

free flight • vol libre

2/85
Mar-Apr



Musings

In 1/84 I presented some thoughts on what each of us might do to make soaring in 1984 more fun. In a fit of enthusiasm I said I would practise what I preached, and listed my goals. My report card reads thus:

Commitment	Achievement
• Get two new members	No success with specific candidates, but still trying. Worked at two shows on behalf of SOSA and OSS. Hope it helped.
• Fly one leg of the Gold badge and 50 flights	Flew 34 times in '84 vs 38 in '83. Hours increased from 22 to 52.
• Achieve 300 km Goal flight.	Got it!
• Fly in SOSA Mud Bowl or equivalent.	Flew at Virden <i>hors concours</i> . Wasn't bored. Flew Ontario Open – came last – still wasn't bored.
• Repeat DuPont ad in 1984	Done. Will be in '85 also.
• Help to manage the field at Rockton.	Done.
• Fly safely.	Yes, but! came close with a heavy landing on a gusty day, which I reported as an incident.

I did make life easier for myself (but more expensive) by buying a PIK-20D. It's a gorgeous aircraft, but as the safety goal above notes, it takes some learning to fly it well in difficult conditions. I learn, always I learn.

I had hoped we would show a stable or growing membership last year. We did not — we lost 112; mostly in BC, the prairies and in Quebec. That is down 589 since 1979, or roughly 14 members per club. For all clubs, especially the smaller ones, that's a lot of members and a substantial loss of revenue. There is some consolation in the fact that we share this problem with all aviation groups, including the ultra/microlights. That can be no excuse for complacency though. Next to safety, our number one goal still has to be increased membership. Al Schreiter is forming a task group to attack this problem.

Speaking of safety, 1984 was about the same as '83 except that we had no fatalities or even, as far as I know, serious injuries. The accidents we did have seemed to be confined mostly to older (Ka6s were popular) and club aircraft.

It looks as if we may have a new insurance underwriter in 1985/86 as a better deal appears to have been found elsewhere than BAIC. The expected savings will be greater than the bonus we have been getting for low claims. Our decision date is 15 Feb. Your club executive will have the details and our plans to fix the frustrations of 1984 by the time you read this.

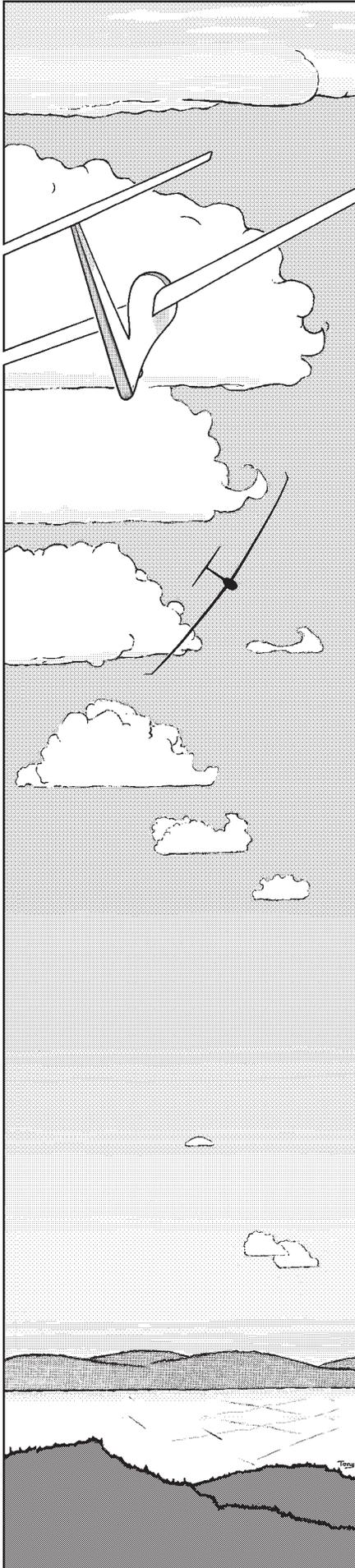
In 1/84 I offered a theme or slogan of sorts to help generate enthusiasm and commitment. Do you remember, "Let's do more in '84"? Here's the '85 model: "Let's strive in '85". You pick your objective – mine will be the big 500 and a better than last place finish at St. Raymond. See you there?

I hope I will see and meet many of you at our AGM in Toronto. We'll have aircraft exhibits and other good stuff this year, and if all goes well, a Canuck-flavoured astronaut for our banquet speaker. There will be good workshops, too.

Finally, a note of thanks to Don Dunn, our past Treasurer, for his diligence and service, and to Al Poldas who tried hard to fit the Sporting committee chairmanship into a family/job agenda that had no room. Welcome to Jim McCollum our new Treasurer, to Jim Oke our new Sporting committee chairman, and to Joe Somfay our new Publicity chairman. Please wish them well — and give them help.

Fly often, fly well, fly safely.





free flight • vol libre

Trademark pending • Marque de commerce en instance

2/85 Mar-Apr

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

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A Skylark nears cloudbase on a great soaring day.

Photo by Tony Burton

GET 'EM FLYING!

Peter Trent
MSC

In a column by Hugh Wittington, in Canadian Aviation, which he calls, "Get 'em flying again," he addresses the fact that many power flying schools and clubs have already failed due to a lack of student income and that unless many other schools and clubs take positive steps to bring in new blood, they too are likely to be on the short list. However, Hugh W. is and always has been an optimist, and in his column he makes several positive suggestions very applicable to gliding clubs. Among them are:

- A market exists for flying, but the market must be sold, and those who aggressively look for new business will get it.
- He suggests that each club member should commit themselves to introducing one or more non-flying acquaintances to our sport at the member's expense; a nice gentle swan around the sky, without violent turns or thermalling to upset them. When you land introduce the person to the CFI for an explanation of the benefits of a flying licence and the costs involved.
- Promote the club as often as possible in as many forums as we can: shopping centres, exhibitions, flying displays and fairs. Offer free introductory flights as raffle prizes.
- Brief club members to be **very** Public Relations conscious particularly around the flight line. We, as "trained pilots" can be intimidating to those who know nothing of our sport, and often we ignore those who we don't know and recognize, and they, in turn, feel resentful at the lack of "friendliness".
- He suggests that a discount of 10-15% be offered for full prepayment of flying fees and membership (club treasurers, take note!).
- For new members who pay the whole student package in advance, give them ground school kit, free.
- Offer an incentive of free flight time of say 1 hour, for every 10-15-20 hours a pilot puts in a club ship.
- To get someone to go for the Gold (or the Silver), offer two or three free soaring instructional flights.
- Set up a committee to review the last five years of membership drop-outs and phone them, to get them to come back — offer two dual flights for the price of one to help them regain their competency.
- Put out signs on each corner of the property advertising introductory flights.
- Put posters up in flying clubs and schools suggesting that power pilots try the gliding **experience**.

Unless we move positively and quickly we may lose members and potential members to the ultra-light movement. If we cannot beat them let's at least not give our market away by apathy on our part.

You undoubtedly may have other ideas, just as good as these. Give them to your club executive for evaluation and implementation.



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 Royal Canadian Flying Clubs Association (RCFCA), 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 Association's official journal.

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. Directors' names and addresses are given elsewhere in the magazine.

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

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

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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.

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Toute correspondance faisant l'objet d'un sujet personnel devra être adressé au directeur régional dont le nom apparaît dans cette revue.

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

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

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5

SOARING THE NORTH MOUNTAIN RIDGE

Bluenose begins the exploration of a brand new ridge soaring site. The Annapolis Valley can give 300 km of low, low cross-country

Dick Vine

A number of members at Bluenose have, in the past, debated the probability of the existence of ridge lift off the North Mountain in the presence of southerly winds (a map of the area is on the next page).

Last September three of us were flown by K. Cheslock from Waterville in a Piper Cherokee to examine the ridge, fields and general conditions from the air. Fields which appeared to be landable in a K8 in strong south winds were noted, also a number of landing strips were studied. Later that day, by road, a ground study was undertaken. Some fields were located on a 1:50,000 topographic map and were marked. It became apparent that there were enough useable fields available that it was unnecessary to mark each one. Most were at the foot of the ridge and were reasonably level very close to it. A few were found at the top of the ridge which were examined for their possibilities for winch launch.

The ridge itself was observed to have an excellent shape for lift generation, and it was decided that an exploration with a K8 in a brisk southwest wind was a safe and sensible project.

On the way back to Stanley, a visit was made to the two landing strips pointed out by pilots at Waterville. The group was made welcome and treated to tea by Mr. & Mrs. Jok Piel of Canning and were told that should an outlanding occur on their graded road, no offence would be taken.

On 12 Nov 1984, there was a brisk SW breeze at the club at Stanley, and a few very high lenticular clouds were seen from Rawdon on the way to the field and they appeared to be over the North Mountain.

Since a towplane was available (a 55 hp J3), K8 CF-RCE was prepared for a tow 20 miles west to the North Mountain ridge. Although it was to be an exploratory and research flight, a barograph and turnpoint camera were taken along as were maps of the area. There was radio communication both with the towplane and with gliders and the ground station at Stanley.

Before departure we agreed that, in view of the strong wind, the flight to the ridge would take a route over landable terrain at considerable altitude; also, that some assessment of lift would be made while on tow, with a return to Stanley if conditions should become unsatisfactory. Arrangements were made for a road retrieve also.

The tow departed at about 1130 hours and a climb to 2000 feet was made over Stanley. A westerly course was taken along the Kennetcook River, then to Burlington in very smooth air once 2000 feet was reached. At the Avon River the tow was at about 4200 feet. At this point we turned northwest and some sink was encountered which resulted in an overall height loss of about 400 feet while the tug was at full power. This soon passed and a steady climb was maintained till the North Mountain was reached at about 5000 due to some lift over the centre of the Annapolis Valley. The tow was directed along the ridge but no significant lift was observed in the area at 5000 feet. In order to fully explore the area, the tow was allowed to pass out over the Bay of Fundy shore where gentle sink was observed; however, considerable time was taken penetrating back upwind over the ridge crest.

At this point a tow return to Stanley was discussed by radio and it was soon obvious that this would be out of the question in such a strong wind. Also, a crosswind landing at Waterville and a tow out was considered, but rejected as impractical due to crosswind conditions. Since an outlanding was therefore inevitable, it was decided to choose a landable field near the foot of the ridge and release. This was done at 4000 feet just downwind of Waterville.

After release the K8 was flown at about 48 kts and I lost height at about 1-1/2 kts until 2100 feet was reached, then some light turbulence was felt and height loss stopped. The aircraft was stationary with respect to the ground at 38 kts at almost exactly 90° to the ridge. At this speed some small lift was available, although little height was gained.

continued on next page

A few tentative traverses were tried at higher speeds and an examination of the area of lift was begun. It was found that at 1900 feet the K8 could be flown at about the rough air maximum without loss of further height, and a traverse speed of about 25 kts could be maintained. As the book says, it was very costly in height to allow the aircraft to drift downwind of the ridge, and drastic increases of speed were required, along with a change of course into wind to regain position.

In slow speed flight (34-38 kts) it was possible to climb to about 3000 feet moving about 1/2 mile ahead of the break in the ridge in extremely quiet air, but of course, no traverse speed could be achieved at that altitude. More high speed traverses at K8 redline were made at about 1800 feet and a practice turnpoint photograph was taken of the radio tower on the eastern end of the ridge. This was quite difficult with a hand-held camera at relatively low altitude and any badge attempts would be much easier with a mounted camera.

During the flight, radio contact was maintained and the information relayed by aircraft and ground station. The retrieve crew of Myers, Moriera and Girard departed Stanley at the end of the flying day, and radio contact was maintained during their road trip. The arrival was observed from the air, and the K8 prepared for outlanding.

It was decided to use Mr. Piel's road and the towplane overflew it to check for obstructions, then landed for a closer view. When all was prepared, the K8 was slowed to 38 kts and allowed to climb to about 3600 feet, then was flown out into the valley at 55 kts. A safe landing was made using about a third of the available runway at 1610 hours.

During this exploratory flight, every attempt was made to minimize risk of damage to aircraft and to gain as much knowledge as possible.

To sum up, in a 38 knot breeze at right angles to the North Mountain ridge, one could maintain a height of 3000 to 3600 feet at minimum sink speed. At 1900 feet, height could be maintained at 68 kts while traversing the ridge. In areas where the ridge face was indented and uneven, it was not always easy to stay in the best lift; in this case one should always be upwind of the best lift as height loss downwind of the crest was dramatic with the poor high speed penetration in a K8. It will be safe for any 100 hour and current pilot to enjoy this form of soaring.

It is theoretically possible to complete a 300 km Diamond goal flight on the ridge in quite slow aircraft on the right day, although the southwest end is very low past Digby Gut. An air and ground survey must be completed at that end of the leg to ensure safe conditions should an outlanding be necessary at such low altitudes. The usual preparations for badge flights should also be completed, of course. These are even more important at such low altitudes as the decision time available is much less than usual.

PLANNING THE 300

After the successful preliminary exploration of the North Mountain ridge, it was decided to go ahead with preparation for a 300 km Diamond badge attempt using low penetration gliders such as K8, Ka6, and K7. These aircraft have, of course, done many long flights in other places and in other hands. At Bluenose, most of the pilots flying these aircraft have little practice at cross-country flying over terrain with limited landing fields, and a 300 km flight using thermal lift by definition takes the glider to areas where the need for best glide to the nearest field will be a frequent occurrence. This tends to dampen our enthusiasm for the project. Flying a long narrow triangle in ridge lift in the Annapolis Valley region is envisaged to reduce the unknowns to some extent. The glider can leave the ridge any time the lift reduces and land in reasonable safety. Also, one can progress from field to field along the ridge and have a feel for the lift quality at all times, rather than hunt thermals. If continuing seems unwise, one only has to do a 180 turn and retreat to safety.

A close look at the chart shows ridge heights of 750 feet to 625 feet from Blomidon to Digby, and can be expected to provide satisfactory lift. At Digby Gut, there is a gap of a half a mile, then the ridge resumes at about 625 feet but falls away to 350 feet or so at Sandy Cove. Sandy Cove as a turnpoint would give a total flight distance of around 310 km.

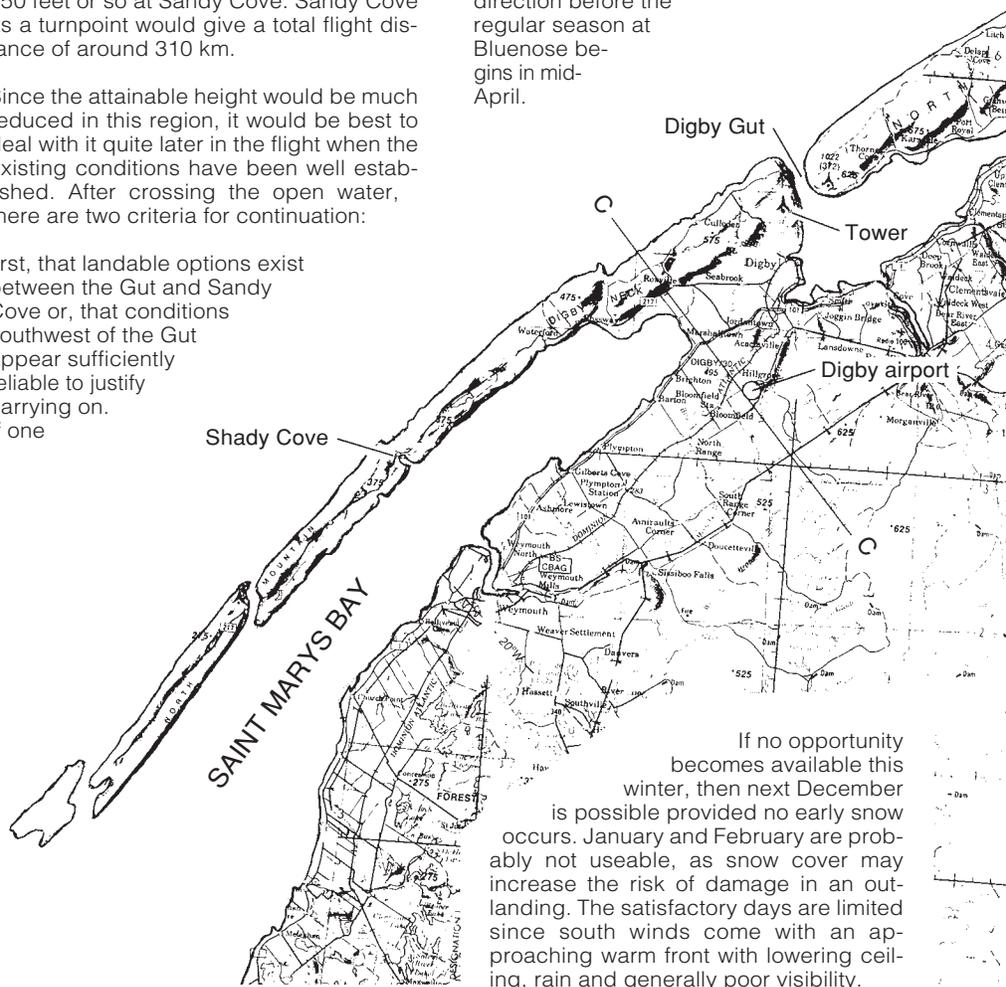
Since the attainable height would be much reduced in this region, it would be best to deal with it quite later in the flight when the existing conditions have been well established. After crossing the open water, there are two criteria for continuation:

first, that landable options exist between the Gut and Sandy Cove or, that conditions southwest of the Gut appear sufficiently reliable to justify carrying on. If one

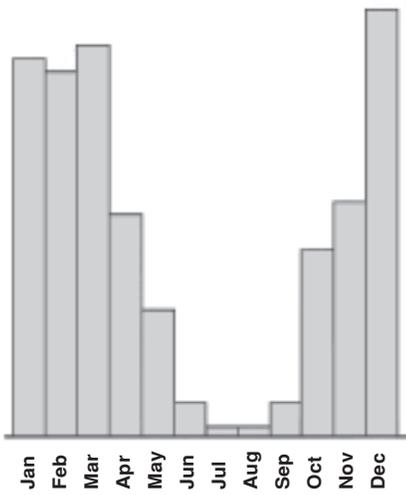
should guess wrong in the latter case, the prospects are chilling to say the least — the sea being about the best option, one would suppose. Of course, the tides at this point are world famous — low tide might reveal a beach, but if one landed on the Bay of Fundy side of Digby Neck, one might well be discovered some time later off Cape Cod.

With all of the above taken into account, we have decided to carry out the following: A power flight will cover that part of the course roughly from Greenwood to the southwest, and fields will be marked as they become less frequent near Digby. After the gap, fields, shorelines, and beaches will be examined from the air. Also, various towers will be noted which could be used as turnpoints, particularly the one just west of the Gut and close to the ridge. The aircraft will then be landed at Digby airstrip. Arrangements have to be made with a local resident to drive to the area covered to view the situation from the ground. There will be four pilots on this trip to provide a body of judgement and to eliminate unjustifiable optimism (or maybe reinforce it, who knows).

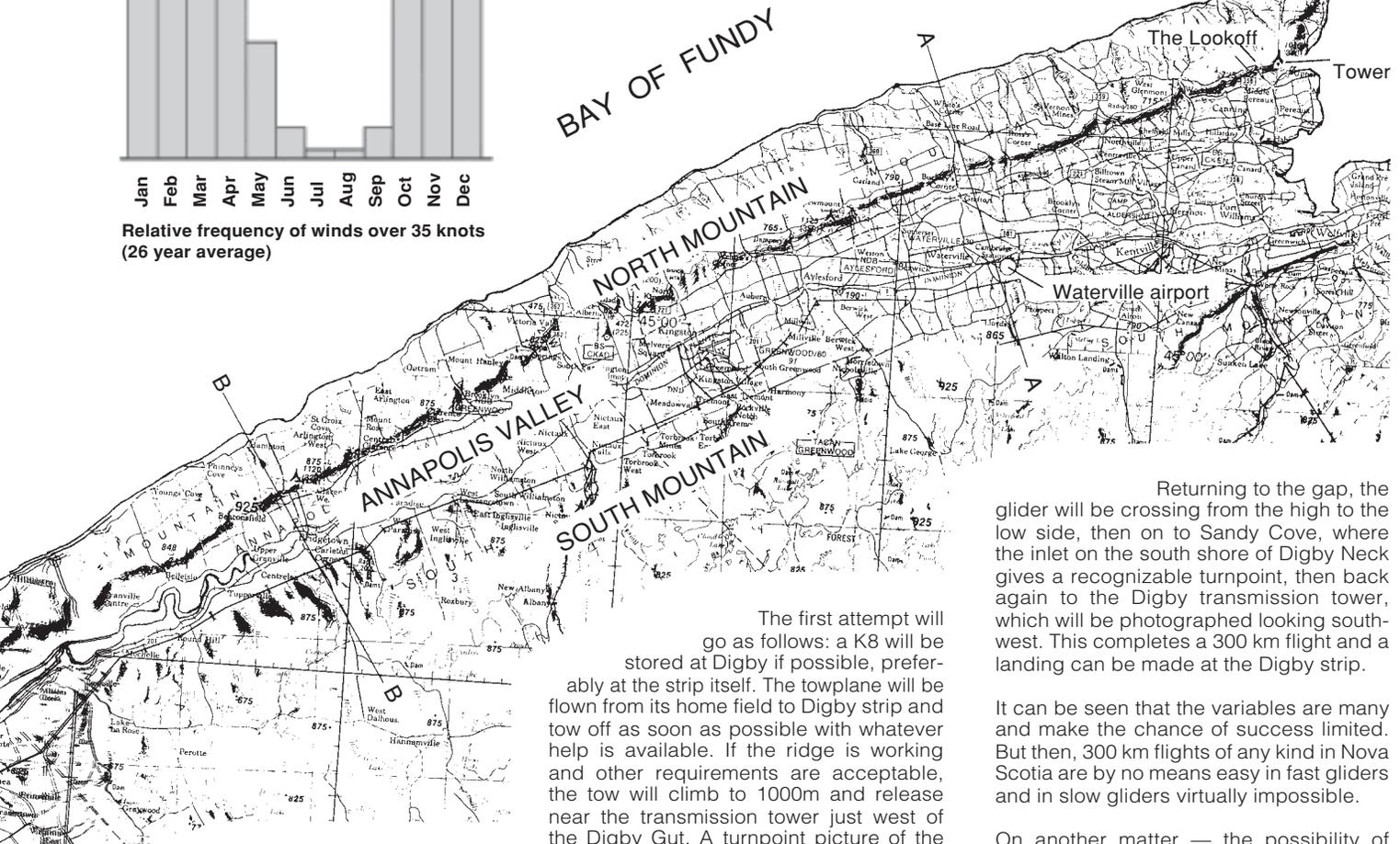
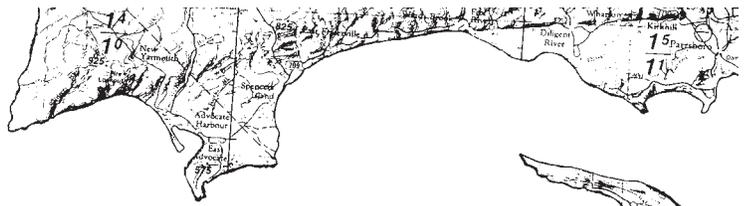
Some weather data have been obtained from the Maritime Weather Centre (Department of Environment) at Bedford, Nova Scotia. The wind chart explains itself — we should probably be ready to go in early February, and hope to see enough wind from the correct direction before the regular season at Bluenose begins in mid-April.



If no opportunity becomes available this winter, then next December is possible provided no early snow occurs. January and February are probably not useable, as snow cover may increase the risk of damage in an outlanding. The satisfactory days are limited since south winds come with an approaching warm front with lowering ceiling, rain and generally poor visibility.



Relative frequency of winds over 35 knots (26 year average)



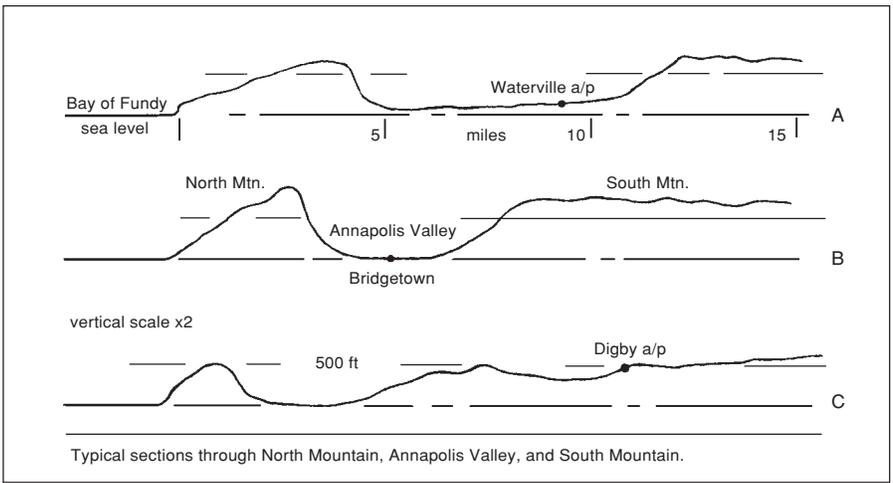
If the gradient of the front is relatively shallow, one can expect a few hours of strong S to SE winds with an acceptable ceiling. Also, if the centre passes to the east, the required conditions may exist for long enough to get the attempt organized in time.

The first attempt will go as follows: a K8 will be stored at Digby if possible, preferably at the strip itself. The towplane will be flown from its home field to Digby strip and tow off as soon as possible with whatever help is available. If the ridge is working and other requirements are acceptable, the tow will climb to 1000m and release near the transmission tower just west of the Digby Gut. A turnpoint picture of the tower will be taken in the correct sector (looking northeast). The glider will then cross the gap toward the northeast and proceed along the ridge to Blomidon and the radio tower near the Lookoff where the second turnpoint photo (looking southwest) will be taken.

Returning to the gap, the glider will be crossing from the high to the low side, then on to Sandy Cove, where the inlet on the south shore of Digby Neck gives a recognizable turnpoint, then back again to the Digby transmission tower, which will be photographed looking southwest. This completes a 300 km flight and a landing can be made at the Digby strip.

It can be seen that the variables are many and make the chance of success limited. But then, 300 km flights of any kind in Nova Scotia are by no means easy in fast gliders and in slow gliders virtually impossible.

On another matter — the possibility of wave conditions have not been totally neglected. A few days have produced lenticular wave clouds. These have been observed by glider pilots and others on perhaps half a dozen days since Bluenose has been active away from Stanley, but lack of a towplane has made it difficult to do any more than watch. Also, our knowledge of what air conditions might give wave in northwest winds is minimal. Of course, this direction gives us our unstable air in summer after passage of a cold front. We just don't know what effect this would have on strong winds flowing over the North Mountain ridge. The more stable southerly winds coming off the South Mountain may be a better prospect for wave, but that ridge is much more broken and uneven in height. As one member has said, "It's no use looking for Cowley conditions here; the North Mountain is just a wrinkle on the butt of Nova Scotia."



Typical sections through North Mountain, Annapolis Valley, and South Mountain.

My thanks are due and hereby gratefully given to C. J. Purcell, P. Myers, J. Moriera, K. Cheslock, D. Girard and A. Gillis for their help and encouragement, and Mr. Charles MacLeod of Maritime Weather Central, Bedford, Nova Scotia. □

SO YOU WANT TO BE AN INSTRUCTOR

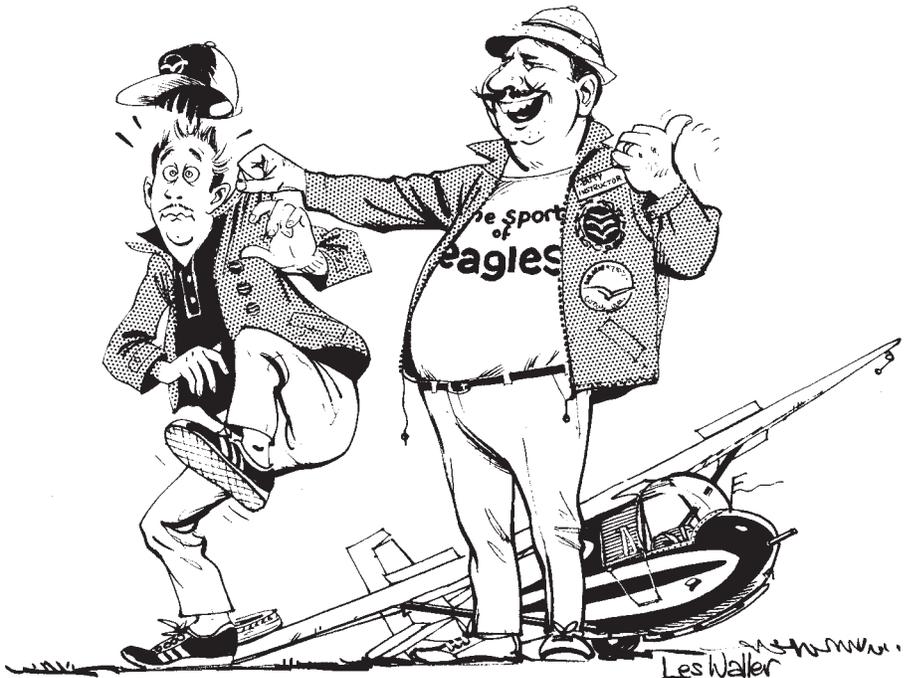
Ian Oldaker

Chairman, Flight Training and Safety Committee

Great, we need more like you! In fact, instructing is one way that we can put something back into the sport, especially at this time when the number of active pilots is down. Instructing has its own rewards too, such as sending someone solo that you have had under your care for several months and seeing him or her doing a perfect first solo landing.

How do we know when we are ready to instruct? Maybe the CFI comes up to you one day and he says "how about it?" In any case, there is no harm in approaching him with the suggestion or query. Here are some guidelines for the experience you require.

First, it is a legal requirement that you be 18 years old and that you have a certain number of flights. These are not generally enough to become an instructor, in fact to register for a SAC instructors course you will need at least 125 flights as pilot-in-command, of which at least 20 have been from the rear seat. You should also have more than 25 hours pilot-in-command time.



I think you should instruct



There is a correct and an incorrect way of doing things.

Each year the Association runs courses in the east and west (a French language course is to be offered for the first time in 1986), and application should be made well in advance. There are one or two reasons for this. First, it gives you time to prepare yourself with a pre-recorded cassette tape that is sent to all course pilots. Together with the text and explanatory notes, this tape is used to learn how to demonstrate the first four lessons. A course manual is also sent ahead of time, and should be read, again before the course (for 1985 a brand new Flight Training Manual should be available).

It is a good idea to prepare for the course by becoming very familiar with back seat flying because, while you are doing this on the course, you will also be teaching/demonstrating to the "student" who is generally a fellow pilot on the course. If you can try the first couple of demonstrations from the cassette tape while at your club, so much the better; take the tape aloft with you and have a club instructor play the tape to you while you fly and follow the tape. Then try (without the tape) to do the demonstration yourself. If you get to the stage of being able to give a reasonably good demonstration before the course, your progress on the course itself will be that much faster.

WINTER DIRECTORS MEETING

You will also fly with the course director or other senior instructor who will help you develop your techniques not only for demonstrating the maneuvers but also for fault correction. This is a vital part of instruction, in fact this is really what many people refer to as coaching. The first time we demonstrate something we explain it, we instruct. Thereafter, we are fine-tuning the pilot's performance, we are fault correcting — we are coaching.

This brings up the National Coaches Certification Program. The Coaching Association of Canada developed theory courses that are run each winter at various technical colleges, universities, and recreation departments from coast to coast. These "theory of coaching" courses start at Level I, the cost is minimal, and they are well worth attending. They are universal in that the level I and II courses apply to most sports, they cover not only the theory of teaching, but of learning. They touch on exercise and diet (not altogether inappropriate), how to prepare a student for learning, etc. etc. Besides meeting many people from other sports, you may be able to interest some of them in our sport perhaps! Those of you who are already instructing, but who have not attended, are urged to do so. You may be surprised, and it could be a useful reminder of many of the principles that all instructor/coaches should use. Sign up as a 'soaring coach' of the Soaring Association of Canada.

Footnote As many of you know, the Dubin Enquiry into Aviation Safety resulted in a number of task forces which are preparing new regulations for pilot licensing, airport requirements, etc. We have been working closely with them and have developed a useful working rapport. We are attempting, for example, to keep control of our sport, specifically with respect to pilot licensing standards and instructor requirements. It is likely that we will be able to retain administration of our 3-class instructor system, to write our own training manuals and to train all our pilots, with Transport Canada being responsible for issuing the glider pilot licence, and later a simple endorsement will reflect the Association standards, as detailed in the above article. The endorsement for teaching aerobatics will follow the instructor endorsement (different than the power licensing system) and the new standard that we have developed. Note that the earlier suggestion of a separate "commercial" licence of an instructor is unlikely to be implemented, following lobbying on the part of several of us in the Association.

Since the task force's proposals have received a great deal of comment from us the result of which has been a complete rewrite, the new proposals are to be sent to us again, for further comment. The timing of this is expected to be the end of '84 beginning of '85. It is unlikely therefore that any new regulations (which will be the law) will be enacted before the 1985 season to replace the recently amended Personnel Licensing Handbook. Though this still reflects the "old" minimum standards, clubs should now be fully complying with our current standards which have been in use since January 1983. □

Jean Matheson Executive Director

The SAC Directors met in Ottawa on 12-13 January for their regular pre-AGM work. The main points of the meeting are summarized below from the minutes.

• **LIFE Members** It was agreed that the current category of "Life Members" should be changed to "Honorary Life Members" and that a new category of "Life Members" be introduced.

This category would be available to those currently SAC members who wished to contribute a minimum to SAC of \$1000 as a lifetime fee. These contributions would be placed in the Pioneer trust fund and invested, with interest earned being used to offset administrative expenses of the Association.

• **SAC Computer** The National Office now has a computer in place and will be producing membership lists starting 1 April 1985.

• **1985 NATIONALS** Alex Krieger will be contacting competition pilots regarding the 1985 combined nationals being hosted by Club de Vol à Voile de Québec.

• **40th Anniversary** 1985 is the 40th anniversary of the establishment of SAC. Plans for celebrating this anniversary were discussed such as a special issue of **free flight**.

• **SAC Insurance** In response to an enquiry about SAC offering Personal Accident and Group insurance it was agreed that it would not be feasible for SAC to pursue this.

Quotes had been received from two underwriters for the SAC insurance program. These were to be studied further by the Insurance committee with a decision to be reached so clubs could be notified by 15 February. In an effort to improve the insurance programme and have policies available for clubs early in the flying season the following schedule was set up:

Feb 15 – Clubs to be notified of premium
Mar 31 – Clubs to forward to National Office 50% of premium together with updated list of inventory.
Apr 30 – Clubs to forward to National Office remaining 50% of premium.
May 15 – Insurance agent to send policies to National Office.
May 31 – Policies to be distributed to clubs.

It is hoped that adherence to this schedule will overcome some of the problems experienced in the past. The Board noted that insurance claims were now being settled quicker than in the past.

• **1985 Budget** There was considerable discussion concerning the production of a balanced budget while maintaining members' services with a minimum fee increase. With the injection of federal funds this fee increase would be 7%.

Tax deductibility of the portion not applicable to the fair market value of **free flight** still applies (fee less \$18). With this tax deductible allowance, the average out-of-pocket expense to a club affiliated member would be slightly more than \$20 plus the \$18 market value of **free flight** (approximately \$38 total).

An increase in revenue is anticipated through sales of the world famous Segelflug Bildkalender. Upon direction from the President of SAC, the Ontario Zone Director negotiated and obtained for SAC the sole Canadian rights to sell this calendar. The potential for commercial orders/sales is being explored.

• **PAPERWORK Solutions** Problems were still being encountered in club membership print-outs. In an effort to overcome this, a new membership application form has been designed which will be put into use in 1985 to be used for application of new members.

Another form has been designed for club use when submitting payments to National Office. The purpose of this form is:

- To assist club treasurers when making payments to SAC.
- Ensure proper breakdown of cheque.
- A copy of the form will be initialled and returned to club to indicate receipt.

• **SAC AGM** Plans for the annual meeting were discussed. The Erin club is the 1985 host, and Harry Thompson of Erin is the coordinator. Suggested workshop topics were:

- publicity for glider clubs.
- increased club membership through activities/programmes.
- collision avoidance during thermalling.
- Cross-country field selection and circuit planning.
- FAI badge claim applications.
- Creative financing for glider clubs
- Winching.
- Fibreglass repairs.

Glenn Lockhard of the Rideau Valley Soaring School is coordinating an exhibit of gliders and other items of interest to glider pilots. He is most enthusiastic about this and the Board agreed to support this venture. It was also agreed that this exhibit should be open to the general public for a \$3 per person charge.

continued on page 11

FIRST LOOP IN A GLIDER

Ed Heath

The impossible has been accomplished again! To Ed Heath, an American pioneer in building and piloting light planes (and who eventually made his fortune with his "Heathkits") goes the honour of first looping the loop in a motorless glider. Here, from the 1930s, he describes how the thrilling stunt was accomplished in his "Baby Bullet".

Most of all pilots who have had considerable air time realize that an airplane travelling close to the ground down wind can be put into a vertical bank and face about into the wind without loss of altitude. They very early in their experiences also found out that it was impossible to reverse this condition without fatal results. That is to say, the plane cannot be flown into the wind, then quickly turn down wind close to the ground. It is because of this factor that so many accidents occur from pilots attempting to turn back to the field after the motor has given trouble, whereas they could have landed safely on bad ground dead ahead into the wind.

This same condition prevails at any altitude, although it is not noticed except when close to the ground. This may be readily proven by taking an airplane to a height of one or two thousand feet, flying it horizontally down wind for some distance without gaining altitude and reading the altimeter carefully. Then making a quick vertical bank into the wind it will be noted that the altimeter will show no loss of altitude.

Reversing this condition, that is by flying into the wind and reading the altimeter carefully, the pilot will then find by making a vertical turn back down wind that the plane has a marked tendency to spin and it best will dive before it can again be flown horizontally. Now reading the altimeter, a loss of 400 to 500 feet will be noticed, this varying according to the wind velocity as well as the suddenness of the turn. It is this wind force that can be used to hinder or help the pilot in flight. It was this wind force that was utilized in looping the glider.

Unlike an airplane, the glider stalls almost instantly when not kept in a normal glide or when the tow rope slackens. This is due to the fact that the resistance of the glider is comparatively high in proportion to its weight.

You can visualize this best by towing a piece of paper and suddenly slackening the string. It does not keep on travelling but stops almost instantly. Bearing in mind these laws, it is impossible to loop a glider in still air, as no matter how far you dive it, it will only obtain a speed at which acceleration of gravity is balanced by the resistance of the plane, and the minute the plane is pulled up from the dive it is in a stall. There-

fore, to loop a glider, it is essential that a high wind prevail and that the glider be travelling down wind.

The speed of the wind must exceed the flying speed of the glider. This means that the glider has a rolling moment, or what we say a travelling speed, in relation to the earth at least twice that which is required to keep the glider in the air. In this condition the glider may be suddenly pulled upward. It is now in a vertical position and lost its flying speed.

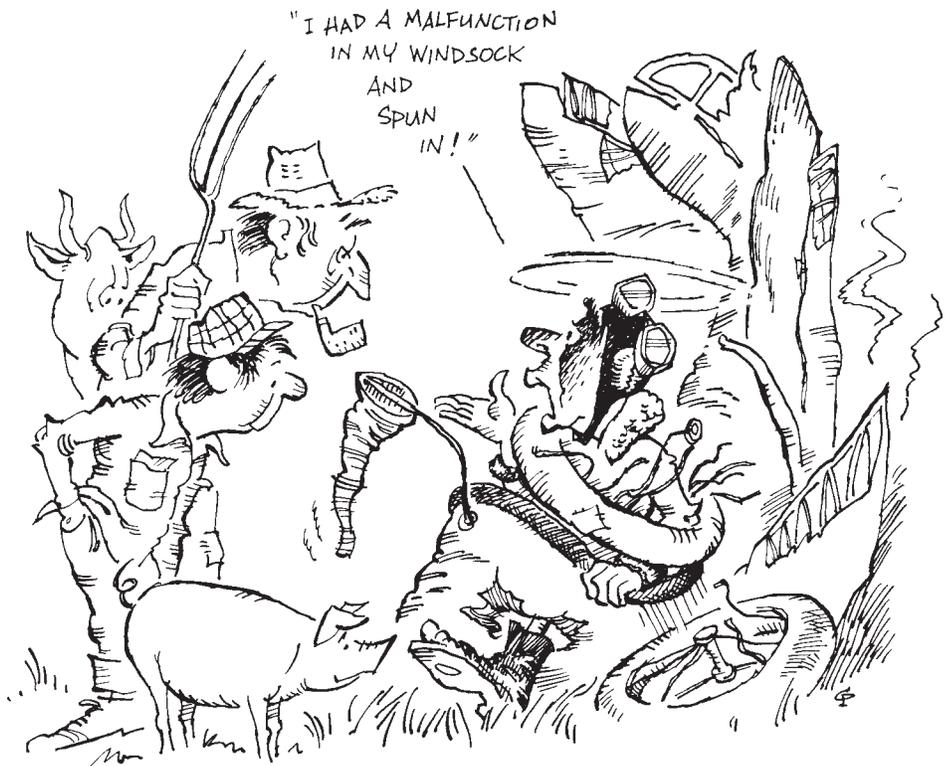
The only concentrated mass or weight to the glider is the man. With this mass at the top the tail is then swept on and out from under the glider. This rotates the nose in the direction of the wind and as the glider noses further over on its back it is heading into the wind and again assumes flying speed although it has lost rolling moment. As the wind is in excess of that required for normal flight it has flying speed, therefore the controls are completely effective and a perfect loop can be made. □



Looking behind the obvious humour of Heath's story today, one wonders a little. Here is an intelligent man who went on to greater endeavours, who actually believed he'd hit on the perfect explanation. He was certainly no idiot, after all he did put together a flying machine that flew — no small achievement. Look at all the flying that was done before he wrote his article in the thirties. One wonders, with such fuzzy thinking, how WWI pilots were trained and sent into the fray with five hours total time.

I can imagine Heath, in later years, trying to live down his burst of enthusiasm. But I guess we can all look back and think, "Oh God, I wish I hadn't said that!"... Gil Parcell

In his cartoon above, Gil fairly represents Heath's "clunky" open-cockpit bi-plane glider. It is quite possible that he did not ever get the ship up to a high enough entry speed to do a clean loop.



CANADIAN MUSEUM OF FLIGHT AND TRANSPORTATION

A growing glider collection

Lloyd Bungey
from the BC Soaring News

Since the early 1960s there has been a significant worldwide increase in the preservation of old aircraft and aviation artifacts. Generally, this interest has revolved around military aircraft, however, in more recent years societies dedicated to the preservation of all types of aircraft have been formed, some specializing in specific types, others taking a more general view of aviation.

Here, in BC, the Canadian Museum of Flight and Transportation has been struggling since 1977 to obtain a permanent site for the display of its collection of historic aircraft. Efforts to obtain one of the old Jerico Beach hangars were thwarted when the Vancouver Parks Board had them torn down. An old hangar at Boundary Bay was also lost when the old airport was reactivated. Present plans include the possibility of locating at Port Langley or perhaps in a greater museum complex elsewhere. In the meantime, the museum's collection continues to grow.

Interestingly, at least to soaring pilots, is the fact that this museum now has the largest collection of gliders of any aviation museum in Canada. Several of these are still flying (although the C of A has lapsed in all cases). These gliders have all been acquired by the museum as the result of charitable donations by benefactors.

The first glider to be acquired for the collection was an old Dagling primary glider. This was originally built by an Alberta group in 1947. Between 1947 and 1950, it was used by several groups in Alberta, then it was damaged and it was not rebuilt until 1953, after which it was used by the Calgary Air Cadets (apparently without bothering to get a C of A). Sometimes after 1954 it came to BC, although in what condition and why is not currently known. The museum obtained it from a donor in the Quesnel region and in 1973 made it one of their restoration projects. It is now in sparkling condition, having been rebuilt to display standard. Due to a lack of plans, and the problem of having no tail assembly from which to pattern a new one, the little primary could not be rebuilt to flight standard. The tail assembly was fabricated using photographs as a guide and, although it is as faithful a rendition as possible, it cannot be guaranteed to have the same characteristics as the real thing.

A major effort would be needed to restore the Corcoran TG-1A Cinema 2-seater of WW II vintage. This sailplane came from the USA in very dilapidated condition, con-

sisting of little more than the fuselage frame and main spars.

On the other hand, when George Matthias donated his Grunau Baby in 1982, this aircraft was still fully airworthy and was still in regular use. It is a noteworthy aircraft in that it had been factory-built in 1938 and had come to Canada after WW II as part of a shipment of gliders sent to the National Research Council for technical evaluation. It is the oldest glider still on the Canadian register.

Another machine that is probably flyable, although not holding a current C of A and not having been flown for many years, is the Nelson Dragonfly which hung from the rafters of the Aero Club hangar in Nanaimo for over 10 years until donated to the museum this year. Originally an auxiliary powered glider, only seven of which were built, and the only motorglider to obtain a US ATC, CF-VFA had its Nelson engine removed many years ago before it came to Canada, and was used as a glider in the Nanaimo area.

The most recent addition to the collection of gliders is a Schweizer TG-3A, dilapidated but restorable. This sailplane was originally brought into Canada by the Wide Sky Flying Club in 1973. Intended as their first trainer, it was found to require a complete rebuild since much of the glue had deteriorated. The club then leased a Blanik from Frank Hinteregger and sold the restoration project to a club member. After dabbling with it for 10 years, he decided to donate it to the CMFT. They hope to make this glider one of their 1985 restoration projects.

Although currently without a permanent site, several open house days are held at the Museum storage site in Surrey on weekends during the summer months. On these occasions, part of the CMFT's collection is placed on display. In 1984, the Dagling and the Dragonfly gliders were displayed during such open house events. In addition, the Vancouver Island division obtained the use of a building for the summer and the Grunau Baby was displayed there.

Membership in the Canadian Museum of Flight and Transportation is open to all and costs about \$15.00 per year. Additionally, the CMFT is registered with the Government of Canada as a charitable organization, and donors of valuable artifacts can be issued with receipts which are recognized by Taxation Canada as charitable donations. Their address is 11040 Cambie Road, Richmond, BC V6X 1L2, telephone (604) 278-9804. □

**THIS WINTER
DO SOMETHING
AEROBATIC!**

Arizona Soaring

ad

Free Flight in 1984

Let me first give you a summary of the content which appeared in your magazine in 1984 (there were four 24 page issues and two 28 page issues):

	items	pages
Flying stories	15	26
Safety articles	11	10
Meetings/course reports	6	6
Humour	6	6
Club organization/editorials	5	6
Contest reports/organization	4	7
Historical	2	3
Technical/technique articles	2	3
Club/Provincial Assn news		12
Hangar Flying		9
Opinions (18 letters)		8
FAI Badge/Record reports		6

This list will give you a good idea of where my priorities lie as an editor as well as the type of material sent to me.

The last two years being a time of lowering membership, I have especially tried to collect articles and guest editorials on the general topic of club survival. I hope that club executives have found some of the ideas useful, or at least a goad to discussion of their relevance in their own club. At a time when new memberships are getting as scarce as hen's teeth, we can't be complacent about factors in the club environment which either turn people off or put them to sleep, and we must be more innovative in our methods of dragging likely prospects in off the street.

I hope to continue to direct the magazine's content towards issues which demand airing, and I will be contacting you for information when I need it.

I get a lot of very useful material from all your club and provincial newsletters, but some of you have dropped **free flight** from the club mailing list. Keep the news coming my way — clubs, please reappoint a "**free flight** correspondent" to help me fill out the gossip column. I particularly want to get more information on significant flights from your area. Many people have made the extra effort to write about their personal experiences just for **free flight** and I thank them all. On reviewing the contents pages in 1984, I am prompted to award some special recognition to:

- Albert Seaman, for his personal tale of getting back to gliding in "Going 'Round Again" in 1/84.

- Hal Werneburg, for his recollection of a memorable desert flight in "Hobbs – Day 3" in 2/84.
- Lloyd Bungey, for his article on "Climbing the Busy Thermal" in 3/84. It is one of rare original pieces of soaring technique which has appeared, and I wish I had more technical material to print. Also thanks to Lloyd for his taped interview of Mike Apps and Dave Marsden after their 1121 km flight — it was a dramatic story.
- George Eckschmiedt, for his sad horror story "How not to Trailer" in 4/84. Good articles about the failures are harder to write than the successes, but much more important in keeping the rest of us out of trouble.

My award for best cover photo is split between Hermann Ksander's colour cover on 2/84, and Mike Maskell's 2-33 strut-mounted shot on 6/84. I also appeal to everyone to send me your best photos, and to conscientiously compose some this season. You have probably noticed that our national soaring magazine is very thin on pictures of gliders in some issues. (See the article on photography in the next issue for some good hints).

Finally, I intend to keep trying to make **free flight** even better. With your active participation — I will.

Tony Burton
Editor

INSTRUCTORS COURSES 1985

The following courses are scheduled for this coming summer:

East at York Soaring, 8-15 June
West at Vancouver Soaring, 24-31 Aug

All pilots who wish to sign up should have a minimum of about 125 flights and 20 hours pilot-in-command, and should be carrying passengers. They also should have some 20 flights of backseat experience. The course fee, which includes course manuals and cassette tape, is \$125 for 1985.

Deadline to sign up for the Eastern course is **10 May** due to the your need to get and practise with the tape beforehand. All pilots must be recommended by their CFI. Apply to the National Office NOW.

Campbell

Printer ad,
Ottawa

2-33 STRUT CAMERA MOUNT

Mike Maskell
Winnipeg Gliding

How many times have you looked at some of the spectacular shots on the cover of a soaring magazine, especially those taken from outside the cockpit with the camera mounted on the wing and asked how it was done or wish that you could take pictures like that. Well I am one of those people and last year I attempted to do something about it.

The last issue's cover shot was taken from the strut of a 2-33 with a Canon AE-1. I made a mount out of aluminum and pop rivets, two common items in the glider pilot's tool box or workshop. See the diagram to get an idea of how to make yours.

The camera should be well attached to the mount using a standard tripod mounting bolt, or a 1/4" bolt with coarse thread will do. The use of a power winder or motor drive will allow you to take more than one shot at a time. To trigger the shutter, use a 15 or 30 foot squeeze bulb air release. However make sure that there are no kinks in the line or else it may stick open and run through a roll of film in 20 seconds. This happened to me on my first attempt and I ended up with 36 shots all the same and unfortunately none were very good.

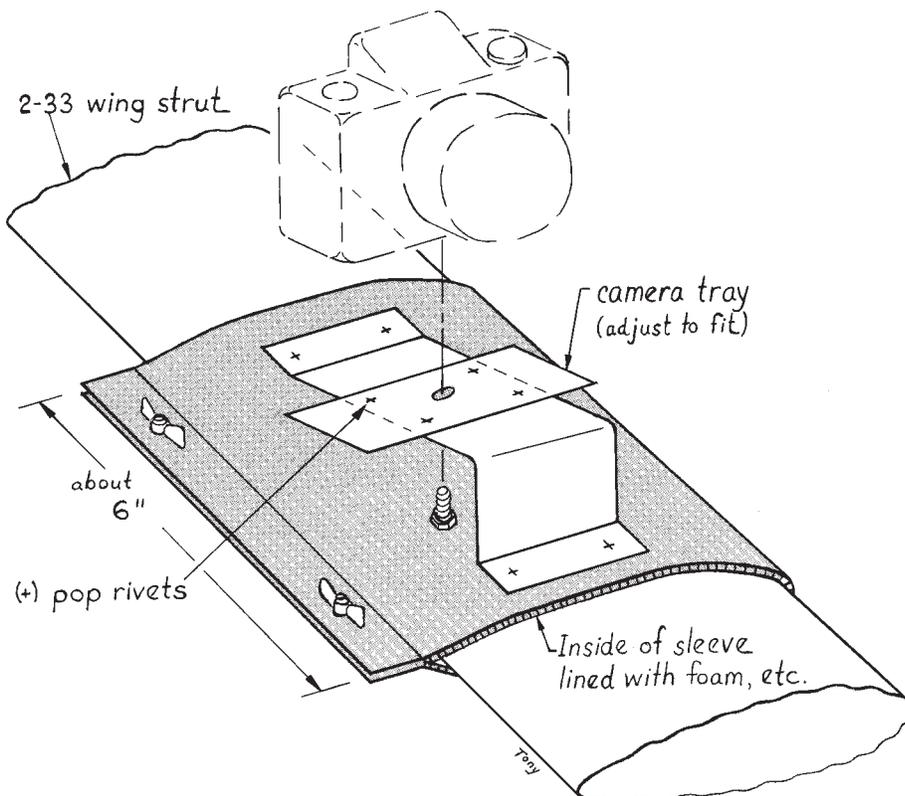
As far as exposure is concerned, a shutter speed of 1/250 sec should be suitable for 100 ASA film. This will allow for an aperture of about f-11 on most bright sunny days. This will insure that you have maximum depth of field while still using a relatively high speed for sharp, clear pictures. At any rate check the exposure meter of the camera before take-off.

Taping the focusing ring on the lens will prevent it from moving while in flight.

I used a wide angle lens for the shot on the cover. It has a focal distance of 24mm which allows more of the airplane to be included. However a 28 or 35mm lens will probably do.

While in flight, try a few wingovers while tripping the shutter (if you are qualified for aerobatics). Having a second person in the cockpit will make it easier to fly and shoot at the same time.

It may take a few rolls of film in order to get anything worthwhile, but it is fun to try and who knows maybe you will get on the cover of **free flight** in the future. □



Winter Directors Meeting

continued from page 7

Publicity will be given in the Toronto area to this exhibit.

In order to offset some expenses relative to the annual meeting such as rentals, coffee breaks, etc. it was decided to levy a registration fee of \$15 each.

Marc Garneau, the Canadian astronaut, had been invited to speak at the Awards Banquet. We have since learned that Marc is not available, but another Canadian astronaut, Steve Maclean, will speak. Steve is an experienced sportsman as well as astronaut, having been a member of the Canadian National Gymnastic Team.

Notices of motion

The following motions will be presented at the AGM. The wording of motions and notes are paraphrased from the letters which have been sent to the clubs, which should be referenced for complete details.

1. Membership Fees Fees of flying member categories of SAC membership to be increased 7% as follows:

• club affiliated	from \$59 to \$63
• junior	\$38 to \$42
• married couple	\$108 to \$116
• new sustaining	\$48 to \$51

Notes

-The \$6 individual insurance fee is to be dropped which will result in an overall **saving of \$2.**

-Proposed fees are predicated on receiving government grants equal to those received in 84/85. The Board is prepared to present an alternate budget if grants are not received.

-Tax deductibility of fees (less \$18 for **free flight**) still applies, resulting in an actual out-of-pocket expense to a club affiliated member of **about \$38.**

-Fees for same SAC services, but without government grants, would increase **about 40%.**

2. Life Membership This new category to be made available to any member for a minimum donation of \$1000 to the Pioneer trust fund.

3. Honorary Life Membership Amendment of by-laws to reflect above motion and rename current Life member category to "Honorary Life" member.

4. Operating policy motions Amendment of By-law 8 to include following: "No notices of motion of a major nature affecting operating policy will be entertained from the floor of an AGM; such motions must be received by the SAC National Office 15 December or earlier. The office shall notify clubs of such notices of motion within 30 days."

5. Expansion of Insurance committee Motion requesting Board of Directors to expand insurance committee to a minimum of three members (each from separate clubs), that this committee work towards improvements in coverage and/or options in future plans, and that the committee report appropriately to the membership via **free flight** and to all clubs in a timely manner.

SAFETY

HIGH WIND HANDLING

John Firth

Flight Training and Safety committee

A "Crocodile Corner" entry in the 4/84 issue is a reminder that handling gliders in strong winds requires special care and a good understanding of how things can get out of hand.

Any aircraft will fly by itself when hit nose-on by a gust exceeding its stalling speed, unless the wing is at a low or negative angle of attack. Towplanes are not immune to this, though many pilots don't seem to consider it.

Retrieving in strong winds

The pilot should stay in the glider till help arrives. One helper takes a wing tip and the other holds down the nose as the pilot gets out. Pilot then goes to control the tail and the tip holder walks his tip around **upwind of the glider**, holding it low in a very secure grip; the glider can then be safely pulled downwind (helpers hanging on the opposite wing tip are a hindrance, and should be employed pushing).

An alternative and safe method is to leave the pilot in the cockpit as ballast, lift the tail high, and push backwards.

Parking in strong winds

Gliders are easily blown over; a couple of tires on the tip are good only for preventing a flip to the other tip, which can cause damage. How often do we see a light glider, 2-33 or 1-26, left facing the wind with only the token tire on the tip? These two gliders are the most likely candidates for a blow over, since they both have very low wing loadings when empty, and sit at a high angle of attack. A 45 km/h (28 mph) gust will take an empty 2-33 into the air, a moderately likely chance on a day with winds of 60 to 70 km/h aloft.

The conventional method: parking glider crosswind with the upwind tip held on the ground with a pile of tires, is reasonably secure but only if **weather-cocking is prevented**. Most retractable gear gliders are OK since there is a lot of weight on the tail wheel or skid. 2-33s are not safe parked crosswind unless the tail is blocked by a couple of heavy tires behind it. If the glider is to fly again soon, leave a competent pilot in the front cockpit, and have him hold the stick forward.

Some clubs are now adopting a different and, in my opinion, more secure method of parking. The glider is parked crosswind as

before, with the wind from slightly behind, but with the **upwind tip raised**, and available tires used to block the tail from swinging. With the possible exceptions of 2-33 and 1-26, most gliders will be safe parked in this manner in winds of 60 to 80 km/h.

Severe weather

If caught in the open by a line squall, attempting to hold the glider down externally may be foolhardy and futile since the weather-cocking forces may be very large, and abrupt wind shifts may occur. The best chance of keeping the glider intact is for an experienced pilot to "fly" it on the ground. There are several accounts of pilots forced down on a cross-country flight by a severe storm, who have ridden it out on the ground in the cockpit. The tail **must not be restrained** (as I have seen bystanders attempt to do), so that the glider can weathercock into wind, thus allowing the pilot to maintain the tail high, and wing angle of attack negative. With dive brakes/spoilers open, and wheel brake on, I believe that gliders will safely survive severe gusts.

In squall situations tie your towplane down, or park it in a sheltered spot. Even small trees will reduce surface gusts considerably. Towplanes will also fly by themselves.

Instructors should instill good ground handling habits into students from the beginning; only thus will we avoid these most senseless of non-flying accidents.

Your comments are invited.

HE DROVE ME TO DRINK

Tom Schollie

Edmonton Soaring

This is not just another account of flying at the Estrella Sailport. This is a story of dehydration, and the flying is only incidental to the condition I had heard about but always considered as something that may strike someone who loses a lot of moisture on a hot day. Not so, read on...

On December 1, 1984 I arrived at Estrella and registered for the 10 lesson basic aero course and paid a deposit. Within about three hours of getting off the 737 I was hanging upside down in the front seat of the Grob Aero Twin 103. At that moment, I had some doubts. Was I really cut out for this?

Next day I was asked if I wanted to proceed with the 10 lesson acro course and I said, "Yes", and paid for the package deal. On Sunday we got in two flights and Monday

was good enough for three flights, and I made progress. On Tuesday, we had two flights but progress was harder to measure, so lessons 7 and 8 were passed off as the slump. On Wednesday, December 5, it was foggy and cloudy, and late in the day we got in lessons 9 and 10. What problems I had! The yaw string sat off centre and my brain told my foot to correct it and my foot did nothing. I had trouble remembering a planned simple sequence, had doubt on the entry speeds and couldn't keep the nose up while inverted. I couldn't concentrate or act upon the thoughts I did put together. I could not have made a safe circuit and safe landing.

On the way down Les asked me if I drank beer. I wondered why he asked; there was nothing to celebrate. I replied that I seldom drank beer. Had I been drinking the water, he asked? Not much, as I was not keen on the taste. I had drunk some orange juice and about three cups of coffee per day. After exploring the liquid intake, Les declared that I was dehydrated and suggested I drink enough to require a couple of night trips to the John. I complied with a purchase of four large tins of assorted fruit juices and I watched the clubhouse TV and drank fruit juice.

The next day was Thursday and I asked for two more lessons. So, I went up and did various basics with the string under control and a better appreciation for what the glider was doing. After one hour and twenty minutes we landed and discussed the flight: Les said I could do the next one solo if I so desired. Having done so poorly only the day before, I opted for one more run through the basics with Les in there behind me. After that flight number 12, I was pleased to go solo and do each basic maneuver as demonstrated and then spent ten minutes in lift admiring the day and the events. It went well, not perfect, but well. The Friday saw one more practice solo session and it had the marks of a beginner, but it was safe and I was satisfied the first solo effort was not just a fluke.

The week of December 1-8 at Estrella was pleasantly warm in my opinion. I had come from an Alberta winter and the Arizona temperatures in the 60s were very pleasant. I don't recall ever seeing 70 degrees. The winds were light and there was rain and clouds and fog. Dehydration was the furthest thing from my mind. There was no work to do, no gliders to push, nothing but fly and enjoy oneself. There was no loss of body fluids through perspiration and yet I suffered the gradual effects of dehydration. On Thursday (after Wednesday evening forcing fluids) I felt sharp again and was aware of what needed to be done and I could act and react.

As I mulled it all over I thought about the hot days of summer at Chipman field where towing fatigue is measured by the poor landings. I have felt tired and dull and I now wonder whether low body liquids may have been a factor. Until now, I have considered myself a low liquid type of person. No more. When you can't notice the onset of mild dehydration, while its consequences for pilots are so very serious, I'm going to drink so I can think. □

BETWEEN-FLIGHT CHECK SAVES A 2-33

Gary Roach
Alberni Valley Soaring

Last year, the flying activities of the Alberni Valley Soaring Association were restricted by an unanticipated period of maintenance down time. Good practices at the launch area averted a take-off with a seriously damaged 2-33 and possibly prevented an accident. The damage was the result of normal wear and tear and was not apparent during the DI. On a normal flight, the weakened member finally gave up under the strain, producing the visible sign that an alert ground crew spotted. The incident deserves review in depth because of the lessons to be learned — both of procedure, practice and of potential trouble-spots in 2-33s and 2-22s.

The 2-33 which AVSA uses has been in service for about 16 years, first with Skyways Air Services, then from 1971 with AVSA. It has not been worked hard, but has spent most summers tied down outdoors. It would have averaged less than 400

launches per year, most of these being by winch since the glider came to Port Alberni.

This summer, while readying the glider for yet another winch launch, one of the launch crew announced "That's it, no more launches." He pointed out that the fabric of the rear fuselage under the tailplane was wrinkled and the rearmost vertical tube was obviously buckled. This had not been the case when the ship was given the Daily Inspection.

Examination revealed that the tubing bundle at the bottom of the rear fuselage had become broken. The upright tube and the attachment points for the tailplane bracing struts were no longer tied in to the rest of the fuselage. It was a highly dangerous situation. Had flying continued, an accident may have resulted. By looking at the aircraft between launches, the damage caused in the previous launch had been spotted. Most importantly, the wrinkled fabric was recognized as trouble and immediate action taken.

The probable cause of the damage is considered to be the slamming down of the tail of the 2-33 at the start of a winch launch when there are insufficient people to have a "tail holder-down" (as is the usual practice with 2-33s and 2-22s where possible). Over the years, the pounding of several such launches each year, combined with water accumulating around the tube cluster (the fuselage low point) whenever the drain hole became plugged, led to crack initiation and eventually tube fracture.

The repair shop at Qualicum examined all the tubing in the area before repair and found cracks starting in other locations, all considered to be caused by the slamming down of the tail during launching. The cluster was completely rebuilt with new tubing as a result.

The Alberni Valley Soaring Association advises other 2-33 and 2-22 users to be aware of the possibility of this happening to them. Every launch, whether by winch or aerotow, made without a tail hold-down person will subject the tail of a 2-33 (2-22) to a heavy impact. The cumulative effect over several years may lead to cracking of tubes. In addition, if the aircraft is tied down outdoors, rainwater will collect in this area. Drain holes should be checked regularly to ensure they have not become plugged. Cracked tubing and accumulated moisture leads to rotten tubing. □

WINCH SIGNALLING AND PILOT CONVERSION

Ian Oldaker
Chairman, Flight Training
and Safety committee

The last issue of **free flight** (1/85) was terrific and has lots of good stuff in it — I was particularly impressed with Eric Durance's article on the winch. This seems to me to be an area that many clubs with some mechanically inclined members could profitably explore, especially now with today's escalating aerotow costs versus the economy of winching. Eric's article is detailed enough while at the same times not so daunting that I hope to see some clubs take up the challenge of winching.

A word or two of caution though, please!

Signalling to the operator

Eric explains the background to their one accident, caused by the cable chute becoming entangled in the glider's wheel and the launch then being restarted. In this case, there was no positive way to give a STOP command to the winch operator. As the glider's wings remained level, the operator assumed he could continue. **A positive means of communication for a STOP signal is a must**, and our Association's "Soaring Instruction Manual" details four signalling methods. Any club contemplating a winch operation, or which has a winch now, should ensure that they can stop the winch — notwithstanding any "implied" stop signal, such as wingtip-down.

We can never be sure that the operator can always "see" the glider clearly, particularly with summer's heat waves along an undulating runway.

Signalling techniques have their advantages and disadvantages. Radio sounds OK, but noise at the winch is a possible problem, and if the pilot is the one using the radio at the launch end, he may not be aware of the problem such as the incident described.

Light signals and flags/bats demand that the winch operator watch closely — these are very common modes of signalling. A field telephone works well over long distances where heat waves can pose a problem for light or bat watchers.

One very positive method for stopping the winch is to have an ignition grounding switch at the launch point. Clubs that have this may wish to comment on the reliability of this system though, as I suspect it could be prone to malfunctioning.

The excellence of Windsor's operation is a testament to their dedication and concern for safety. Their one incident where they could not stop the winch could have been a much worse accident and we are thankful that it was not. Clubs have to evaluate their particular conditions carefully when choosing a signalling method, and in all cases have a positive means of stopping the launch if necessary.

Winch conversion for pilots

As I have mentioned in these pages before, a club which introduces a winch to aerotow trained pilots will need to be thorough in their conversion training. ALL pilots will need a minimum of 12 launches on the winch, and preferably 20, before being allowed to go solo. These flights are vital to re-learn how to carry out an emergency landing following a cable break. Old-timers may wonder why I'm being so conservative. However, Australia learned the hard way when they had winches coming back. Several pilots spun-in off cable breaks following their subsequent attempts to return to the launch point. This did not happen to winch-trained pilots, but to the experienced aerotow pilots.

It is vital to emphasize, following a cable break:

- the tendency to want to return to the launch point,
- the tendency to start turning with insufficient airspeed, and
- the tendency to use too much rudder to tighten the turn, especially when low.

All these points are now covered on our instructors courses, and in the flying part we take the trainee instructors through a demonstration of spinning off a winch launch cable break (at 3000 feet of course!). The necessity of adequate conversion training is then easily understood.

We have suffered large losses in the club membership in the past three years — if the winch can bring back ex-members through reduced flying costs, then Eric's article will surely help. □

PROVINCIAL ASSN NEWS

BC SOARING SOCIETY

Lloyd Bungey, the BCSS president, has been keeping very busy tracking down soaring activity in small corners of BC, even from people outside SAC. His work may very well encourage SAC growth in the province.

Fort St. John

Word has been received that a new soaring club may be formed at Fort St. John. This group is attempting to start a winch launching operation using a 2-22. They have found a suitable site for their operation and have been seeking advice.

Apparently, the operations of the Wide Sky Flying Club have become reduced in scope recently and the new group wishes to be less reliant on the services of one or two individuals for their operations. Hence the move to winch launching.

Campbell River

Dave Nilson, a former Air Cadet tow-pilot and a practicing AME, bought a damaged 2-33 from the Air Cadet League a few years ago, restored it, and has been flying it occasionally at Campbell River airport. He has also built a Monerai which first flew in 1983 (I believe). At present it is just Dave and a few friends flying and there are no plans to form a club, although they occasionally give it a passing thought. Dave (when I phoned him) made a comment to the effect that he tried contacting SAC a few years back but they never replied to his letter.

Nanaimo

Steve Paton, of Victoria, has been giving introductory flights at Cassidy airport near Nanaimo with an old 2-22, C-FACC. It was the last one built, and was used by Schweizer for about the first 50 hours (1966) testing new empennage parts, and a new wing and struts (perhaps as a development aircraft for the 2-33?) before being put back to original and sold to the Air Cadets. It flew about 2000 hours before breaking free of its tiedowns in a high wind. Steve bought it, restored it, and it is his pride and joy.

His objective in giving passenger flights at Nanaimo is to form an active, growing club on the lower Vancouver Island (the Van Isle Gliding Club operated from Cassidy airport, Nanaimo from 1958 to 1973) but ceased operations then and finally folded in 1979).

Invermere

It was with deep regret that we learned of the death of Dr. George Duthie of the Swansea Soaring Society in a light plane accident on Thanksgiving weekend.

He was a passenger in a light plane that crashed on a glacier north of Invermere. Participants in the several Labour Day weekend soaring camps attended by BC and Alberta clubs at Invermere over the last few years will remember George for his generosity and hospitality. We have lost a friend.

Lloyd Bungey
from the BC Soaring News

ALTA SOARING COUNCIL

The Alberta Soaring Council held a weekend workshop on 19 January in Red Deer to plan programs for 1985. Representatives from the Calgary, Camrose, Edmonton, Medicine Hat, and Grande Prairie clubs were there.

These meetings began two years ago as a result of a change in the provincial government granting methods to amateur sports. The province wanted more long-term planning from associations, more details of their exposure to the public, etc. Baring our souls

to the province to prove our worth was traumatic at first, but it has proven to be a valuable exercise in forcing ourselves to set goals and priorities, decide where we want to spend money, and to show the benefits of increased inter-club communication. The workshops became vital also, because a complete grant application package was impossible to prepare even half-well by two or three hapless volunteers (last year it was 1-1/2 inches thick!).

The Red Deer meeting worked on reviewing goals set last year and brainstorming new ideas, then setting priorities on them. As a result, many new provincial events are taking place such as: inter-club CFI and tow-pilot meetings, OO seminars, production of common publications for ground school notes and event safety rules, possible inter-club student instruction, cross-country courses, and background work on provincial soaring history and even a feasibility study on holding a World championships in Alberta.

What began as a grant application exercise has become the backbone of a successful method to continually watch over our progress as a provincial association of soaring clubs.

Tony Burton

ONTARIO SOARING SOCIETY AT ADVENTURE WORLD



Over 50,000 people crowded through the turnstiles at the International Centre near the Toronto airport on January 4-6. The attraction was the World of Motorcycles '85, and Adventure World. After pushing past the crowds around a hundred and one motorcycle exhibits, visitors found Adventure World which was a collection of displays related to sports and leisure time activities. There were rock climbers, white water rafters, snowmobiles, micro-lights, houseboats, go-kart racers, all-terrain vehicles and...soaring.

Six of the Toronto area clubs cooperated in setting up and staffing the booth on Friday, Saturday and Sunday. Kurt Meyer of Air Sailing generously allowed his Astir to be hung from the ceiling over the display area. Glider pilots from Air Sailing, Caledon, Erin, SOSA, Toronto Soaring and York talked to visitors and passed out club literature throughout the three day event. We expect a lot of visitors looking for an intro flight this coming season as a result of this promotion.

Bob Nancarrow

CLUB NEWS

BULKLEY VALLEY

BVSC offered a ground school, but not enough interest was shown to run it in 1984. We had only one student active during the season.

Early in the season, there were some excellent thermal flights; however, interest was down and we managed only 170 flights in the year as compared with 750 flights in 1983. This was a result of having too few members active to be out at the airport both days of the weekends. We therefore relied on people requesting flights.

We did not have enough interest to attend the Vanderhoof Airshow this year, although we had attended as a club in 1983. Some members, however, did take the towplane and the Blanik to the fly-in at Houston.

Regular flying ceased in early October due to early snow and cold weather.

Alan Pickard

LONDON LAST YEAR

Our year ended quietly with few good soaring days in the last two months of flying. Total number of flights was down at 837 as was our average flight time of 43.5 minutes. This was due mainly to the poor weather at the end of the season

Our longest documented flight was by Simon Davies in his HP-18 going round the Clifford-Hagersville triangle for his 300 km on a rather difficult day. CFI Kurt Hertwig took the same ship on the 500 km Kent Bridge - Beeton triangle on the one good weekend. Kurt did not need a 500 flight as he had flown this course before. The three of us who needed 500 km all managed to fumble our flights by various acts of incompetence.

Sue Eaves completed 5 hours in the Twin Astir, evidently the flying was fairly easy, thinking "dry" was the major problem. Ted Creeden made good use of the club 1-34 by completing his Silver C with a flight to Rockton, and Mike Steckner saved us a retrieve by making the return flight.

A new structure on our field which at first glance appeared to be a new barn, was later identified as a new trailer for the Twin Astir. It looks as if we shall have to find a Mack truck to make retrieves.

Our membership remained static throughout the year. Our Publicity Director, Grant Graham, did however succeed in bringing many visitors to our field, so perhaps this will translate into some new members next year.

Dave Miller

CU NIM 1984

Overall it was a good year for the club. Membership rose to 85 from 76 in 1983 and student activity was especially gratifying with 27 flying.

There were 1910 flights in the 6 club gliders, up from 1221 in '83; there were 472 flights in the 21 private ships, down from 517 in the previous year (mostly as a result of the poor cross-country weather). Club gliders flew 683 hours, while the private gliders flew 1062 hours and over 25,000 km of cross-country, a significant amount of which was flown during the Nationals at Virden.

One major concern of the club was what seemed to be an unresolvable rent problem with our landlord which taxed the negotiating prowess of the last two presidents. An agreement was finally reached in January which will carry the club through to 1990.

There was one major accident (without injury) to the Citabria towplane when it ran off the end of the runway. It has been replaced with a Scout, so now both 150 hp tugs are gone and we are equipped with 180 hp towplanes. This significantly improves safety margins crossing the fence, particularly with the trainers on hot days when the density altitude at Black Diamond is much higher than the 3700 foot field elevation.

Tony Burton

1986 Segelflug Bildkalender

The best soaring calendar in the world!

12 superior colour prints are reproduced in print quality on 19 x 11 inch heavy stock. On the reverse of each photo is a description in English, French, and German.

SAC has acquired Canadian rights to this excellent calendar, and will order a minimum of 300. At \$15, (plus 7% in Ont.) we will be selling it at 33% below the current US price of over \$20 Cdn.

You are advised to order NOW to be sure of getting a copy. We must send in the minimum order before 1 July to guarantee delivery, but can order more if demand warrants it. (SOARING, Nov '84, page 17 shows the '85 Bildkalender photos).

- \$15 -

You are going to get some calendar for your wall

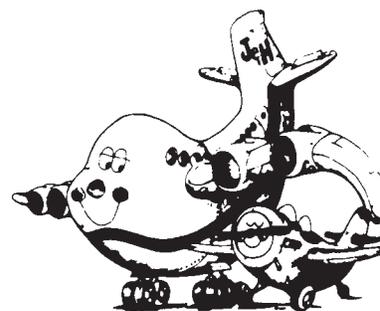
WHY NOT GET THE BEST?

PORT ALBERNI

The big news from Port Alberni is that, now Doug Moore has solved the towplane problem by buying one, he is getting a real sailplane to fly behind it. He has bought a Monerai kit, the one with the extended wingtips, and hopes to find enough spare time to see the project through sometime next year. It's a good thing the club has another towpilot besides Dougie, otherwise he may have had another problem.

Gary Roach

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HANGAR FLYING

Compiled by Tony Burton

STEP-TOWING

The hang-gliding community has discovered winch launching in the recent past, with an extra twist now from Germany. A method called step-towing is used to give 3000 foot winch tows commonly, and the record is 7,775 feet!

Simply, in step-towing, the hang glider pilot tows towards the winch normally, then turns away while still attached to the cable, which now pays out, turns back towards the winch, and repeats. The tow proceeds stepwise upwards, the maximum height being a large fraction of the total length of the cable.

The cable bridle is attached to the pilot's harness near the centre of mass of the pilot and kite. It consists of two separate lines, one longer than the other, both with separate pilot-operated releases. The shorter line passes over the horizontal control bar in front of the pilot, and is used for the initial portion of the tow when the angle of the tow cable is low. The longer second line drapes loosely under the bar. At some point during the initial climb, the short line begins to interfere with the control bar, at which time the pilot releases it and continues the tow with the second line which is itself released at the end of the tow. As a safety measure, both lines will disengage simultaneously if the lever for the second line is hit while both are attached.

An experienced pilot and a good winch operator are required, and both should have about 100 normal tows before attempting step-towing. Proper coordination of the winch is imperative, and the responsibility for the tow lies with the winch operator.

Shortly before the pilot is over the winch, he signals his intention to turn, and the winch operator puts the winch in neutral to take the tension off the cable and allow it to pay out. The pilot then makes a 150-250 foot radius turn and flies straight downwind, then turns towards the winch again on signal, either at some safe minimum height (about 500 feet) or on command of the winch operator — especially if the end of the cable is coming up! The winch operator lightly brakes the drum at this time to prevent the drum from overrunning and creating loose loops or backlashing as the turn begins. When the pilot is in the crosswind position, the operator engages the clutch which increases line tension. If this is done too early in the turn, it will force the hang glider to bank **away** from the turn, forcing the pilot to release. On completion of the turn, the winch operator applies full power and the process is repeated.

Sailplanes are occasionally "kited" on a cable. It requires wind speeds in excess of the stalling speed so they can drift backwards and slowly pay out the cable that way. This technique was much more common in the past with gliders of low wing loading hence lower stall speeds than current designs.

Adapted from an article in WHOLE AIR.



100 ACROS TO RAF

The Royal Air Force has ordered 100 fibreglass GROB G-103 Twin II Acro two-seat sailplanes with a total value of approximately \$2.5M for basic training in the Air Training Corps. This is the largest single order that has ever been placed with the German glider industry. 40 aircraft were delivered during 1984, the remaining 60 before July 1985.

GROB was the successful bidder against stiff competition from several German and other European companies. Excellent

flight characteristics, performance, rugged design and the recognized high production quality of GROB aircraft played the decisive part in placing the order. By mid-1984, more than 700 aircraft were sold of all the two-seater G-103 series which have been in production since 1977.

In view of the large British order, the production rate of the G 103 Twin II is being increased from 5 currently to 15 aircraft per month to allow for delivery for other customers.

It is possible to fly without motors, but not without knowledge and skill. This I conceive to be fortunate, for man, by reason of his greater intellect, can more reasonably hope to equal birds in knowledge, than to equal nature in the perfection of her machinery.

Wilbur Wright

LESS IS MORE

Insurance is an area where the pilot of the "simple" airplane generally does pay less, although the savings may not be in proportion to the lower price of the airplane. Often, the premium rate will be *higher* on the simple airplane. Why? "The more expensive airplane gives the underwriter a greater value base to work from," explains a spokesman for one major aviation underwriter, adding that claims for repairs to expensive airplanes usually represent a smaller portion of total aircraft value than on less costly machines.

Aviation insurance premiums are not set as scientifically as those for automobiles — there aren't enough airplanes flying, or at least not enough crashing, to establish the kind of statistical base available to auto insurers.

Tom Hammett
from June '84 "Flying"

These are comments on the US general aviation market! It's no wonder our insurance committee isn't bargaining from a position of strength.

A MOUSTACHE FOR A GROB

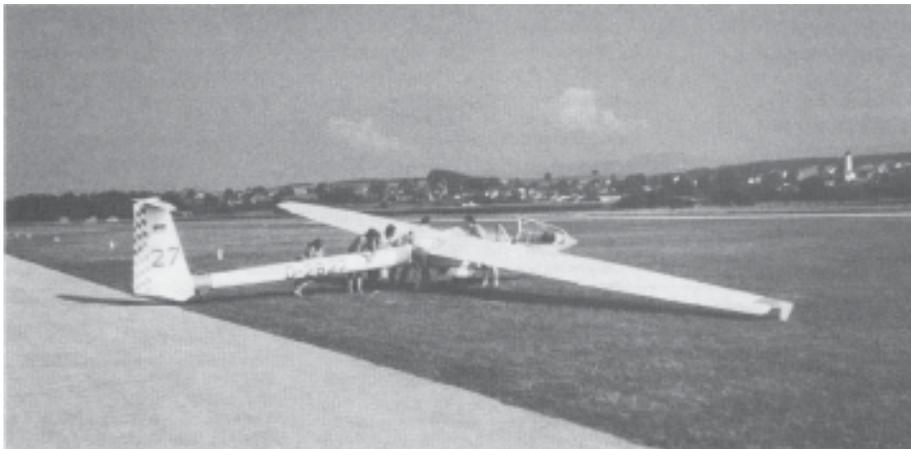
Here is a GROB Twin fitted with a removable "moustache" for spin training. It has been used in 1984 by the Adelaide Soaring Club in Australia. The stubby canard is fully approved by German and Australian authorities.

Tail ballast to enable sailplanes to spin is a no-no, but the "moustache" assists spinning (which the Twin is not normally very good at) without any danger. It can be left on the sailplane all the time without affecting the flying characteristics, except possibly for a very small performance loss.

from Australian Gliding, Oct '84



Australian Gliding



MONSTER Mü-27

The Mü-27 is a variable geometry two-place sailplane which was built by the Akaflieg München based in Königsdorf in West Germany. The wing profile is varied by panels in the trailing edge which are operated by an electric motor.

As you can see in the photo, it is rather large, and is a problem to tow. Rumour has it that there is a Mü-29 on the way which is a motorglider that can also tow and perform aerobatics.

Thanks to Amy Hansen in Germany for the news and photo.

DESIGNED FOR RECORDS

For several years, the famous SB-10 (see 1/83) built by the Akaflieg Braunschweig students, had been flown out of Alice Springs in Australia by Hans Werner Grosse in his attack on multiplace world records, particularly the speed records over long courses. A new two-seater and a new pilot is now preparing for more attempts.

This latest super two-place is the AS 22-2, built by Schleicher for Erwin Müller, who currently holds four multiplace records: the 100, 300 and 500 km triangle speeds (at 158, 140, and 147 km/h respectively) and the out-and-return distance.

The AS 22-2 is a hybrid of three existing sailplane designs. The 4-piece wings are from the ASW-22 Open class ship, the fuselage is from the fs-31, and the canopy and cockpit layout are from the ASK-21 two-place. The fs-31 was the two-place design begun in 1980 by the Akaflieg Stuttgart which experimented with a more crash-worthy fuselage built of carbon and Kevlar fibre to produce a very tough and 30% lighter structure than fibreglass (for more detail, see 3/83, page 20). The AS 22-2 designer was Martin Heide, a former member of the Akaflieg Stuttgart.



Soaring

This new sailplane is calculated to have a performance equal to that of the ASW-22, with a maximum L/D of about 54:1! Its wingspan is 24m, aspect ratio is 32.2:1, weighs 450 kg (990 lbs) empty and fully

equipped, 750 kg (1650 lbs) gross, and has a maximum wing loading of 9.9 lbs/sq.ft. It is now in Australia to begin trials.

Tony Burton

FAI BADGES

Boris Karpoff

24-1/2 Deloraine Avenue

Toronto, Ont. M5M 2A7

(416) 481-0010

1984 FAI AWARDS REPORT

The 1984 soaring season was a relatively active year for Canadian glider pilots and compares well with the 1983 results. It was, once again, a rewarding experience with a notable reduction in problems connected with applications for badges and badge legs. Through a heavy work load of correspondence and many telephone calls, I had the pleasure of knowing more and more glider pilots. My sincere congratulations are extended to all Diamond, Gold and Silver badge pilots and also to all pilots completing a badge legs. Special thanks are extended to Tony Burton for the help he provided me on different occasions in the interpretation of some technical points in the Sporting Code.

The overall results of this past 1984 soaring season are shown below:

Totals	'79	'80	'81	'82	'83	5yr Avg	'84	± %
Diamond badge	6	1	5	9	3	5	2	-60
Gold badge	13	9	14	8	11	11	12	+9
Silver badge	44	18	42	28	29	32	34	+6
Badge legs	191	106	216	180	172	173	166	-4
C badge	98	39	83	78	65	73	67	-8

NOTE Claims that met the requirements of more than one badge level for previously incomplete legs were only shown at the higher level in 1981 (ie. a Diamond goal and Gold distance claim was only shown as a Diamond goal claim). Therefore, the actual number of badge legs awarded in 1981 was greater than the number of 216 shown.

As mentioned above, the 1983 results compare favourably. Nevertheless, if the 1984 results are compared with the average of the previous five years (1979 to 1983), Diamond badges have decreased by 60 percent and Gold and Silver badges were up by 9 and 6 percent respectively. There was also a slight decrease in badge legs completed and in the C badges.

The main problems encountered during the processing of claims, although much less pronounced than in 1982 and 1983, was the lack of supervision by some of the Official Observers when submitting a claim. There were still many claims containing errors and omissions which should have been noted and corrected by the presiding Official Observer. Many pilots are still using the old application forms. I sincerely hope that in 1985 ALL claims will be presented on the current application form available either from the National Office in Ottawa or from myself. Following many suggestions received in the past year, the Application form has been improved. The latest form can be recognized by the imprint of the SAC logo in the upper left corner. An incorrect application creates extra correspondence and, of course, delays. Once again, I urge all Official Observers to take that extra five minutes and to ensure that all claims, especially those of new pilots, are complete in every aspect.

To give all SAC members an idea of the problems encountered in 1984, I list the following:

- 27 applications were sent back due to omissions, insufficient funds, not dated and/or not signed by the pilot or the OO.
- 2 Silver distance badge legs refused for incorrect interpretation of the FAI Sporting Code.
- 1 Silver altitude refused, barograph trace not available and, alas,

The following badges and badge legs were recorded in the Canadian Soaring Register during the period November 29, 1984 and January 16, 1985.

GOLD BADGE

215 Dominique Bonnière Gatineau
216 Bryce Gormley Gatineau

SILVER BADGE

705 Gary Ockwell Regina
706 Edward Creeden London
707 Gerhard Betsch Air Sailing

DIAMOND GOAL

James Lewin	Air Sailing	317.3 km	ASW-19	Belwood, ON
Duncan Marshall	Gatineau	305.0 km	Jantar	Pendleton, ON

DIAMOND ALTITUDE

Gary Ockwell	Regina	6431 m	1-23	Cowley, AB
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GOLD DISTANCE

James Lewin	Air Sailing	317.3 km	ASW-19	Belwood, ON
Duncan Marshall	Gatineau	305.0 km	Jantar	Pendleton, ON

GOLD ALTITUDE

Dominique Bonnière	Gatineau	4846 m	Pik-20B	Lake Placid, NY
Bryce Gormley	Gatineau	4800 m	RS-15	Lake Placid, NY
Gary Ockwell	Regina	see Diamond altitude		
Ole John Madsen	Namao	4100 m	1-23	Cowley, AB
Douglas Girard	Bluenose	3749 m	Skylark 4	Baie St-Paul, PQ

SILVER DISTANCE

Charles Keith	SOSA	80.0 km	1-26	Rockton, ON
Edward Creeden	London	63.0 km	1-34	Embro, ON
Gerhard Betsch	Air Sailing	58.0 km	Std. Astir	Belwood, ON

SILVER ALTITUDE

Gary Ockwell	Regina	see Diamond altitude		
Edward Savage	Montreal	1615 m	LS-1	Hawkesbury, ON
Tom Okany	Montreal	1204 m	Astir	Hawkesbury, ON
Peter Robinson	Gatineau	1554 m	Skylark 3	Pendleton, ON
Ole John Madsen	Namao	see Gold altitude		
Edward Creeden	London	1189 m	1-34	Embro, ON

SILVER DURATION

Stephen Foster	Toronto	5:10	1-26	Conn, ON
Edward Savage	Montreal	5:50	LS-1	Hawkesbury, ON
Piotr Kurylowicz	York	5:56	2-33	Arthur, ON
Peter Robinson	Gatineau	5:17	Skylark 3	Pendleton, ON
Edward Creeden	London	5:13	1-34	Embro, ON
Christine Futter	Gatineau	5:20	Skylark 4	Pendleton, ON
David Montgomery	York	5:19	2-33	Arthur, ON
André Grenon	Quebec	5:49	Blanik	St-Raymond, PQ
Mario Lepire	Quebec	5:00	Blanik	St-Raymond, PQ
Peter Leigh-Jones	COSA	5:30	Jantar Std	Chemong, ON
Kemp Ward	Champlain	5:01	Pioneer II	Roxton Falls, PQ

C BADGE

Tom Okany	Montreal			
Brian Butler	Windsor	1:45	K8	Dresden, ON
Piotr Kurylowicz	York	5:56	2-33	Arthur, ON
Peter Robinson	Gatineau	5:17	Skylark 3	Pendleton, ON
Ole John Madsen	Namao	1:12	1-23	Cowley, AB
Robert Murphy	Vancouver	1:35	Pilatus B4	Hope, BC
Edward Creeden	London	5:13	1-34	Embro, ON
Joseph Laposnyik	Montreal	1:20	2-33	Hawkesbury, ON
Harvey Libby	Regina	1:23	1-26	Odessa, SK
Christine Futter	Gatineau	5:20	Skylark 4	Pendleton, ON
David Montgomery	York	5:19	2-33	Arthur, ON
Sheran Jankowski	York	1:22	2-33	Arthur, ON

- 1 Diamond distance refused, the negative strip being cut!

All reply form letters are now available in French for the benefit of our pilots in La Belle Province. The filing system and cabinet has been cleaned and improved. The SAC Official Soaring Register has been almost completely restructured.

I have enjoyed the position of FAI Awards chairman very much in the past year and look forward to continuing my chairmanship and all connected activities in 1985.

My sincere thanks to all the people from SAC for the help provided. To all Canadian glider pilots my best wishes for a safe and successful 1985 soaring season.

FAI RECORDS

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

1984 was another good year, almost duplicating last year's achievements of ten new records set in seven flights.

In 1984, seven flights produced ten record claims. However, one excellent flight, a 400 km triangle claim of 99 km/h, was rejected due to a turnpoint error, and the claimed 100 km speed to goal of 156 km/h flown in Pennsylvania was withdrawn due to technical problems at the start gate.

Of particular interest is the joint record flight of Marsden and Apps, who covered 1093 km from Edmonton to Winnipeg on June 2, and which eclipsed the oldest record on the book, 676 km flown by Marsden (the same one) in 1968. Also, the 500 km goal and return flight of Hal Werneburg on May 12 produced the fastest closed circuit speed flown in Canada, 115.4 km/h.

A geographical note: one of the records (John Firth's 200 km triangle speed) was set in Ontario, and the rest originated in Alberta, finishing variously back at the starting point, and in Manitoba and Saskatchewan.

Last year's records are included below in the listing of all current Canadian records. Details are in previous issues of *free flight*. My congratulations to all of last year's pilots. [It's time we filled in more of the "not claimed" blanks in the book. Tony]

FIRMAL ELECTRONICS
for
CAMBRIDGE INSTRUMENTS
ad

CROCODILE CORNER

No accidents reported during the last four months. Make sure this corner stays empty over the winter. This year, don't make that one extra turn before entering the circuit.



CURRENT CANADIAN RECORDS

RECORD TYPE	OPEN	FEMININE	MULTIPLACE (OPEN)	MULTIPLACE (FEM)
DISTANCE (km)				
4.3.2.1 Straight distance	Marsden/Apps 1093 1984	A Williams 305 (C) 1975 A Williams 209 (T) 1973 A Williams 305 (C) 1975	Zwarych/McColeman 406 1984	not claimed
4.3.2.2 Str. Dist. to goal	Marsden/Apps 707 1984	A Williams 305 (C) 1975	Zwarych/McColeman 310 (T) 1984 J Proudfoot/G Fitzhugh 304 (C) 1981 D Marsden/E Dumas 422 1979	A Williams/E Bell 76 1979
4.3.2.3 O & R distance	M Apps-DMarsden 615 (T) 1983 B Milner 1001 (C) 1983	U Wiese 328 1984	D Marsden/E Dumas 422 1979	not claimed
4.3.2.4 Triangle distance	H Werneburg 804 1982	U Wiese 307 1983	not claimed	not claimed
SPEED, Δ (km/h)				
4.3.2.5a 100 km	R M Cook 113.4 (C) 1970 D Marsden 111.3 (T) 1982	A Williams 54.5 1976	Marsden/M Jones 98.1 1975	A Williams/M Stone 31.0 (C) 1970
200 km (not FAI)	J Firth 110.6 1984	M Barritt 68.7 (C) 1970	L Bungey/T Burton 76.0 1983	not claimed
4.3.2.5b 300 km	R Mamini 110.1 1973	U Wiese 55.6 1983	D Marsden/E Dumas 69.9 1975	not claimed
400 km (not FAI)	J Firth 77.9 1974	not claimed	not claimed	not claimed
4.3.2.5c 500km	R Mamini 101.8 1973	not claimed	not claimed	not claimed
4.3.2.5d 750 km	W Krug 108.8 1982	not claimed	not claimed	not claimed
4.3.2.5e 1000 km	not claimed	not claimed	not claimed	not claimed
ALTITUDE (m)				
4.3.2.6 Gain of altitude	W Chmela 8321 (C) 1974 J Beattie 8153 (T) 1983	A Williams 5898 (C) 1969 U Wiese 5720 (T) 1982	R Shirley/ P Campbell 7100 1961	Williams/Kossuth 2987.(C) 1970
4.3.2.7 Absolute altitude	W Chmela 12449 (C) 1974 B Hea 10485 (T) 1981	A Williams 9772 (C) 1969 U Wiese 8035 (T) 1982	Chmela/VanMaurik 10390 (C) 1975 R Shirley/P Campbell 9085 (T) 1961	Williams/Kossuth 4206.(C) 1970
SPEED, O & R (km/h)				
4.3.2.8a 300 km	P Masak 171.6 (C) 1983 H Werneburg 115.2 (T) 1983	U Wiese 59.6 1984	Chmela/Rominger 65.0 (C) 1976	not claimed
4.3.2.8b 500 km	H Werneburg 115.4 1984	not claimed	not claimed	not claimed
4.3.2.8c 750 km	not claimed	not claimed	not claimed	not claimed
4.3.2.8d 1000 km	B Milner 94.7 (C) 1983	not claimed	not claimed	not claimed
SPEED, GOAL (km/h)				
100 km (not FAI)	D Band 59.4 1975	not claimed	W Chmela/R Zimm 47.0 1971	not claimed
200 km (not FAI)	J Firth 70.0 1970	not claimed	not claimed	not claimed
300 km (not FAI)	W Mix 108.6 1966	not claimed	J Proudfoot/G Fitzhugh 70.2 (C) 1981	not claimed
400 km (not FAI)	not claimed	not claimed	not claimed	not claimed
500 km (not FAI)	D Marsden 97.1 1970	not claimed	not claimed	not claimed

C indicates a record by a Canadian outside the country.

T indicates the corresponding record set within Canada. These are noted only when there is a greater 'C' record.

COMING EVENTS

Jan 16, 1985 and the next ten consecutive Wednesdays, **Toronto Ground School**, 7 – 10 pm at Bathurst Heights Secondary School, North York. Cost approx. \$25 Call (416) 789-0551 for registration.

A NEW SEASON RESOLUTION FOR ALL FREE FLIGHT READERS

Everyone in the SAC organization who is involved with volunteer work for you asks the following of you (repeat after me):

“At least once every year, I solemnly promise to read ALL THE FINE PRINT in free flight, every bit of it.”

This promise would, if kept, go a long way towards reducing all the mis-directed letters, unnecessary phone calls, incorrect amounts for SAC supplies and badge processing, late articles, and other small crosses which slow down the work. In anticipation, we thank you.

Mar 23-24 **SAC AGM** in Toronto at Skyline Hotel. Meeting, displays, workshops, banquet, prizes. More information in this issue.

Mai 17-20, **Compétitions Provinciales du Québec**. Organisés par le Club de vol à voile de Québec à St-Raymond de Portneuf.

May 17-20, **Quebec Provincial Soaring Competition**, sponsored by the Quebec Soaring Club. St-Raymond.

May 18-20, **Innisfail May Meet**, hosted by Edmonton Soaring Club. Contact Kevin Green (403) 434-5611.

Jun 8-15, **Eastern Instructors School**, York Soaring. May 10 deadline to apply to SAC.

Juillet 16-25, St-Raymond de Portneuf, Québec, **Championnat canadienne**, class Standard, 15m, et libre. Organisés par le Club de vol à voile de Québec. Contactez Alex Krieger (418) 681 - 3638

Jul 16-25, **Canadian Nationals**, all classes St-Raymond, Que, sponsored by the Quebec Soaring Club. For info contact Alex Krieger (418) 681-3638.

Jul 27-Aug 5, **Cowley Summer Camp**. Come to the largest soaring gathering in Canada. Host Alberta Soaring Council. Contact Kevin Bennett, #2 - 15 Sorrel Place SW, T2W 1Z4 (403) 253-0063.

Aug 24-31, **Western Instructors School**, Vancouver Soaring Association, Hope, BC.

Oct 12-14, **Cowley Wave Camp**. Host: Alberta Soaring Council. Facilities usually open a few days earlier. Contact Kevin Bennett, #2-15 Sorrel Place SW, T2W 1Z4 (403) 253-0063.

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AGM PREVIEW

Harry Thompson

Erin Soaring

As a result of a few seconds of “tongue-out-of-control” at last year’s SAC AGM in Ottawa, I was invited to assume the responsibilities of co-ordinator for the 1985 AGM. My qualifications, which follow, will attest to my ability to carry out the functions of this vital position:

- I have no previous experience.
- I have a finely developed sense of procrastination.
- I believe that all things left to themselves will work out to everyone’s advantage.
- My spare time is all used up in resting.
- I don’t care for people.

Now that I have filled all SAC members with confidence, I will list some of the things that may happen at this year’s meeting, if I get careless.

Thanks to Glenn Lockhart, we will have a display that will include a glider or gliders. It/they will be the latest two-place fibreglass ships available. I hope you will be able to sit in them and let your imagination whisk you up in beautiful thermals to great heights before your wallet brings you solidly back to earth.

We also hope to have table displays of flying “goodies” for mounting in your instrument panel, that will virtually ensure your ship will climb, whether there is or isn’t lift.

We hope to attract large numbers of the general public, who will be asked to pay a modest admission fee in order to view the various displays, and who will gaze with awe at all the wonderful men (oops!) persons who fly those machines.

There will be a drawing for a new parachute from Niagara Parachute.

Workshop subjects that may be covered include publicity for glider clubs, importing gliders, collision avoidance, cross-country field selection and circuit planning, badge claim applications, how to increase club membership, accidents to experienced pilots, fibreglass repairs, type certification, etc.

We have a stalwart band of volunteers who have sworn allegiance to me and our cause and are filled with a driving ambition to achieve complete mediocrity in all things connected with the weekend activities. Please let your flying and non-flying friends (and others) know what we are up to, and invite them along to the Skyline Hotel in Toronto on Saturday, March 23 and the morning of Sunday, March 24 to see the display. I’ll see you there.