 128 km/h to place 3rd for the day, and he has worked himself up to 5th place overall. Ray Gimmey (USA) and Ingo Renner (Australia) placed 1st and 2nd at 130.2 km/h each.

JÖRG STIEBER
Day 8 — Distance

The weather on the previous day had been fantastic and this day looked even better. A light SW wind activated the southern faces of the predominantly east-west oriented ridges and chains. The perfect airmass called for strong thermals with a high cloudbase.

A cat's cradle distance task with a six hour duration was set for Standard class. This type of task allows the pilot to choose from a number of turnpoints in a prescribed area. The scoring is based on the distance achieved from the start point, around all photographed turnpoints either to the landing point, if the landing occurs within the time limit for the task, or to the last turnpoint photographed within the time limit. To reduce the risk, a 5% bonus is granted upon landing on an airfield. Contrary to a POST task, a return to home base is not required. Even though speed is not scored explicitly, it of course enters into the scoring since it is the objective to fly as large a distance as possible within the given time.

Dave and myself started at 1:15 pm which put our finish time limit to 6:15 pm. We intended to return to Wiener Neustadt since this would give us the benefit of a long final glide of more than 80 km over which we could easily achieve an average speed of 130 to 140 km/h. It would also give us the best utilization of our altitude since the elevation of Wiener Neustadt airport is considerably less than that of any airport in the mountains. The disadvantage of this strategy was that we would be committed to reach Wiener Neustadt in time once we were on final glide since there were no turnpoints in the vicinity we could photograph in case we would be running out of time. If we would arrive after expiry of the time limit, our scoring distance would be reduced to the turnpoint last photographed within the time limit. We planned to fly to Zell am See which gives us an out–and–return distance of 517 km. If there was time left on returning, we could take some turnpoint within final glide distance.

Once we were in the mountains, the conditions were fantastic. We zoomed along the ridges of first the Mur valley, then the Enns valley. We rarely had to thermal and if we did, we did not take anything below 8 knots integrated. More than once I saw 10+ knots on the average. After 2 hours and 40 minutes,

we rounded Zell am See. Conditions seemed to get even better on the return run with cloudbase reaching almost 12,000 feet.

I had gained a 15 km lead over Dave and was toying with the idea of taking one of the turnpoints in the valley and backtracking some 30 km to achieve more distance under these excellent conditions. Dave was not in favour of this because he was concerned about getting home in time. By the time I had made up my mind, I had passed a conveniently located turnpoint and had to take one which required a little detour. Also, my backtracking distance was not 40 km which would increase total flying distance by 80 km. Trying to fly 600 km in 6 hours meant cutting it very tight.

The plan fell apart when I got too low and had to take a mere 5 knotter to regain altitude. I was still 120 km from Wiener Neustadt and had only 25 minutes to go – I had to make alternative plans. I took another turnpoint close by and then started to fly towards Kapfenberg, an airport in the mountains which was also a turnpoint. I had planned to land there and claim the 5% airport landing bonus but found a good thermal in close proximity of the airport which I took since I still had 15 minutes to go. As I studied my map while gaining altitude, I realized there was another turnpoint I could easily reach and add 15 km to my score. There was no off-field landing risk since the other turnpoint was close to Turnau airport.

After having taken a photo of Kapfenberg, I flew over to Aflenz, the other turnpoint. I encountered large areas of lift possibly wave induced. Two minutes before time was up, I shot my last turnpoint photo from 6000 feet.

The timing was ideal except for the fact that I was 6000 feet too high. The altitude should have been converted into distance. I put the excess altitude to good use by embarking on a leisurely flight toward Wiener Neustadt.

This pleasant evening flight, without pressure and plenty of time to admire the scenery, put the crowning touch on the day. A scoring distance of 550 km placed me 20th. Baer Selen, from Holland, won the day with a scoring distance of 695 km.

HERI PÖLZL
DAY 9 — 563.1 km

As well as the day unfolded, things were not quite as predicted at the morning's weather briefing. Normally, the Open class gets the longest task but on this, the ninth day of the competition, the little guys got it.

The first hour after takeoff we had to struggle to stay airborne in the stable airmass over Wiener Neustadt by ridge soaring the Hohe Wand 10 km northwest of the airfield. 108 aircraft on a 5 km long mountain at 2600 feet AGL reminded me of rush hour in Toronto – the only thing missing were exhaust fumes. Finally the heating got strong enough to get things going and I had a good start following the standard route via Schneeberg, Rax, Schneealpe, and Veitsch exclusively in ridge lift 10 to 20 m over the steep rock faces of these mountains. Jumping from the Veitsch to the Hochschwab mountain, I took a 4 knot thermal to 9200 feet MSL and continued the flight in ridge lift up the Eisenerzer Alpen to the Reichenstein near Admont. Keeping thermaling to an absolute minimum, I flew the first 140 km in an hour and 5 minutes.

During most of the World's the winds were from the southeast to south, which is rather unusual but it made ridge flying possible on the south facing rockwalls. Flying in ridge lift mixed with thermals is extremely rough at times as the mountains are mainly rugged. This low level flying is further complicated by a limited number of landing fields. Many pilots preferred to fly thermals at higher altitudes even if they lost valuable time.

CAT'S CRADLE TACTICS

The organizing team examining the turnpoint sequences assessed some evident facts, showing the tactics of the best placed pilots. Most of them chose a turnpoint far away from Wiener Neustadt, and along this track they looked left and right spotting places where they had the best rate of climb. Then returning, they flew a triangle over the area they ranked as best, their operating area getting smaller and smaller as the flying time deadline approached.

The two seaters had an advantage over the solo sailplanes in the Open class. The co-pilot could really concentrate all his attention on this kind of assessment.

Once reaching the Reichenstein, one must cross a wide valley and by this time overdevelopment was getting quite bad. There were light showers under every second cloud, although the lift was still good at 4–6 knots. The first turnpoint at Bad Aussee is surrounded by mountains and lakes and known as a sinkhole. I had no problems rounding it, but by now thunderstorms had developed south of Dachstein mountain over the Enns valley (the preferred route), so to get to my second turnpoint Mittersill, 104 km further west, I flew north of the Dachstein, crossing the glacier to the Tennengebirge, 30 km further west, way north of my course. Pushing through a narrow gap in the mountains in heavy overdevelopment and rain, I got the weird feeling of flying through a tunnel with no end in sight, but the map confirmed a wide valley just 2 to 3 km ahead of me.

Finally I break through the mess into a dryer airmass and good soaring conditions lay ahead. I round the turnpoint with no problems. All of a sudden the sky is busy, I recognize Jacobs (DJ), Gantenbrink (YY), Garton (31), and a few more. I feel great as they still have to make the turnpoint 20 km behind me. Flying back to the east, the moist airmass starts dominating the conditions again. Twenty kilometres short of the Dachstein, I can see that the thunderstorm now covers the whole valley from the mountains to the north and to the south side. A black wall of rain and lightening blocks the way towards Wiener Neustadt. Well, to say the least, I don't feel that great any longer. While thinking how to attack the monster, I pull up under a huge cumulus into 8 knot lift. I take it to the top and roll out at 11,500 feet (my outside thermometer shows -8°C, and I am glad that we put antifreeze into the tail tank). I approach the storm cell with best L/D and notice many of my competitors landing out. The storm is obviously sucking in all the heated air around it, leaving no chance for thermals to pop up. At 9500 feet, I dive into the black wall and all hell breaks loose: snow, ice pellets and severe turbulence hit me at once. I know if I maintain a heading of 80 degrees, I will follow the middle of the valley without the risk of running into a mountain. The sink is not bad, but the leading edge of my wings shows severe ice and snow build-up. The airplane becomes increasingly nose heavy which I notice as a stick load. I increase the speed to 120 km/h and trim the airplane, the ice pellets making an incredible noise on the canopy.

By now, I am passing Schladming, which I recognize looking straight down although I'm not 100% sure. Five minutes further on I fly out of the thunderstorm into a completely overcast sky about 3000 feet over the valley floor. Looking at the ice on my wings, I remember my newly installed bug wiper. Should I give it a try? Why not! It works perfectly. The wings clean, I pull back to best L/D speed but nothing happens. The airspeed stuck at 120 km/h, the vario seems to go completely nuts, shows sink, and the speed director wants me to slow down. The pitot must have been completely plugged by ice or snow. I maintain speed by trimming to 100 km/h with zero flap (it pays to know your trim settings) and float to the next mountain. Eventually after 10 minutes or so the ice in the pitot melts and my instruments work normally again. Once I get to the mountain I'm surprised to find five other competitors there who obviously also went through the same thunderstorm, and we start to fly towards home. The lift is weak but we make good progress until I end up 350 feet above the valley floor. It takes me an hour to dig myself out of the hole, while I watch the other guys land below!

The rest of the flight was uneventful and by making the finish line I gained six places on my competitors. My speed was 86 km/h. It was one of the most demanding flights of my flying career, however I wouldn't have wanted to miss it. •

PETER MASAK
THE LAST DAY – 555 km

For me, the last day was a particularly memorable one since I learned a great deal and had a most enjoyable flight, even though my daily placing was rather unimpressive.

By now the final placings were pretty well established. There was a minor point spread between the top three contestants: Lopitaux (F), Renner (AUS), and Schramme (FRG). Other contestants were at least a couple of hundred points behind. I was sitting in 10th place overall after a disasterous landout the previous day which dropped me from 6th to

10th. So I wasn't too concerned about winning anymore, although it would be nice to win a bottle of wine for a top three day finish.

During the latter half of the contest, I had formed a bit of an informal alliance with Ray Lynskey of New Zealand. We had enjoyed several marvelous flights together. Ray was flying an ASH-25, with Ian Findlayson as co-pilot/navigator in the back.

For the last day, Ian's skills would be important, as a task had been set into Hungary. The Hungarian landscape was very hard to navigate over, what with roads running in every possible direction, so the advantage of a back seat navigator was clear. This would let us concentrate on picking the best clouds, instead of wasting time trying to find out where you were all the time.

The forecast was for good cumulus, however the likelihood of overdevelopment was also there. The first leg would take us into Hungary, and the second leg back into the Alps west of Wiener Neustadt, and then finally on home. A late start might result in finding the second turnpoint washed out in rain.

Ray and I speculated as to the optimal time to go, and decided to leave early, given the forecast. No one wanted to go first, and most of the Open class pilots could be seen dodging in and out of the mist at cloudbase in the foothills to the west of the startpoint. We tried one false start to see if we could draw anyone out. No one took the bait and we went back to the hills to climb back up for another run. Ten minutes later we were back at cloudbase and struck out at max L/D for the start point several miles east.

Moving out eastward into the flatland over Hungary, the thermal strength weakened and the cloudbase dropped as was expected. I started to get concerned that we might be pushing too hard as I noticed the altimeter continue to wind down. The few circles that we took all seemed to be in weaker and weaker cores.

Moving onward, the glide ratio of the Nimbus 3 was helpful as we sailed through a blue hole south of a large lake in Hungary. All of a sudden we were joined by Schramme/Holighaus in the two-seat Nimbus 3D, and several minutes later by Ingo Renner (Nimbus 3), who sailed over us a couple of hundred feet higher. The pace quickened as Renner pushed onward, moving very aggressively in the soft conditions. I gave chase, determined not to let Him (the capital is appropriate) get too far ahead. Renner must have had a sixth sense of what was ahead, because the next thermal that he hit was a boomer – after messing around in 2 knot thermals for 100 km, we joined Renner in an 8 knotter!

Each of us moved out of the thermal separately, with Renner ahead, myself next, then Schramme/Holighaus, and Lynskey trailing. We were close enough to the turnpoint to glide in and out, and I passed up Renner's next 6 knot thermal hoping to pick it up on the way back from the turn instead. Renner had about 500 feet on me, but I was determined to get to the turn first. I overshot the turn by a few hundred feet, and Schramme cut inside of me as we both took our turnpoint pictures simultaneously.

For whatever reason, I lost sight of both Renner and Schramme, and Lynskey and I pressed on together, looking for the elusive 8 knot thermal. We were now heading back westward towards Austria and 'freedom'.

I led out for several thermals, but suddenly Lynskey found a better core and sailed over me by a few hundred feet. I then started to play catch-up, but seemed to continue losing on Ray little by little. Maybe I was getting too bugged up I speculated, and the bug wipers were deployed. In any event, Lynskey was flying brilliantly, and we soon became separated. As we crossed into Austria, I briefly caught sight of Ingo leaving a thermal. I came in under his cloud, but it had already started to dissipate, and only a 3 knot climb was available. Strange I thought, this doesn't seem like an 'Ingo Renner' thermal!

Ray Lynskey and I talked briefly on the radio, and we concluded that Ray was a couple of miles ahead, about even with Renner. As we approached the rising terrain to the west, it became obvious that a fast climb to cloudbase was necessary to be able to climb up into the Alps. Lynskey called me and said that he had a 5 knot thermal right on the lee-side of one of the small foothills. I left my mediocre 3 knotter and came in under Ray, clearing the top of the small hill by a few hundred feet. To my exasperation, there was nothing but sink, and I had to make a quick ninety degree course shift and head off to the north to avoid a landing in the mountains.

This was the beginning of my troubles. I watched Lynskey disappearing over the high mountains to the west, while I looked around for possible landout sites. My altitude reserve was quickly disappearing, and a quick save was necessary. Did I ever regret leaving that last thermal early!

I bobbled along northward off courseline, following a small ridge line. I tried first the windward side, and then the sunny (but lee side) of the ridge, feeling a lot of turbulence but no surge that was the telltale sign of a solid, building thermal. Down to 500 feet now and the situation was getting tense. All of a sudden I felt a bit of a surge, and I turned in anticipation of getting a decent climb rate all around the turn. This was not to be as the thermal was small. I dumped my water and started a slow climb, all the while knowing that the minutes were ticking away too fast.

— What I didn't know at the time was that Renner and Holighaus were in the same predicament. Apparently Lynskey had been the only one to successfully negotiate the transition. Holighaus later remarked to me that he was lower and in more trouble than I was!

I forced myself to stay in the weak thermal for at least a few hundred feet. This gave me some altitude for a decent search radius, and I moved out again in hopes of getting a better thermal. Finally I connected and moved out of the sinkhole. (Apparently Renner had had more success, and even though I hadn't seen him, he had come through the bad air with much less height loss.) Finally I was at cloudbase again and into the mountains! From there it was a cakewalk run to the next turnpoint at Turnau. I called Lynskey and asked him for a status report, expecting to hear that he was on final glide. He laughed and said that he and Ian had made a major navigation error and were only now rounding the turnpoint. I think Lynskey could have won the day had it not been for that slip.

I approached the second turn near cloudbase, only to see a couple of Open ships pass well underneath me. Knowing that I probably had final glide altitude, I sped up, rounded the turn, and pushed the stick forward. I was determined not to let anyone pass me now. There's something very comforting about seeing other ships ahead and below on final glide. I'll just give chase and follow overhead and pass them in the last few miles, or so I thought.

This plan quickly evaporated, as it became apparent that they must have been flying at a considerably higher wingloading, and were pulling away from me. To my surprise, I realized that I was again gliding with Schramme/Holighaus and Goudriaan. It was a delight to see that Schramme was not 10 to 15 minutes ahead of me as I had expected.

Together we pushed forward. The herd instinct took over and we progressively bumped the speed up higher and higher, to about 120 knots. Unfortunately, we realized too late that the speed was too high, and before too long it was apparent that none of us might clear the last major mountain ahead between us and homebase! Before too long, we had slowed back down to max L/D speed with the terrain uncomfortably close below us. With a sigh of relief, the last major obstacle was cleared and we broke out of the high mountains into much friendlier terrain ahead. We were now below glide path, and we inched upward by ridge soaring the sunny side of several small ridges on the way. Finally it was a relief to push the speed up, and I finished 16th for the day. Schramme finished just ahead of me in 15th position (3rd overall in the contest), Lynskey finished 6th (5th overall), and Renner won the day (2nd overall). It was enjoyable, apart from the minor kaffuffle in the foothills.

What struck me as most interesting was the fact that the lead switched so many times that day. I can think of times when Lynskey, Renner and Schramme were all effectively in first place (at that moment); however, in the long run the "Master" Renner prevailed! As the saying goes, "it's not over 'til it's over!"

PS Let me take the opportunity to thank two people that were particularly instrumental in helping me at the world contest: Klaus Holighaus, who was a superb negotiator who somehow succeeded in arranging a first class ship on my behalf for the contest, and Beth McCollum, who was an outstanding one-woman crew and a close friend during the contest. Thanks. It was most appreciated. •

The Canadian Team thanks Becker Flugfunk's sponsorship in supplying a ground station for the Worlds and for the Canadian Nationals.

The Western Interprovincials

Tony Burton
contest organizer

CANADA'S FIRST all-POST competition was a great success by every measure you may use to rate a contest except perhaps size – only 18 pilots in 15 sailplanes attended – about half the size I had hoped for. This was perhaps fortunate as there were only three towplanes readily available. This minor cavil aside, all the usual signs of a good contest were there:

- the top third of the placings were closely fought and changed from day to day (on the morning of the last day the top four were within 143 points of each other),
- the POST rules got a good workout and proved to be an enjoyable way of competing – while 2-3 additional days could have been scratched by a task setting committee using "standard" rules,
- the weather was challenging with tough scratchy conditions on many days, but capped with an absolute beaut of a Day 6 which required 505 km and 123 km/h out of Kevin Bennett to get first place and the contest win (and Andrew Jackson soared 640 km home to Regina),
- the contest facilities were first rate, and the banquet had better food and drink than I have eaten at any other contest bar none,
- and, wonder of wonders (except practise day evening) not a drop of rain fell!

When the sailplanes were all in the box, the winners were:

Grand prize:	Kevin Bennett
2nd place plaque	Hal Werneburg
3rd place plaque	Dick Mamini
Novice plaque	Guy Peasley
Best team plaque	Marsden/Zwarych

and the top ten scores were held by:

Kevin Bennett	4195	Jessee/Southwood	3204
Hal Werneburg	4023	Tony Burton	3075
Dick Mamini	4005	Stirling/Peasley	2898
Hans König	3955	Buzz Burwash	2645
Marsden/Zwarych	3519	Jerry Vesely	1997

The first prize received a lot of attention, it being a 11 x 14 framed print of a truly awsome storm cloud taken by a photographer near Claresholm last year which earned a prize in a national competition.

This was the first time the turnpoint/photo target system was used in a contest in Canada, and some pilots had trouble with it. Hal Werneburg, Tony Burton and Kevin Bennett lost Day prizes as a result of bad turnpoint photos. The main complaint was that the required accuracy was too tight when one was required to be directly over the turnpoint as the photo of the target was taken. Other blunders were made because the pilots didn't check their position carefully enough (individual sets of TP photos and maps were not printed for competitors as an economy measure, so they carried descriptions of the TP area rather than maps of them), or just plain rushed their photography. It would seem that contest organizers must give careful consideration to TP and phototarget selection, not only to reduce complaints from pilots, but also the photo interpreter.

Claresholm and Granum (5 and 17km away) were very close turnpoints which were for fine tuning final glides for maximum distance, but for some were the only place they got to on some days. This was the result of a stable weather pattern which kept the jet stream over southern Alberta for most of the contest period. The cirrus associated with the jet kept the Claresholm area shadowed and cool, suppressing lift until early afternoon on three days. Two other days were cancelled, one for lack of convection, and one for strong winds. It was noted that free use of close-in turnpoints could allow "Vne" speed runs to gain maximum speed points, but would have the result of unfairly depressing the speed points of pilots who flew "proper" tasks. A minimum distance to fly or not allowing the sole use of the closest turnpoints would eliminate this unwanted possibility.

The "racehorse" start, although a very simple system, drew the most negative comment. The start gate opened at a fixed time – usually 20 minutes after the last launch. This could be tough on pilots who launched last or were forced to relight in the variable local soaring conditions at start time on some days. There were some strangely slow achieved speeds, the result of the clock's inexorable ticking away while some pilots were clawing for enough height to go anywhere!

If all competitors fly with time-back cameras the above problem will be solved, as pilot-chosen start times will be possible without requiring the labor intensive start gate system. Use of time-back cameras would also solve the question of controling the finish time of a landout by requiring the pilot to photograph the tail of the sailplane on landing. This proof of landing time would ensure that flying past the day's finish time could be limited by suitable distance penalties.

A simple scoring formula was used which eliminated all the usual devaluation factors and replaced them with the elimination of a pilot's worst daily score. Points were scored equally for distance and speed with 500 points going to the day's maximum for each, but one had to get back to Claresholm A/P to earn any speed points. A major "plus" was that the pilot's ability to fly wherever the conditions were best significantly reduced the landout factor. The landouts were only 10% (and 3 of the 8 were mine!) — attempts at standard task setting under the same con-ditions would have raised it to probably 50–60%.

Contest pilots in general don't like revolutionary changes in the way they compete and believe that direct competition over the same task has some value; however, pilots at this contest also saw much merit in the test of the increased navigation, weather observation, and timing required, so there was some expression that a mix of the two types in one contest was appropriate (but it does impose a larger ground organization).

This contest was a good solid first test of the POST concept, while showing where more fine–tuning of the rules is required. The main thing is that everyone found it was an education, and it was fun. •

"... and finally, though we expect to see good turnpoint photos, we're not really looking for close–ups."

TEST FLIGHT

Bill McElwee
from "SHAp Talk"
Sailplane Homebuilders Assn newsletter

HOW MANY TIMES over the past four years have I dreamed this flight? I remember those first naive weeks after I bought the nearly (?) completed BG12BD; fuselage suspended by ropes from the rafters in my basement, I climb in wearing the old Navy reserve chute and pretend there are wings and a canopy. Later in my backyard (I have a photograph, my daughter and the dog in the cockpit) wings in place, still no canopy, again I climb in, the leaves of the trees, above the clouds. The ailerons completed and mounted to the wing, I manipulate the pushrod and watch it move and imagine it rolling the ship.

How many nights have I laid awake and rehearsed what I will do? First we will turn her left and right, make sure she flies normally. Then do a gentle straight ahead stall, recording the airspeed. Then stalls with progressive flap settings to full flaps. Then I will simulate an approach with full flaps, making the turns to base and final and flare till it stalls, recording the rate of sink.

Toss and turn in the bed. Rearrange the pillow under my head, and always as part of the imagined test flight, maybe there will be some lift somewhere. And the landing. How many times have I rehearsed the landing. Flaps instead of spoilers don't bother me. I have plenty of time in Cessnas. In fact, I fully expect that I will as usual complete the roll-out on the test flight in front of the Eagle Ridge shack.

Pleasant thoughts in the wee morning hours, but what if ...? I am really not worried about a major structural failure. I have seen the wing spars in this aircraft. They are like telephone poles. I have conducted the crucial test, counted the cycles of vibration as Briegleb describes and the count is exactly as he says it should be. I am not worried about wood construction either. I have read Jack Lambie's comforting words about how wood found in the pyramids is as good as it was 2500 years ago.

But what if the thing is not rigged quite right? Or something binds somewhere, or the canopy pops open, or the release doesn't work. Still all my day dreams end in a pleasant and successful flight.

Recently the dreaming has become more real. In the backyard of my partner, Jeff Bushnell, the ship sits gleaming white, canopy in place, racing stripes, everything hooked up and working. The uncertainties and the waiting are about over. We are going to fly it.

Who is going first? I have made it clear from the beginning that I want to do that. Other more experienced friends have offered to test fly it for me, but I am determined that since I bought it and built part of it, it is my responsibility. No one but me is going to risk his neck on that first flight of what some have considered McElwee's folly.

I would have flown it on the day that the FAA gave it thumbs up, but the winds were too high. Now at last the moment is here. I am not scared, but I am not no sweat macho either. I want some extra runway for this first lift off, so I request that we start from beside the skeleton hangar, and it turns out that it is a good thing I did.

How many nights have I laid awake and rehearsed what I will do?

We are off in a blast of dust and gravel from the towplane, flying before you know it, and whoops, what's this? We are climbing above the tail of the still rolling towplane, and the nose won't come down. Release at 25 feet, now it flies just fine. Except that now I am descending through the wake of the towplane. The turbulence kicks us about a bit and I learn the meaning of Briegleb's warning that this ship has less aileron authority than others. Still it is no sweat; pull full flaps, float in the ground effect and gently touch down on the grass two thirds of the way down the airport, as the towplane roars around the pattern.

I am not dismayed, but encouraged. The thing really does fly, and rather nicely at that. I figure the problem was that I had too much flap in for takeoff, but Jeff adds the crucial insight. We need more weight in the nose. We knew we were fairly close to the aft limit of the CG, and had talked of adding some lead shot up front but didn't do it. We are using a borrowed chute which weighs less than ours. We know what we will do on the next flight. A package of lead under my seat and a no flaps takeoff.

This time at Kurt's request we forsake the gravel and go off the taxi way. I am excited and confident. This airplane is alright! Once again we are in the air quickly, as though this six hundred pound piece of cabinet work were a 1-26. The tow is perfect. The ship is rock steady. Nothing to do but sit here and smile. Everything is normal in the turns. By the time we reach 5000 feet, I am feeling just fine thank you.

Off tow it stalls straight ahead with plenty of warning rumble, and obvious determination to keep on flying even with the stick full back. When the break does come there is some slight tendency to fall off to the left, easily controlled by the rudder pedals. Adding half and then full flaps shaves a few more miles off the stall speed, getting it down to 42 mph. Right and left turns at up to 45 degrees of bank go perfectly normal and I dearly wish I had a thermal to circle in.

Before takeoff Kurt had told me that while the winds were relatively quiet on the surface,they were really honking at altitude. I notice at this point that I am drifting somewhat downwind of the airport so I decide to penetrate upwind, and while doing so check out the minimum rate of sink. The vario indicates something less than 100 feet per minute sink, and I am surprised. I didn't think a BG12's performance was quite that good. Then I notice that the needle is moving up towards the zero. Looking over the side I am aware that I am standing still in the sky over the airport. Wave! With the wind out of the southwest I hadn't expected this, but here I am at 3500 feet sitting absolutely still in the sky.

For a brief moment there is something frightening about this feeling. It is as though I were sitting at the top of a very tall flagpole. Pilots can look down from thousands of feet in the air at a moving earth with no fear of heights. But there is something very unnerving about sitting on a window ledge at the top of a skyscraper. That is how it feels to me just now as I sit stock still, anchored in an unchanging position at an unchanging altitude. I say to myself, "Well, this is one way to put time on the aircraft," and resolve to work it as long as I can.

Back and forth across the wind, loosing a little here and there, what should have been a thirty minute sled ride turns into a fifty minute maiden voyage for our lovely resorcinal queen. May she see many more days like this!

In the pattern it's full flaps on downwind opposite the runway. (Ron is right, the flaps are of only moderate effect), and fly it like any other approach. The glider sideslips beautifully, making up for spoilers very effectively, we touch down gently, and just as in my dreams, roll up to the flight line with the biggest grin you have ever seen. A couple of cowboy whoops and hollers confirm for Jeff how I feel about our sailplane. Now it is his chance to turn dreams into reality. •

PERSONNEL LICENCING CHANGES COMING

Ian Oldaker, Chairman
Flight Training and Safety Committee

SIGNIFICANT CHANGES to licencing standards have occurred over the past few years due mainly to the recommendations of the Commission of Inquiry on Aviation Safety. Other amendments have been drafted and distributed for consultation to "Industry" which of course includes the Soaring Association and other gliding organizations. Meetings have been held with Transport Canada to help answer concerns and questions regarding gliding, to assist in drafting new requirements for gliding. Comments that we gave pointed out our particular mode of operation and to a very great extent have helped lessen the impact of the changes. In fact the draft regulations will affect the glider pilot very little.

The changes were being held for publication with the Personnel Licencing Regulations, Series IV. Publication of these has been delayed, and therefore Transport Canada has decided to promulgate this information in the Personnel Licencing Handbook and in the existing Pilot Licence Privileges Orders (Air Navigation Orders Series IV Numbers 1 and 2). Information that we have suggests the *Personnel Licences Order* will come into effect some time before 16 November 1989.

The changes that will affect glider pilots are:

- A general student pilot permit will be issued and will relate to any aircraft category.

- Introduction of recent experience requirements for all pilot licences. Under the new order the privileges of a licence may not be exercised unless the pilot has acted as pilot-in-command within the 5 years preceding the flight, or has written the exam (for that licence) within the previous one year.

- In addition to the above, passenger-carrying privileges are affected – the pilot will have had to complete at least five takeoffs and landings within the previous six months in the same category of aircraft.

- Every pilot will be required to maintain a logbook – this will provide a means of verifying recent experience as now specified.

The changes will clearly have minimal impact on glider pilots generally, especially those relating to recent experience for pilots! The requirement that the pilot have flown *five flights* within the previous six months in the *same category of aircraft* before exercising passenger carrying privileges may affect some of our pilots, but is in reality a very sensible requirement and should affect us little. Finally the logbook requirement may affect some of our pilots but is required as backup for the recency requirements, and is already a (Personnel Licencing Handbook) requirement for pilots undergoing training. The additional burden on those pilots who do not now maintain a book should be minimal.

There will be additional provisions in the Privileges Order (ANO, Series IV, No. 2, now to be renamed the *Flight Crew Licences Privileges Order*); for example, it will now be an express requirement that training be under the direction of a qualified instructor. As this is already being observed it will not affect our operations.

The logbook record is spelled out – it follows our current book with the addition that the *conditions under which the flight was conducted* will now have to be stated. This can be shown conveniently in the comments column of the book.

A slight change to the student pilot holder's privileges will occur – he or she may:

- act as pilot–in–command when under the supervision of a flight instructor ...
- carry no passengers, and
- the flight must be conducted within Canada, by day and under visual flight rules (VFR).

A glider pilot who wishes to carry a passenger will have had to have used the same launch method for at least three previous solo flights. And finally the blanket aircraft type rating which will be issued for glider pilots will simply be a type rating for all gliders.

These changes are the result of many years of deliberations by people at Transport Canada and by our own members in representing our Association's interests to them. I believe we have come off lightly in the sense that many of the new requirements represent what we are already doing and so they will not affect us strongly. In some cases our requirements are stiffer than the regulations will be; it should remain this way, and provided we continue "to run our own house" the effect of future changes to the regulations should be equally small to us. •

"FREEFALL" by Wiliam Hoffer and Marilyn Mona Hoffer, St. Martin's Press, New York, 270 pages, about $19

The words at the top of the book cover tell it all: "41,000 feet and out of fuel". To a glider pilot this would never be of any concern as we quite often find ourselves at the upper limits of the atmosphere. But to Captain Bob Pearson on 23 July 1983 those words reveal the stark reality of the situation. Here was a highly advanced Boeing 767, cruising west over Red Lake, Ontario which, by a series of events, ran out of fuel.

This book, which has taken over five years to write, recounts those events which led up to the now famous "Gimli Glider" incident, so named because of the final landing site north of Winnipeg. Many of the passengers onboard at the time relived those terrifying 29 minutes after it was announed that they would be landing in Winnipeg with a "problem". The book switches easily from cockpit to passenger cabin and ties us in with the people involved. As seen through their eyes, the book actually has us sitting in the pilot's seat, almost feeling the aircraft descending and finding us gripping the seat as the stewardesses prepare the cabin for an emergency landing. The final chapters deal with the final approach and landing at Gimli, Manitoba, as well as the conversation between Capt. Pearson and Air Traffic Control in Winnipeg. Capt. Pearson, a glider pilot himself, found that he was too high on final approach and did what his early flying training had taught him: putting the huge 767 into a sideslip so that his touchdown was only 800 feet past the threshold of the runway.

The book is well written and very interesting to read. It is a must for any glider pilot. (Capt. Pearson was in Winnipeg recently to promote the book and signed my copy simply, "From one glider pilot to another – many happy landings".)

Mike Maskell

Albert Seaman

SAFETY NOTE

Paul Moggach
SAC Flight Training and Safety Committee

The soaring season will be past its mid-point by the time this gets to print and sad to say so will the accident season. Of particular concern at this stage is the number of incidents we have seen lately where spoilers have been left open on takeoff or have inadvertently been deployed. While some of these problems are of a mechanical nature it might be wise to review other factors at this time.

In most launch situations, it takes three people to fail to act when a glider takes off with the spoilers open. While the pilot-in-command is ultimately responsible – the pilot, the towpilot, and wing runner all have the means to stop the launch. Let's act together and help prevent some of these accidents and incidents. A few ideas come quickly to mind.

Some clubs, as part of their pre-takeoff CISTRSC check, routinely ask the wing runner if the spoilers are "closed on top/bottom" depending upon the sailplane. This practise was largely a holdover from the days of high-wing ships and upper-surface only spoilers that could not be viewed by the pilot during his checks. When I first saw this in practise I thought that the check was largely redundant in light of the more modern mechanical arrangements on most gliders. If spoilers were deployed on the top it was almost impossible for them not to deploy on the bottom and vice versa. However, I now think that such a practise would be good in that it actively involves the wing runner in this crucial check. Consider now that two people would now be remembering this item. This could be added to the training of the wing running procedures quite easily. Such active procedures aside, please remember that many of your wing runners are new students who may feel intimidated by experienced pilots. They may feel that it is not their "place" to comment on your use of spoilers and may feel reluctant to halt the launch. It is important to let new people know that the pilot would rather be a bit embarrassed and alive rather than hung up in the trees!

It seems that Blaniks have been involved in many of these incidents. In particular it is well known that it is easy to confuse the flaps and spoilers in this aircraft. Some clubs have adopted the practise of placing one of those ribbed children's bicycle grips on the flap handle to further differentiate it from the spoilers. Consider this at your club. It might save on "splap" deployment in the future.

Finally, consider the stress at launch time and what it does to your judgement. Many of the accidents we review happen to experienced, conscientious pilots. Beware of stress associated with your mental and physical condition each flight. Don't become complacent about your skills, the environment you fly in, and the aircraft that you fly. Remember that it takes some effort to fly safely. •

J.J. Audette

continued from page 10

movable exhibition seemed to be the answer. "In 1974, a specially designed trailer to accommodate the exhibition (which when set up, covered approximately 10,000 square feet) began its two-year tour from the Calgary Centennial Planetarium, to the Klondike days festival in Edmonton, the Pacific National Exhibition in Vancouver, the Northwest Territories, the Centennial Airshow in Winnipeg, the Canadian National Exhibition in Toronto and to the Maritimes. However, by 1976 a permanent home had to be found.

The Hall, it was said, would add to Canada's heritage. It would undertake by every responsible means to 'document, preserve and publicize the names and deeds of those Canadians, both alive and dead, whose contribution to the advancement of Canadian aviation has been of superior benefit to the nation'. It would give credit where it was due regardless of sex or racial background. Finally, Edmonton was chosen because pilots of the 1920s and '30s made Edmonton 'the Gateway to the North'... even though getting to that stage was as adverse and frustrating as the pioneers' deeds themselves.

The criteria for membership is one whose contributions to aviation have been of a major benefit to Canada, a lifetime of contribution and not just a singular event. Reviews are made in September to consider nominations, and new and old applications. Nominations are never destroyed but are kept on file and are updated as the individual's career progresses. Thus it is possible for someone to be selected many years after the original nomination was presented. Aviation qualifications in the field of civil and military operations, science and leadership are graded into four categories: quality of achievement, consistency of achievement, significance of achievement, and character assessment. The top ten are then sent to the Board of Directors who usually select only three for the June induction ceremonies.

The Members' Gallery shows a 4 foot by 8 foot panel for each member, displaying their record of achievement, photographs and personal aviation memorabilia, along with an Irma Coucill portrait [sketch type] of the individual. One may listen to their taped stories at individual listening posts. Many reminiscences have been recorded by the honourees themselves. The Trophy Gallery exhibits the Trans-Canada (McKee) Trophy, for sixty years the most prestigious award in Canadian aviation, and trophies of the Royal Canadian Air Force Association, the Royal Flying Clubs Association, the Canadian Aeronautics and Space Institute. The Mini-Theatre offers a multi-media audio visual show of the beginnings of Canadian aviation.

Canada's Hall of Fame tells in words and pictures the exciting story of the adventurous and often visionary men who pioneered aviation in our country. It is unique in that through the lives of the airmen, doctors and engineers, one can see the development of Canada's aviation heritage. Since heroes are made from bold or daring deeds all in the Hall of Fame would meet that standard." •

The War Prize Gliders

continued from page 9

> in the end I completed one GBIIA from the wreckage of two. The fuselage I repaired in the Torpedo room of HMCS Magnificent – by stretching out the wire controls of the tail assembly, fastening both parts of the fuselage down and splicing the necessary longerons and panels to put it back in one piece. The wings were rebuilt in England by a small company who did the repairs for the London Gliding Club ... that GBII was still incomplete when I was sent to Esquimault, so it followed me and we completed it – rigging it by eye but never flew it out there. It followed me east again and was flown at the Gatineau Gliding Club for some years, I think, before being sold to another club – with my blessing. I was in Esquimault from 1948 to 1950 and we completed the rebuilding out there. It followed me to Ottawa in 1950 and I farmed it out to the Gatineau Gliding Club with an understanding that Naval members would fly it without charge. The club would have use of it and look after maintenance. Naval members didn't materialize, and some years later the club asked me if they could dispose of it and I agreed."

Whether the Gatineau Gliding Club had utilized the "Navy" Grunau to any great extent cannot be determined from the records. In July 1952 the markings CF-ZCB were assigned to a Mr. Walker of the Department of National Defense for a Grunau Baby II. In September 1952, a temporary C of A was issued to the Gatineau Gliding Club for this aircraft, presumably the "Navy" Grunau. Elvie Smith of GGC reports that he flew it during the period of 13 October 1951 to 27 April 1952 but does not recall what happened to it after that. The registration CF-ZCB was cancelled in May 1954, so it was most likely no longer in existence as a complete aircraft at that date. •

Note

The author has been unable to ascertain the original date of manufacture of any of the NRC "war prize" gliders. The cards on file with the Department of Transport give 1942 for ZBD, 1944 for ZBH and 1944 for ZCP. The basis on which these dates were justified is not known. ZBD is, of course, no longer in existence, ZBH appears to have lost its original manufacturer's plate, while the manufacturer's plate for CF-ZCP (located on the right hand wing root rib) holds only the following information:

Bauart:	E. Schneider, Grunau
Sach-Nr:	108-49-F5C
Werk-Nr:	1535
Hersteller:	Flugzeugbau Edmund Schneider, Grunau/Riesengeb.[irge]

As a further point of interest, the original serial numbers provided to the DoT appear not to have been the manufacturer's numbers (possibly they were NRC acquisition numbers). ZCP is still listed as S/N 004497 while ZBH carries the number 1533, but the DoT card shows the number 004496 was originally listed and later rubbed off.

Reprints of this article with complete references and footnotes are available from the editor for $4.

Club News

VANDALS CAUGHT AT HOPE

On 19 June, early in the morning, two vandals struck out at the hangar and club gliders tied down at Hope. They started by forceably entering the hangar, which was empty at the time, and then proceeded to each of the gliders ripping off the covers, breaking the canopies, and kicking the fuselages. A firm estimate of the damage has not been made, but could reach as high as $10,000.

Thanks to the quick thinking of Keith Collins, one of the Hope weather observers, one of the culprits was caught at the scene. Keith was driving to work at 4:30 am when he noticed a vehicle parked down by the glider tiedowns. He recorded the car licence number as he drove by on his way to the weather shack, called the police, and then drove down the taxiway with his car lights off to investigate.

Keith managed to catch one of the vandals and hold him until the police arrived. Charges are pending to one 17 year old youth, and his accomplice has been identified. The club owes Keith a great vote of thanks for his initiative and going well past the call of duty.

Both of the Blaniks and the Pilatus were hit. Bob Lorenzo reports that EJA is still serviceable and that he may be able to bring the Pilatus to a flyable state. Unfortunately, ZEU will have to be grounded until adequate repairs can be made.

It was fortunate that both Grobs and the Jantar were not in the hangar during the festivities. The abundance of angle iron in the hangar, and the additional cover provided could have resulted in substantial damage to the glider keep within. Consideration is now being given to relocating the tiedowns to the westside of the hangar and providing electronic protection to the gliders kept in the hangar.

from **Vancouver Soaring Scene**

COLD LAKE TRIPLES MEMBERS

I have been asked how the Cold Lake Soaring Club managed to triple its membership this year. I failed in my attempts to make an article on the subject, but here comes a *"Reader's Digest"* version.

- Faced with the threat of being shut down because of low membership and the associated lack of funds for the towplane's approaching engine overhaul – we (the four of us who flew regularly last year) PANICKED.

- Mike McKay (one of the four) then came up with the "blitzkrieg" idea: swamping virtually every work section of every unit on the base with a "learn to fly – this is soaring" package. That came out to a twenty inch high stack of paper.

- We then put together a mall display with a giant TV screen. The videos we showed were CBC's "Riding the Mountain Wave" and the US "Running on Empty". By far the best response was to the latter, which is a spectacular video describing the Hitachi Masters' championship. It was interesting to note that people were more willing to approach the display when there were at least three of us milling around. We gave away another twenty information packages that day.

- The result was 24 persons registering for the ground school, and a number of other pilots came back to the sport of flying.

- I estimate that at least six more persons would join the club if we pursued them. The problem now is that we don't yet have the management structure of a large club or the resources ...

But it's the thought that counts.

Marek Wakulczyk
president CLSC

STARBUCK UPDATE

There is a saying around the city of Winnipeg that there are only two seasons – one being winter and the other being the construction season. Many of the streets in the city are in one form or another in the process of being repaired. And while the city workers are hard at it, our club members are also busy repairing their personal gliders.

We have a Ka6 which was bought last year after an unfortunate meeting with a windsock pole. The damage is considerable but at last report much progress was being made and we expect to see it in the air by next year. There is also an HP-14 on the mend after several years of being locked in its trailer after a control obstruction caused the pilot to bail out safely. The glider landed upside down in a nearby river and received moderate damage *(this harrowing story – "Bailout" – is in free flight 1/83)*. Another member is busy doing some woodwork on a K7 that received minor damage during a wind storm two years ago.

With the end of a winter that seemed to go on forever, our club finally got flying on the last weekend of April with our instructors getting some check flights. During May we had a few very good days with cloudbases around the 10,000 feet mark. Our club Jantar C-GCGJ has seen some good use with one member practically dominating it until others get checked out to fly it. On one weekend alone he racked up close to 12 hours and some 600 km.

A very successful promotion in the form of a mall display and a sport and hobby show was held in March and May. During the two events many people stopped by to chat and expressed interest in the sport. A list of over 100 names was taken and now that we are flying on a regular basis, Friday evening has been set aside for introductory rides. Each week 8 to 10 people off the list are contacted and arrangements made for them to come out and fly. So far this has proved to be very worthwhile.

Our student membership has also increased considerably, with over 20 new students on the roster for this year. Many have taken our winter ground school and by now are well along in their flying lessons. With our new students all keen to fly and our usual eager members, 1989 should be the best ever at Starbuck.

Mike Maskell
Winnipeg Gliding Club

The two latest "soaring thrills and agonies" ceramic masks from Norm Taylor at Winnipeg.
photo **Mike Maskell**

FAI Records

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

Triangle Distance – Multiplace, Citizens, 510 km, 25 January 89, Charles Yeates (Kris Yeates), Twin Astir, VH–IKU. Flown from Waikerie, South Australia with turnpoints at Commandook silo and Cull-ulleraine Lake and return. The John Firth (Danny Webber) flight of 510 km in 1986 becomes a territorial record.

300 km Triangle Speed – Multiplace, Citizens, 79.4 km/h, 27 Jan 89, Charles Yeates (Kris Yeates), Twin Astir, VH–IKU. Flown from Waikerie, South Australia with turnpoints at Teal Flat and Meribah silo and return. The Dave Marsden (ED Dumas) flight of 69.9 km/h in 1975 becomes a territorial record.

200 km Speed to Goal – Open, 93.6 km/h, 22 May 89, Tony Burton, RS–15, C–GPUB. Flown from Black Diamond to Warner, AB. Previous record was 70.0 km/h set by John Firth in 1970.

The following new record has been claimed:

Goal and Return Distance – Open, 703 km, 3 Jun 89, Mike Apps, Nimbus 2, C–GAJM. Flown from Chipman to Black Diamond, AB and return. Exceeds previous record of 615 km set jointly by Dave Marsden and Mike Apps in 1983.

SIGNIFICANT FLIGHT

Andrew Jackson, 2 July, Ventus B, C–GRUR. Flew home 640 km in 6 hours from Claresholm a/p to Regina a/p on the last day of the Western Interprovincials to complete his Diamond badge. Excellent soaring conditions on most of the trip, especially the Medicine Hat to Swift Current where he stayed above 8,000 msl and never had to turn.

ACCIDENTS

($70,000 in claims to date)

2–33, C–GSOR,1 May, Winnipeg Gliding Club. Landed short, hit road and bounced into a field. Damage to left wing.

Scout, C–GXTX, 5 May, Regina. On landing hit bump and bounced, then nosed over following a second landing try. Minor prop damage.

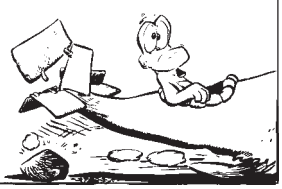
Blanik, C–GGUV, 11 Jun, Kawartha. Spoilers opened on take-off, early release, glider landed into a wooded area. Possible write–off.

1–26, C–GNEU, 11 Jun, Rideau Gliding. On final approach at about 100 feet the glider nose-dived into ground, bounced and hit on nose again. Substantial damage, probable write-off. Pilot sustained back and rib injuries.

Champ, C–FOHQ, 17 Jun, London. Nosed over on overbraking, minor prop damage.

Pilatus B4 C–GHES, **Blaniks** C–GZEU and GEJA, 19 Jun, Hope. Canopies broken by vandals.

Libelle, C–GJFQ, 2 Jul, Windsor. While on tow dropped wing and crashed nose–down. Write–off. Pilot sustained broken leg and arm.



FAI Badges

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

The following Badges and Badge legs were recorded in the Canadian Soaring Register during the period 1 May to 30 June 1989.

GOLD BADGE

245	Richard Grocholski	York

SILVER BADGE

773	Richard Grocholski	York
774	Alfred Hunkeler	SOSA
775	Steven Esplen	Beaver Valley

DIAMOND GOAL

Richard Grocholski	York	304.5 km	Std Jantar	Estrella, AZ

GOLD DISTANCE

Richard Grocholski	York	304.5 km	Std Jantar	Estrella, AZ

SILVER DISTANCE

Richard Grocholski	York	304.5 km	Std Jantar	Estrella, AZ
Alfred Hunkeler	SOSA	62.0 km	1–26	Rockton, ON
Steven Esplen	Beaver Valley	56.0 km	Std Jantar	Waikerie, Australia

SILVER ALTITUDE

Steven Esplen	Beaver Valley	1950 m	Std Jantar	Waikerie, Australia

SILVER DURATION

Steven Esplen	Beaver Valley	5:15	Std Jantar	Waikerie, Australia

C BADGE

2168	Steven Esplen	Beaver Valley	5:15	Std Jantar	Waikerie, Australia
2169	Ken Withrow	SOSA	1:17	1–26	Rockton, ON

CANADIAN NATIONALS RESULTS

Preliminary (almost final) results just as *free flight* goes to press

	15 metre class		Standard class	
1	John Seymour	3509.1	Ed Hollestelle sr	3112.9
2	Heri Pölzl	3423.5	Jörg Stieber	2996.1
3	Wilf Krueger	3420.6	Paul Thompson	2780.3

Walter Weir had been leading the contest every day until day 7 when he forgot to remove the lens cap from his camera. That cost him 600 points and the title of 15 metre champion.

The contest was favoured with very good weather and eight contest days. There were four speed tasks and four POST tasks, all averaging 300 km! The tale of the 1989 Canadian Soaring Championships at Rockton, Ontario will be printed in the next issue of *free flight*.

I SEE JUST GREAT, DOC

A story in *Flight International* about the Royal Australian Air Force's new Pilatus PC–9 turboprop trainer had a great anecdote about pilot behaviour. The Central Flying School's commanding officer indicated that serviceability of the new type has been very good, with few snags. However, said the CO, "... the most amusing one was an EFIS (electronic flight instrument system) which was out of focus and stayed that way for about three months. Nobody wanted to admit they could not see it properly, in case they needed an eye check. Pilots naturally steer clear of anything that might mean a visit to the doctor and possible downgrading. Anyway, someone touched on it one night in the bar, and there was a chorus of 'I thought it was me' – problem solved..."

I guess the moral of this story is to speak up. Everyone else may be thinking the same thing. Then again, it just may be your bifocals.

from the 2/89 **Aviation Safety Newsletter**

Freeze – dried pilots

Plain old fatigue can happen from many causes, but one of the most treatable is dehydration. Consider the following:

- we lose about a litre of water a day through excretion,
- in hot weather, sweating can cause the loss of up to four litres in an hour! In the cockpit we won't lose that much, but a lot nevertheless.

There is also an altitude effect. As we go to altitude there is less air, and less water vapour, too. The tendency is for the human body to share its water with that virtually water free atmosphere. Water loss from low humidity at altitude increases "insensible" perspiration – insensible because we don't notice it. Our bodies, like wet sponges in the desert, continually lose water through evaporation, and this increases when the body is in the dry atmosphere at altitude.

However, thirst tends to diminish at altitude. The body, designed to survive on the surface, usually loses most water by sweating, not by insensible perspiration. Sweating also causes loss of body salts (electrolytes), and it's the change of electrolyte concentration in the blood which the brain detects to trigger the thirst sensation. As change in electrolyte concentration is not as dramatic when water is lost through insensible perspiration, the thirst warning lags behind actual need.

A lot of dehydration is self–imposed because we rarely drink enough water in the first place. *When the human body signals thirst, it's already about a litre low.* How many of us routinely ask for water at a meal? Not many... Why? Because we want something sweet like a soft drink, etc., in fact, almost anything but water. But sugar can complicate the absorption of water into the body, and alcohol and coffee can cause a net *loss* of water.

Why haven't we dried up like a piece of beef jerky by now? Fortunately we also get water in our food and the body produces water as a byproduct of cell respiration. Add that to the water we get the hard way with sugared drinks, and we manage to stay alive, but are usually walking around in an almost freeze–dried state (glider pilots especially).

Even the early stages of dehydration can lead to emotional alterations and impaired judgement – not the sort of changes that go well with flying, (and dehydration is much more prevalent among glider pilots than power pilots due to their cockpit environment). Dehydration must be recognized and treated – simply stop and take a couple of swallows of water before you think you have to.

adapted from **Aviation Safety Letter**, 4/83

Coming Events

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