5/86
Sep-Oct

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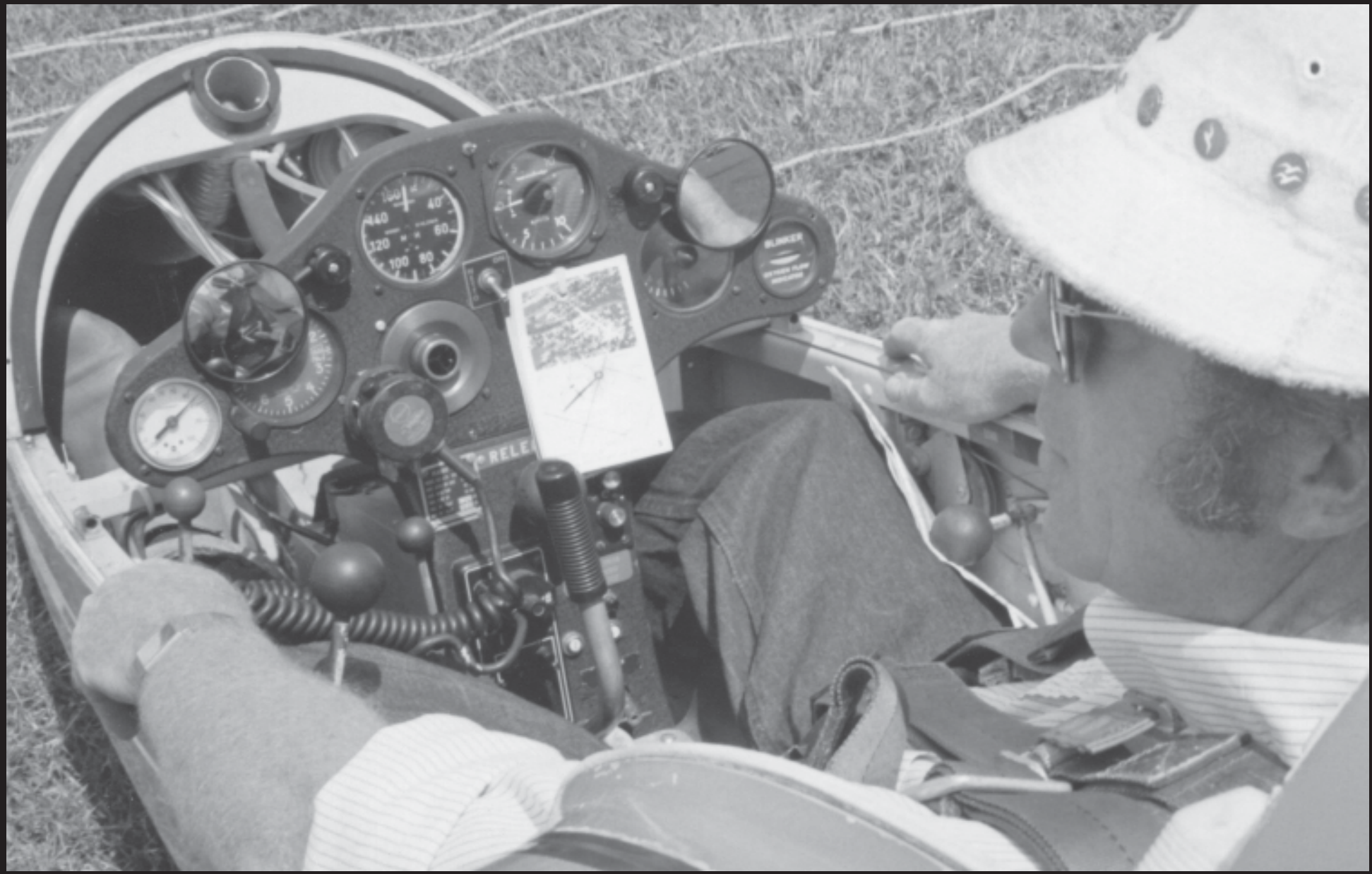


Musings

Well, the summer is one-third done, and the 1986 Nationals are history. A good contest in my limited experience. And no accidents. That is a real joy. How did I do? Ulli and Dave know that they do not have to worry. I haven't seen the final list, but I expect that I'll be fourth or fifth from the end. Still lots of room for improvement. One of the great things about competition is that you learn a lot about yourself, and the kind of pilot you are. You also learn a lot about your competitors; there is much to admire in their flying and tactical skills. We had two American pilots flying with us. It was interesting to see that their airmanship is similar to ours. For Tom Knauff, it was sufficient to win the 15m class. Congratulations to all who succeeded. The thermal-by-thermal description is further on in this issue.

No contest is a success without the hard work and contribution of the host club. On behalf of all, I thank the good folks at York Soaring for their sweat, blood, and tears. They were all real. I'm sure Walter Chmela is looking hard at an investment in lightning arresters. Similarly, no pilot participates without a hard working crew. We pilots owe them much, the least of which is thanks.

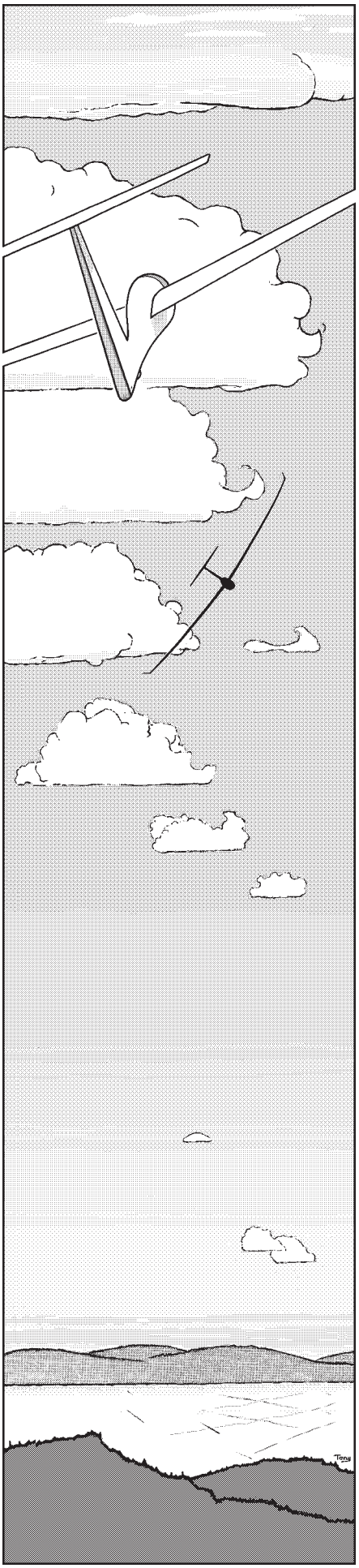
This was the first year of our association with Bacardi Rum as our major sponsor. Each of us involved in the competition appreciates their generosity. I hope that the media coverage and your enthusiasm gives them encouragement to expand their activities and support. We also received limited but welcome support from Texaco Oil. Thanks folks.

It seems that no year goes by without some frustration. This year, again, it is acknowledgement of receipt of insurance premiums and issue of policies. You will recall that last year each owner received a coverage acknowledgement card, and each club, three copies of the policy. The same documents were to be sent this year. To the best of my knowledge they have not. To make matters worse and a story short, we're having trouble finding out why. I hope I'm wrong and that all have arrived by the time you read this. In the "now-it-can-be-told" category, the underwriter wanted to raise hull rates after the final agreement had been made. Your Insurance committee argued successfully to maintain the status quo, at least for this year. It will be a lot tougher to maintain this year's rates next year when we and others who share our underwriter continue to have so many accidents. It may be that these discussions deflected energy and priority from issuing the cards and policies. We'll continue to chase.

Membership this year seems to be tracking about the same as last. The difference is that it is uneven. The areas of the country that are experiencing economic difficulties (the Prairies and BC) are the areas where some clubs are having trouble. The wet weather in eastern Canada is not helping flying activity. However, most clubs are holding their own. Some are doing well. For example, SOSA has 21 new members. I understand that Champlain is revitalized and has 20 new members as well. A lot of hard work on mall displays seems to be the cornerstone of the success at SOSA. I know too, that York Soaring works very hard at organizing visits from all manner of interest groups; a "let's try soaring" outing. It seems to work, if in no other way than to generate flying activity.

There has often been much discussion about the effect of fees on the attractiveness of soaring. The simplistic notion is that if fees go up members go away. An office colleague told me that her golf club is raising its nonrefundable entrance fee from $2,500 to $3,500 in the middle of the season. The waiting list has not shortened one person. There is no grandfather (person?) clause either. Annual green and other fees (bar, locker, etc.) are additional. What has golf got that we haven't? Maybe attractive surroundings and facilities? A world-wide problem for gliding clubs is holding on to members for those critical first years. My thought for you to ponder is — how many members and/or their mates are turned off by ratty or non-existent facilities for comfort or just plain gossip? Karl Doetsch has pointed out that the most expensive and precious commodity for many, very often the people who make good glider pilots, is time. Ask yourself; if I had the choice where would I and my family/companion prefer to spend our time? In a pleasant, or in a grotty place (or aircraft, to bring it to the flight line)? I think it is important; so do good golf or yacht clubs. 'Nuff said?

FLY SAFELY, WELL, AND OFTEN.
DO ENJOY THE JOURNEY



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The journal of the Soaring Association of Canada
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DEPARTMENTS

Cover

The office of a contest pilot. This instrument panel — a study in understated elegance — exemplifies the clearness of thought and the simplicity of purpose of our competitor just prior to take-off. Photo by Tony Burton.

AGAINST THE EASY DISTANCE

Justin Wills
from Sailplane & Gliding

I would like to give you a personal view on the role and responsibility of the performance pilot in the development of gliding. I want to start by suggesting the adoption of a "Gliding Ethic". The Ethic I would like to propose is as follows: **"A responsibility to uphold the freedom whereby enthusiasts from any walk of life can explore the ocean of the air howsoever and wheresoever they choose, with the minimum of constraints other than those imposed by the laws of nature."** Underlying this ethic is a belief in the intrinsic value of the sport and that it enriches the lives of those who participate in it.

Performance flying, be it for badges, records, or competitions, is the most publicized part of gliding and thus should bear its full share of this responsibility. However, modern trends in performance flying are showing signs of running contrary to this ethic.

I have specific grounds for concern: the one I wish to discuss now is the introduction last year of the new FAI rules permitting flights encompassing multiple turnpoints to qualify for badge and distance diploma flights. I am not alone in this concern, and I would like to read you excerpts from a letter printed in the February issue of *Soaring* magazine:

"Once upon a time, flying a sailplane cross-country was a horizon-expanding experience. But all that is changing. The latest revision to the FAI Sporting Code drastically reduces the minimum distance a pilot has to fly from his home base to complete the distance requirements for Gold, Diamond, and 1000 km badge legs. And while there was jubilation in the clubhouse at the prospect of completing Diamond distance without risking even a 100-mile retrieve, I was caused to wonder if the challenges of soaring cross-country are not being over-diluted.

"Twenty-five years ago, flying Skylark 3s with an average cross-country speed of 25-35 mph, we attempted Gold and Diamond distance. Landing out was often a foregone conclusion, as was a lengthy retrieve ... Now we fly fibreglass beauties with cross-country speeds twice that, yet our globe-trotting has become restricted to a much narrower region. Diamond distance can be achieved by zipping up and down a mini-course to points only 52 miles from the centre. Meanwhile, our dinky little computers are telling us how fast to fly, how high to climb, etc. after we've punched in our data on the flightline.

"Are we becoming a bunch of armchair pilots? Have the demands for comfort and convenience taken over the soaring movement? If so, where will it end — in the total simulation of the cross-country experience?

"I'm not at all sure that we're not going too far. My guess is that I shall never again . . open the canopy and ask the farmer, 'What state is this?' Or set up my approach in the last glimmer of gloaming. Of course, I could do these things, but if the rules say I don't have to, chances are, I won't. I question whether a 52-mile return ticket excursion is worthy of that prized Diamond in the pin. What should we aim for — absolute fairness and ultimate safety? Or tasks that challenge the pilot to make creative decisions and extend him to the limit — even at some risk?"

I agree with the sentiments expressed, and I believe that the reasoning behind this change is not only mistaken, but runs contrary to the gliding ethic.

- The first reason advanced is that this change enables such flights to be performed in countries where geographical limitations rendered them impossible under the previous rules. However, this reason is based on the fallacy that there is an equality between the achievement of a given task in different countries, in fact, we are all perfectly aware that the achievement of say, a 750 km triangle in Australia, is far easier than a similar flight in the UK, and that in Denmark it may be impossible. That hasn't prevented a Dane from being a recent World Champion! What the previous rules did provide was an acceptably consistent measure of achievement within the country concerned. A change in the rules will destroy this, whilst making such flights perhaps ludicrously easy in Australia.

- The second reason advanced is one of safety. At this point, I would simply state that a skilled pilot must be capable of meeting the demands of the laws of nature, and attempts to insulate him from such demands are not only contrary to the gliding ethic, but could also be counter-productive.

- The third reason is one of convenience. This is unarguable if you accept that the length of retrieve determines its inconvenience. I don't, but realize this is a subjective view.

continued on page 14

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 RCFCA delegates to SAC the supervision of FAI related soaring activities such as competition sanctions, issuing FAI badges, record attempts, and the selection of a Canadian team for the biennial World soaring championships.

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President R.I. Carlson
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Corporate Treasurer Jim McCollum
SAC Office Secretary Rosanne Paquin
SAC National Office
485 Bank Street, 2nd Floor
Ottawa, ON K2P 1Z2
(613) 232-1243

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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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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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EDITOR
Tony Burton (403) 625-4563
Box 1916
Claresholm, Alberta T0L 0T0
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OPINIONS

MORE ON "LOW LOSS"

I see that **free flight** has been running my series "Low Loss Instructing" from "Australian Gliding".

Firstly, may I thank you for your interest. It gives me much pride to be associated with your magazine that is doing so much work on promoting flight safety and club gliding generally. Secondly, may I compliment you on the editing. You excised the parts applicable only to Australia so well that I had to look a couple of times to realize they had gone.

Originally, "Low Loss Instructing" ran to over 60,000 words in its original draft. I edited this back, but even then was surprised that AG took it on — it is a very large series for a gliding magazine with limited space and a variety of interests to satisfy. To compensate for what I could not include in print via AG, I offered additional notes that enlarge upon the teaching sequence and the Point-of-Contact concept: these being for readers who wanted to go a little deeper.

For obvious reasons, **free flight** did not repeat the offer, so I have enclosed a set of the notes for your consideration. If you feel that they may have use, then they are yours. *(These notes have been passed to the SAC Flight Training and Safety Committee for comment.)* I am interested in all instructor training methods and would be grateful for any information available on current Canadian instructor training and upgrading.

In conclusion, may I thank you again for your kind interest and wish your movement a safe and successful flying season. Also, my particular good wishes to your team at the Benalla World Comps.

Regards,
Tony Hayes,
Lot 7, Caboolture River Road,
Morayfield 4506,
Australia

WHO CAN AFFORD IT?

I read each annual SAC report and each copy of **free flight** with the hope that I will see some reaction to Musings and to evidence of other quarrels from Central Canada. A few issues ago, we read an editorial from Al Schreiter about the costs and membership policies for clubs. He said we should not worry about a few potential members who are deterred by cost. I say, balderdash! — no one can afford it! We get a taste of the sport in some ratty glider on a windy field in the spring, run by a crew of ordinary, grouchy elitist egomaniacs and — in spite of it all — one or two of the many will afford it, no matter what it costs, and these one or two join the 1,200 or so soaring pilots who make up the depleted SAC membership.

The membership used to be 2,000; maybe we don't hear from the hacker club pilots any more because they are the 800 we lost. If clubs wish to survive, they must:

- cut costs
- be nice to people
- teach them properly (see the low loss instructing series) in the best equipment the club can afford, and
- try to make friends and family part of the club.

I expect this outburst will be condemned in the opening salvo of the next Musings. A frustrating aspect of these presidential comments as I see it is a tendency to refute opinions of the membership as expressed in the magazine.

Dick Vine
Bluenose Soaring

Perhaps the tendency you see has taken a pause, Dick. Reading the "Musings" in this issue, I find you and Bob on somewhat the same wavelength — a near miracle. But, I do not think you can achieve both your first and last points together. I remember back in the late 60s when I was a new pilot at the Gatineau Gliding Club, there was an ongoing controversy as to whether club earnings should go to equipment or amenities (in your terms: pilots, or friends and family). It can probably be shown that the clubs which have grown have satisfied both if at all possible, at increased cost. In any case, GGC is still going strong, while the clubs with only a two-holer down the flight line are losing to windsailing the "elitists" who discovered soaring.

A reading of other country's soaring magazines will also see a lot of discussion on this subject, with club success attributed to both decent equipment and club owned real estate. The initial costs were always hard to bear and controversial, but the long-term results were beneficial to the members and to membership growth. Tony

THINGS TAKE TIME

I sincerely believe that if soaring is ever to become a more popular and expanded sport, the work involved in conducting glider flights is going to have to be eliminated even more than the conventional airplane tow that is now being used. That leaves only one choice, namely, to install a motor on our sailplanes so that we can take off and climb under our own power.

Ned Nelson, in a letter to the editor,
SOARING, Mar-Apr 1948

THE DREAM IS REAL

In 1962, Julien Audette had achieved all three requirements for the first Canadian Diamond badge, flying a 1-23, the modern glider of the fifties, and all his flights were records. My goal was to do the same in "Cloverleaf", my Ka6.

Ursula Wiese
Cu Nim Gliding Club

If someone would have told me 15 years ago, just after I had received my glider pilot licence, that I would become the first woman glider pilot in Canada to earn the FAI Diamond badge, I would have thought their thinking was definitely warped. My club's operation was limited to flying circuits for years to come, and I just could not imagine flying even 50 km away from my home field.

Today, I can proudly say that I have made it happen. However, I first had to build up my soaring confidence and skills. Fortunately, I was able to buy my own sailplane which would teach me the art and take away the fright of cross-country flying, or to be more exact, the landings in a field. After all, staying up is fairly easy, isn't it? In the summer of 1981, my Ka6CR, "Cloverleaf", the modern sailplane of the mid-sixties, arrived in Claresholm and my soaring career began. At the Cowley wave camp in 1982, I easily climbed to 26,000 feet after a "missed approach" at the wave, when a severe rotor had blocked my way home but then grabbed my wings and threw me right back into the wave, into five knots. It took me a 1000 foot gain to believe it! Thus came my first Diamond to Silver C #525. I quickly found that this was a Canadian feminine record — and the race against myself began. The SAC Soaring Site Directory, "Diamonds" section, pointed the way for my plan, and showed that I had indeed a good chance to earn the first Diamond badge in Canada for women. My goal would be to do it in my wooden glider, despite Tony's fine RS-15 waiting for me and some uncomprehending looks from a few fibreglass owners.

In the summer of 1983, I flew an FAI 300 km triangle after some shorter flights, thus gained my second Diamond and Gold C #195. As a bonus, this flight filled an unclaimed record slot in the women's section. It really wasn't all that difficult any more to plan long flights and try them — and I felt the strong urge to meet the last challenge in my Ka6, the 500 km distance flight.

But times had become tough. The occasional work in the winter allowed a very slim flying budget. So I simply had to wait for the most favourable weather forecasts for long flights. The best attempt was a 500 km O&R which failed after 410 km on 13 June 1984, when the day quit early ... it was the last really good day I saw until this spring. Meanwhile, frustration began to replace my interest in my goals and flying in general. In 1985, I sold Cloverleaf; but the new owner, Don Jessee, agreed to give me a chance at 500 km attempts — he sure did on 12 June at Chipman when we both attended the Alberta Soaring Council cross-country clinic.

• • • • •

On Wednesday, 11 June 1986, a cold front raged through the Edmonton area, dumping heavy rain showers and hail on the land and gusting to 70 km/h, but it promised good soaring for the next day. Tony and I spent the evening in town enjoying the IMAX movie "Silent Flight" with Oscar Boesch and his ASW-15; and "The Dream is Alive", the NASA movie of several shuttle flights, which offers a supernatural feeling of floating motionless in space above our Blue Planet with its continents and oceans drifting by underneath.

The next morning dawned clear and cool, and the pilots at the cross-country clinic got busy before the 9 o'clock meeting. Talk of 500 km flights swirl through the air. Doug Stroud, the course weatherman, arrives with a big happy face, reporting moderate winds (for example 310/20 at 6000), a drier airmass than yesterday but still a fairly low cloudbase to start (2000 agl), and that yesterday's front is at the Manitoba border, 800 km away. (This was important to know because I had learned in the last two years of weather watching that indeed the fronts and winds rapidly change soaring conditions within a 300 km radius.)

Don Jessee

Ursula gets to hold Cloverleaf again during the Cowley Summer Camp.

John Firth, our coach, is left with the fact that today everybody wants to do his own thing. Everyone sets 500 km — everywhere straight east, Mike Apps (ASW-20) declares a 750 O&R going into Saskatchewan. It promises to be a great day. My only choice is the dirty downwind dash with my Ka6 because the 20 knot wind is too strong for her to penetrate upwind very far. I expect an "easy" downwind flight of some six hours. On the way is North Battleford airport, for a 320 km goal record, which calls for a remote start at Lamont, 11 km west of Chipman.

Chief towpilot Chester Zwarych, with copilot Reg Adam intend to head off in their Blanik, TVT, but it happens that we are short of towpilots so Chester is persuaded to do some towing himself, and he loses two precious hours for his own flight. At 1115 Chester pulls in front of me: good lift on tow, ragged cu on the way, some with black bottoms, and they are beginning to street. The first 50 km are flown conservatively in an operating band of 1500 feet. Many clouds do not provide a definite source of lift and S-turns are necessary to connect. Gemini, the two-seat trainer for the course, a Libelle and a Jantar catch up with me and we share the lift. The performance difference of the fibreglass ships soon separates us. Within the next hour or so cloudbase rises and a faster trip begins. The landscape now changes from flat farmland to wooded and hilly areas, but I am high. Tony, my crew, stays just ahead of me on the ground. Lloydminster, on the Alberta-Saskatchewan border, is 20 km north of me when two Jantars and a Libelle report trouble and have to land. The area on track down the highway and to the north is rapidly overdeveloping, and rain showers darken the air ahead at my goal of North Battleford; Kerry Bissell in his Libelle was already heading well south; Gemini has rounded the first turnpoint at Marshall, Saskatchewan and heads southwest; Mike reports rounding his turnpoint at Radisson, east of North Battleford, and is on his way back. The sky to the southeast looks inviting. My goal is now shrouded in rain; virga encroaches. I have to deviate more south, and the goal has to be abandoned if I am to stay airborne. Mike inquires about my location which could save him from his low spot near Battleford — but he has to land, after a total of 470 km.

Suddenly, I'm in trouble 30 km south of Battleford, after 320 km. There is lift in sight, but the cu around me change to rain clouds forcing me earthwards. I radio my landing field to Tony who is now on standby at Battleford. Then, unexpectedly some weak lift tempts me and I cautiously begin to turn, observing the wind drift, and slowly Cloverleaf and I gain some 500 feet and tip-toe on. Finally, we reach a strong cu and soar to 9000 and to safety. TVT received my happy radio message then, and a little later I spot her orange wingtips circling far below me. Shortly thereafter though, my battery begins to fail and I can no longer transmit. On the ground, Tony begins to play "Twenty Questions", and for a little longer I can pass some general information with mike clicks. He radios, "I'll follow you anywhere", and that helps me free my mind for the rest of the flight.

Silent wings carry me higher and back over comfortable farmland, 9500 at Biggar, and the best part of the day begins — around 5 o'clock. I am wondering just how far this day will get me, but the sky ahead to the southeast still looks very good, even though I have now flown off the bottom of my map, and I am free of everything — communication, navigation, electric vario and audio — and about 150 km shy of my distance I decide to follow the pathway of high cloudstreets and fly as long as the soaring day will last, and a most breathtaking time begins.

Cloverleaf and I ride along under the cloudstreet just next to the blue air to the north. The lift is a smooth 4 to 5 knots. We cross the empty-looking South Saskatchewan River. I see a lake with an alkali rim, then the green countryside below us unfolding as we glide overhead at 50 knots. Some time later, a long fingered lake comes into view, perhaps Diefenbaker Lake west of Regina. It is around 6 o'clock. "I'm close to 500," I think, "but would appreciate one last thermal, just to make sure."

Soon, only 1500 feet above ground with a field in sight, I reach some cumulus above which connect to another promising cloudstreet. I feel Cloverleaf rising again: I bank, and the vario indicates 2, then 3, then 4; we thermal to 8000, enough for a 50 km final glide. I expect to be on the ground in about half an hour. The same feeling of being motionless in space takes over, just as I felt watching the orbital scenes in "The Dream is Alive" — below, the green land, nestling farmhouses, communities drifting by.

Thermals weaken now ... some ripples here and there. There, another good one, and I pull up and centre in five knots till we reach the top at 7500. I push on, then reduce speed to 50 again. The air is still once more as we continue on our second final glide. I see a long shadow far ahead, it becomes another big lake. Some lift is still around but I decide to land while my concentration is still at a high level. Also, I am certain that the distance is sufficient to complete my Diamond badge. I land at 7:25 in a fallow field and ask where I am. The farmer, also a pilot, says "Dilke, Saskatchewan, 45 miles northwest of Regina ..." That's over 600 km from home! Cloverleaf and I did it, and I think I can still see her smiling.

□

Postscript:
Last year at the Cowley Summer Camp. Julien had encouraged me in my goal to parallel the achievements of his Diamond badge, and he had a standing offer of a steak dinner if I landed near Regina. In December he became very ill. After my success, I hoped he would still be well enough to receive the good news, but the disease was too advanced ... It tempered the joy knowing that I could not share my achievements with the pilot who did it first.

THE ARTHUR NATIONALS - 1986

Tony Burton
Cu Nim

The 42 pilots arriving at the contest site at York Soaring found that two lightning strikes on the airfield on 18 and 19 July had resulted in melted power lines, no phones, and a soaked and soft site to camp on and fly from. Power and phone service was back by the last practice day, but it sure slowed down the guys trying to get up to speed on George Dunbar's scoring program — and for a while, contest director Art Schubert advertised his car phone number in case the contest telephones didn't get repaired by landout time. Some contest facilities were not completely ready, but organizer Walter Chmela made steady improvements, and the crucial operational aspects of the competition like the launch and start line were very well handled. Everyone *loved* the hot showers next to the flightline.

The task committee consisted of pilots Dave Webb and Walter Herten, weatherman Bob Gage, and Art Schubert. The jury consisted of the task committee plus Jim Carpenter, Karl Doetsch, and Wilf Krueger.

Once again in a Canadian Nationals, the necessary minimum of five Open class ships was not present to constitute a separately scored class, and there seems to be no prospect that this will change. Brian Milner's Nimbus 3, Stan Janicek's Tinbus, and Walter Pille's Kestrel were entered into the 15m class on a handicapped basis. In a pilots' meeting, chaired by Jim Oke of the Sporting committee, it was a majority opinion that no handicapping system will fairly admit Open class ships to another class, and that this no longer be done in future competitions.

We had two American entries in the contest: Tom Knauff of "Ridge Soaring" and ridge soaring fame, flying a Ventus; and George Vakkur who developed the very useful strip maps of the Appalachian ridges, flying an ASW-20CL. Tom did quite well.

One change in the contest, and a refreshing one I thought, was the unlimited height start gate. It reduced the workload for the start-line crew, and provided a safer and less stressful beginning to each day's task. For the pilot, the choice of the "best" time to go and the usual start line psyching did not change, but it was a much more "laid-back" beginning of a race to wander across the line at best inter-thermal speed rather than suffer the noise and bashing around of Vne. Start line identification of ships was no problem this time since no one was able to cross at much more than 4000 feet agl anyway. Better conditions at other contests may require larger contest letters under the wing or other means of positive identification from the ground, or else place responsibility for the start entirely in the pilot's hand with, for example, the use of clock cameras.

A scoring change this year set the minimum task duration for a full 1000 points at three hours for the winner; but the weather (perhaps I should say climate), the task setting, and the normal times required to launch and start a class, all conspired to produce winning flight times of less than three hours for eight of the twelve tasks set for both classes. This derated daily scores and compressed the cumulative scores. The Sporting committee will have to determine if this is an intended and acceptable outcome of the scoring change.(Cynics have said the purpose of all the changes in recent years is to give everyone the same score!)

Let's get on with the main event. My time and narration have been helped out very much by the following competitors who each described the events of one day of the contest Here goes:

DAY 1 22 July

Bob Gairns (TZ)

The weather had improved during the night. Light winds were forecast, with thermal strength estimated at four to five knots, and scattered cumulus at 6000 feet or 4500 agl. *(All further reference to altitude will now be agl.)* A 300 km triangle was set for both classes: southwest to Lucan, east to Oshwekan, and return. But due to late development, the Lucan turnpoint was shortened to Stratford airport. Even this task (227 km) was a long one and a number of pilots landed out.

A northerly wind moved several pilots off course on the first leg to Stratford, and the hazy conditions made navigation difficult. Robert Binette (DC), in his first National contest, made good time on the first leg, then suffered from "teeny-weeny-bladder" and was forced to rush back and land at Stratford. Ian Grant (XR) flew between 1800 and 3000 feet and got off course north of Elmira. He found few clouds there, but after Stratford had a good run as far as Brantford, where the dead air from the lake effect began all the way into Oshwekan. Getting as high as possible at Brantford, he was able to glide around the turnpoint and back to seasonable conditions and make it home. Ian said it was the sort of day to make Club Libelles and Ka6s look good. Bob Carlson's battery ran down just after the start and he flew the whole course using only the netto function of his vario, but still managed to get to within a few miles of home before landing.

Among the notables to land out was Wilf Krueger. While flying west of Brantford with Tom Knauff (KG), the eventual day winner in the 15m class, Wilf flew over the town to try to gain more height but found only more sink, and did not have enough height to get into the turn and back to lift again. The poor conditions into Oshwekan caused several pilots to get low, but they were able to struggle north towards SOSA's airfield at Rockton. Colin Tootill said that a number of pilots were milling around at 800 feet, trying desperately to get the added 100 necessary to get over the trees to land at SOSA. George Reid, Sid Wood, Walter Herten, Jock Proudfoot, and Stephen Newfield also made it into there.

The best tactic was to fly to the inside of the triangle on the last leg where the first cu were closer, and a good cloud street northwest of Brantfort brought many pilots home with improved times. Jim Carpenter took the day in the Standard class.

Seth Schlifer, flying a borrowed HP-11A built by Dave Webb and Ben Price in 1965, landed close to home near Fergus, but as this was the first time he had de-rigged the ship, it took so long working in the dark that he and his crew did not get back until 0130 in the morning.

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Brian Milner always launched from the back of the grid to allow himself maximum take-off run for the heavily-ballasted Nimbus 3. It had to sit on a sheet of plywood to keep the wheel from sinking into the soft turf.

DAY 2 23 July

Paul Thompson (T2)

Today's task was a 206 km quadrilateral for both classes: Dundalk, Mildmay, Monkton, Arthur. The first two turnpoints were north of Arthur where conditions had looked so good yesterday. The weather proved to be better than predicted. Cloudbases moved up to 4500 feet with four to six knot lift. A good cloud street along the second leg moved the gliders along well, and all 42 ships made it home.

There were a few casualties to navigation, however; at least two experienced Ontario pilots found themselves considerably off course. It was hot and hazy, particularly around Monkton, and southern Ontario tends to look all the same on days like this. One pilot at the top of a gaggle announced that he would leave first if only he knew which way to go!

Contest Director, Art Schubert, collects Brian Milner's signature on the change of task form.

This was also the day that proved beyond a doubt that with too much whiskey, things can get very confusing — WW, W2, 2W, BW, and DW all calling "IP" within a few minutes at the start did get Art Schubert slightly tongue-tied at the gate.

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Southern Ontario was originally surveyed by crews who started straight in from each Great Lake, right after throwing away their compasses, and right after eating some illicit herbs. The result is a contest area having a road grid that looks like a micro-photograph of a mineral sample with all its random crystal grain orientations. Add a lack of prominent landmarks, a sameness to the fields and towns, and often limited visibility, and you can now understand why many pilots found navigation a problem. For the first time, some added compass headings to their courselines, and the quarter million topographic map was a boon if you had one.

DAY 3 24 July

Chris Wilson (W2)

Bob Gage told us we still had the same airmass as on the previous two days, and so the real question was whether the advantages of drier ground would outweigh the disadvantages of the more stable air. Signs of the warm front to the north and increased haze made us all somewhat pessimistic, and when the cumulus clouds failed to appear at 1100 sharp, we knew that Day 3 would be more difficult than yesterday.

The main task was a quadrilateral with turnpoints at SOSA, Stratford airport, and Flesherton, for a total of 270 km. An alternate task of SOSA, Stratford, and back to Arthur was called in case the weather was not as good as forecast (183 km). Launch time came and went — several times, in fact — as the sniffer failed to detect any lift and the task committee failed to call the alternate task. A compromise was finally reached, preserving everyone's honour and integrity: the sniffer agreed there was a little bit of lift, and the task committee agreed to set a little bit of a task. The first bit in fact: out and return to SOSA for 122 kilometres.

Launching began at 1415 into a hot and hazy sky, and while there seemed to be things that resembled and behaved like cumulus clouds around the start gate, there was very little indication of lift out on course.

Of more immediate concern was the reduced visibility. At times, there were eight to ten sailplanes in one moderate thermal, some climbing slowly as they staggered about with wings full of water, others seeming to go up the centre like an elevator. Sailplanes were leaving and joining the thermals continuously, and it required constant look-out by every pilot to keep the whole thing safe. (I suggest that gliding students try to imagine such a situation, and particularly the feeling of flying close to another sailplane and not being sure whether the pilot had seen you during the last ten seconds. Then perhaps us instructors would not seem so unreasonable in our apparent nagging to keep a constant look-out).

I went through the gate after 1500, having left the middle of a gaggle in order to get a good start. On Day 2, I had not been recognized at the start gate because too many aircraft had started at the same time. I was determined not to repeat that today. Conditions as far as Guelph were reasonable, although most of the lift was found in blue thermals. But south of Guelph things deteriorated, and gaggle flying suddenly became fashionable. I was lucky enough to tag onto a gaggle being led by some fairly high-priced help (a fact that undoubtedly contributed to my safe though sweaty return to Arthur) and we made it round the turnpoint and back to the 401 highway south of Guelph ever so carefully.

Over Guelph, the gaggle disbursed as quickly as it had formed in the same place about 40 minutes before. It was as if the impulse of rugged individualism had suddenly overcome the herd instinct. Well almost, anyway. I tagged along behind Karl Doetsch and Ulli Werneburg as we headed for some clouds between Elora and Fergus. Fortunately, there was some weak lift which gave the needed height to get back to Arthur, and I finished just under two hours after leaving.

Others had not been so fortunate, and a number of pilots landed at the turnpoint. Some of the SOSA competitors were pleased that Tom Knauff got a chance to drop in at their gliderport.

For those with a sixth sense, it might have been possible to predict that Day 3 was not going to be the best so far. For example, early in the day, it was discovered that 13 tow ropes had mysteriously disappeared. And while many of the aircraft were flying around the start gate, one visitor, who noticed sailplanes dumping their ballast, was heard to ask: "Why do they have water, is it a weapon or something?"

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MoT called up to say that George Vakkur's ASW-20CL was not legal to fly in Canada. George withdrew from the contest, and the rules required that all previous days' scores had to be recalculated (again) to exorcise the effect of his presence on the day factors and formulas.

DAY 4 27 July

Seth Schlifer (NN)

Some sour weather prompted a couple of rain days and the flying could not resume until the 27th. Bob Gage's weather briefing had the conditions painted a somewhat unsettled colour, so the task committee selected three possible tasks depending on the state of the thermals and sky as launch approached. It was to be Tavistock and return (130 km). Tavistock/Listowel airport (157 km) or Tavistock/Mildmay (207 km).

Two to three knot thermals were predicted with 2500 foot bases, and the weather did look promising, so the long task was called. Launches began at 1315 and most pilots started around 1445. The light, northwest breeze, some streeting, and four to five knot lift made life very bearable. Some of the more alluring clouds did offer little more than sucker lift and choppy air though. I found reading the clouds a bit difficult and "centring time" averaged the lift to 3.5 knots or so. Bases were 4000–4500 feet, but dropped to 2500 feet at Mildmay, and the last leg was bluer.

The perfect model of what every properly dressed contest launch grid chief should be wearing.

The majority of the gliders travelled around the course in several huge gaggles. The top eleven finishers in the 15m class were separated by less than 7 km/h and 101 points. Near the second turnpoint it was reported that one thermal contained a mixed class gaggle of 20 or so! Things were jumping at the finish gate when one of these gaggles broke for home and all crossed the line virtually together. The eight sailplanes did a good job of sorting themselves out in the circuit with two 2-33s.

Top dog in the Standard class was Dave Webb (DG) with 85.9 km/h and Tom Knauff smoked the 15m class with 89.9 in his Ventus. Brian Milner (GJ) was over 100 km/h in the Nimbus 3 but was handicapped downwards below Tom's speed. This writer blew it badly right from the outset by detouring several miles south of course on the first leg to what looked like better conditions, instead of staying with the helpful gaggles. By the time I found the weather was actually weaker and then got myself back on course, the others were all well ahead and out of sight. I didn't reach the first turn until 1630 and the only sailplane I saw was at Stratford airport, but he was of no help because he was on the ground!

I got my act together on the second leg, and the last half of it involved very little circling due to a couple of short streets and a base which gradually lowered from 4500 feet to 2500 (it did make it easier to stay at cloudbase). Rounding the second turn at about 1800 I followed the last of these streets back south a bit, jumped 10 miles east to another for a final five knot climb to 3300 feet for final glide. I was the last one home at 18:33:15 — don't ask what my speed was.

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No accidents in the whole contest, and for the most part, disciplined flying. However, Colin Tootill had his ship spin out of a thermal while avoiding a near miss on Day 2. There was some complaint of "aggressive" thermalling by one or two pilots prior to starting. Given the size of the prestart gaggles and the low cloudbases at the time this was totally unnecessary, especially when outclimbing your neighbour didn't matter anyway.

DAY 5 30 July

Ed Hollestelle (A1)

After two more days of low cloud and waiting on the grid — finally a day that looks promising. A task of 216 km is changed to a longer one of 273 km on the grid as the sky filled with cu: a pentagon of Brussels, Mitchell, Ingersoll airport, Guelph airport, Arthur for the 15m class. The Standard class skip the Ingersoll turnpoint for 217 km. There were a lot of start gate games, with Stan Janicek (EZ) starting six times, and many others went through four times. EZ completed the course in good time and Tom Knauff continued to prove he could keep up with the Canadians.

Cloudbase was only 2200 feet at launch time and only slowly improved throughout the day. Many pilots preferred looking at the sky rather than the ground out on course and made better time that way. Some pilots lost precious time scraping away from farmers' fields when they dropped out of the bottom of the narrow soaring height band. The headwind on the final leg was very tricky — Walter Herten (SX) and Harry Pölzl (KC) landed just short of home. There were a lot of low circuits over the campground and many times, crews were rained on with water ballast.

Out on course, Brian Milner thought he was going too slowly, so he made a late return to the field for a refill of water and a relight. But he left too late in the day (1530) and even a Nimbus 3 couldn't get all the way around.

The task was well called and it was finally a 1000 point day for the 15m ships and almost (955) for Standard. Many pilots remarked that it was not an easy day, but all enjoyed the hard work. Tom Knauff won the 15m class with 78.1 km/h followed closely by Mike Apps at 77.2 km/h. The Standard class was won by Jim Carpenter at 75.5 km/h with Jörg Stieber in second place with 70.2 km/h.

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Paul Thompson will land ten kilometres short of Stratford airport tomorrow, and so close to his outlanding of three days ago that the same farmer will give him help — and the reward of a bottle of hard cider because he had enjoyed Paul's visit so much the first time.

The 15m contest was a real horse race at the end of Day 5, with the top five pilots within 89 points of each other, while the lead three, Knauff, Werneburg, and Apps, were separated by only 4 points!!

THE WINNERS ARE ...

Mix Memorial Trophy & Gold medal — Standard Class
4280 points of a possible 4445:
Jim Carpenter (ZZ)

4171 — Silver medal Dave Webb (DG)
3495 — Bronze medal Jörg Stieber (JS)

Gold medal — 15m Class
3991 points of a possible 4472:
Tom Knauff (KG)

MSC Trophy & Silver medal – 15m Class
Not official to date (see next issue)

Bacardi Trophy — best overall pilot
4996 points of a possible 6000 (handi.)
Stan Janicek (EZ)

SOSA Trophy — best novice pilot
4290 points of a possible 6000 (handi.)
Walter Weir (2W)

Dow Trophy — fastest Std Class triangle
72.2 km/h (Day 1) **Jim Carpenter** (ZZ)

Dow Trophy — fastest 15m Class triangle
91.0 km/h (Day 1) **Tom Knauff** (KG)

DAY 6 31 July

Kevin Bennett (X1)

Day 6 started out much the same as Day 5. Cloudbases were quite low (2000 feet) in the morning, but were supposed to rise by mid-afternoon to 3500 feet. Thermal strength was predicted to be moderate at two to five knots. An upper trough was approaching from the west and was supposed to be in the area by early evening. The task committee called for a 273 km task for the 15 m class (SOSA, Stratford airport, Flesherton, Arthur) and a 206 km task for the Standard class (Stratford airport, Flesherton, Arthur).

The first leg to SOSA for the 15m ships was quite good. Several pilots made the 61 km in a half hour. Dolphin flying under cloudstreets allowed long runs with little need to stop and thermal. However, the second leg quickly revealed that "early evening" was coming to southern Ontario very early this particular day. Just west of Kitchener it was evident that the high cloud associated with the predicted disturbance had completely covered the rest of the course. The last remaining cu were visible half way between Kitchener and New Hamburg. The large gaggles that congregated here climbed to cloudbase and then set out on a final glide westward under overcast skies and in perfectly smooth air towards Stratford airport. The airwaves began filling with

AMERICAN SPORTS CLASS NATS HAS CANADIAN WINNER

Peter Masak, flying his Nimbus 3, won the second US Sports Class Nationals at Hobbs, NM this year. He earned 4853 points of a possible 5081 over six days, four of which were derated from the normal 1000 points as a result of winning times being less than the minimum three hours. Peter won two days, and was second on two others.

The event was attended by 53 contestants, flying chiefly the usual 15m ships, but others in the competition were a Caproni A21, Nimbus 2, ASW-12, HP-18, 1-34, Duster, and three 1-26s. A 1-26 was second on one day, and the 1-34 pilot did very well, winning one day and being 4th overall until the last day.

The contest was marred by a large number of accidents, with seven gliders being written off in outlandings. Although the reasons are being investigated, it looks as if poor pilot judgement is a significant factor, with dehydration being a villain. Peter remarked that he kept wet with Gatorade, and that it worked better for him than plain water.

Gamesmanship features in every contest, handicapped or not, with higher placed pilots approving of the handicap factors and others not. The 1-34 pilot chose to fly that ship because he thought that it performed better than its assigned handicap under Hobbs soaring conditions, and his standing tended to bear him out. However, Peter said that the 1-26 were essentially unhandicappable under the strong wind conditions of some days.

messages to crews to get on the road. As Stratford was the first turn for the Standard pilots, they had the luxury of lift for only half their trip.

The end result of the day was that everybody landed out, with 25 sailplanes descending on Stratford airport and half a dozen others just short or a few kilometres beyond. The 15m winner for the day was Tom Knauff, his fourth for the contest, landing 15 km past the airport. In the Standard Class, seven pilots landed at Stratford, but Joerg Stieber photographed the hangar turnpoint before landing long on the runway, and this small progress up the next "leg" won him the day.

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Well, stories are supposed to have an ending, but not this time. The Day 6 flights in the 15m Class seemed to baffle the scoring program. Two weeks after the event, Art was still manually re-scoring some inconsistent values found in the results that were mailed to the competitors.

The daily scores and final results before you in the table are not absolutely final yet — a common theme of the contest. The winners and runners-up who were honoured at the banquet on the evening of Day 6 may have to trade around some of their plaques. A 25 point penalty was assessed against

Larry Springford takes care of the cleanup work on S1, his ASW-20.

CANADIAN TEAM RANKING

Immediately following the Nationals, the Competition Seeding List was recalculated. The top twelve pilots were then ranked subjectively for a Canadian world team position. The current Canadian team ranking is as follows:

	pilot	avg. rank	std. dev.
1	Werneburg	1.6	.99
2	Webb	2.0	1.35
3	Hollestelle	3.4	1.38
4	Krueger	3.5	1.37
5	Apps	3.9	1.00
6	Janicek	5.3	.75
7	Firth	6.6	.48
8	Pölzl	7.6	.77
9	Bennett	8.4	.99
10	Wilson	8.8	.60
11	Pille	10.3	.46
12	Milner	10.6	.92

At least the top four pilots will be offered a position on the Canadian team to fly at Benalla, Australia in January. Further positions will be open depending on the maximum size allowed for each team and the availability of our pilots to attend. The pilots need your support to represent us. See the info on page 15.

FIFTEEN METRE

			Competition Class Score			DAY 1			DAY 2			DAY 3			DAY 4			DAY 5			DAY 6			Total
			hdcp	pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	km/h	pts	pos	Score
1	Tom Knauff	Ventus B	1.10	4996	5	91.0	843	1	80.4	663	6	(62.8)	123	21	89.9	766	1	78.1	1000	1	(139.2)	596	1	3991
2	Stan Janicek	Tinbus	1.14	5378	1	83.2	740	2	79.5	650	8	65.2	349	7	84.0	678	9	76.5	973	3	(119.3)	497	12	3887
3	Ulli Werneburg	ASW-20	1.10	5125	3	77.8	669	3	84.9	735	2	77.4	437	3	83.1	666	10	70.4	874	6	(123.7)	p494	14	3875
4	Mike Apps	ASW-20FP	1.10	5082	4	73.1	607	8	75.1	578	13	71.3	393	5	88.4	744	3	77.2	984	2	(131.3)	557	2	3863
5	Ed Hollestelle	ASW-20	1.10	5196	2	64.9	498	14	85.4	p704	3	85.0	492	1	89.8	764	2	70.6	877	5	(123.7)	519	6	3854
6	Wilf Krueger	ASW-20B	1.10	4625	10	(153.7)	242	24	87.4	775	1	84.5	488	2	86.4	714	6	68.0	835	9	(123.7)	p400	22	3454
7	Harry Pölzl	ASW-20B	1.10	4789	7	73.8	616	6	78.7	636	10	74.5	416	4	87.3	727	4	(268.0)	479	17	(131.3)	557	2	3431
8	John Firth	DG-400	1.09	4575	12	77.8	669	3	79.1	642	9	(119.1)	233	17	84.1	680	8	58.5	680	15	(123.7)	p494	14	3398
9	Kevin Bennett	DG-200	1.08	4470	14	69.2	555	10	81.1	674	5	(87.6)	172	20	74.9	545	18	75.4	955	4	(123.7)	p494	14	3395
10	Walter Weir	AWS-20B	1.10	4290	18	73.8	616	6	80.1	659	7	(62.8)	123	21	78.6	599	13	68.6	844	8	(123.7)	519	6	3360
11	Andy Gough	Mini-Nimb	1.08	4564	13	74.3	622	5	71.5	521	19	59.8	310	13	74.6	541	19	69.1	852	7	(125.5)	p503	11	3349
12	Chris Wilson	Mosquito	1.08	4622	11	65.8	510	12	72.3	534	16	68.7	374	6	81.1	637	12	64.2	772	12	(123.1)	516	10	3343
13	Larry Springford	ASW-20	1.10	4387	17	61.1	448	18	78.2	627	11	63.0	333	10	75.8	558	17	64.2	772	12	(123.7)	p494	14	3232
14	Karl Doetsch	ASW-20	1.10	4068	23	71.5	586	9	81.6	682	4	64.5	344	9	86.0	708	7	66.1	804	10	(0.0)	p0	25	3124
15	Walter Pille	Kestrel	1.14	4444	16	63.9	485	15	60.6	348	22	64.9	347	8	78.1	593	14	64.6	779	11	(119.3)	497	12	3049
16	Brian Milner	Nimbus 3	1.23	4635	9	63.1	475	16	73.7	556	14	61.6	323	12	87.3	727	4	(224.2)	401	19	(127.5)	538	4	3020
17	Nick Bonnière	PIK-20B	1.06	4280	19	65.6	508	13	72.3	534	16	61.9	325	11	65.7	410	21	60.6	714	14	(123.7)	p494	14	2985
18	Bob Gairns	ASW-20	1.10	4126	22	61.7	457	17	72.5	537	15	57.6	294	14	83.1	665	11	(257.7)	461	18	(123.7)	p494	14	2908
19	Colin Bantin	RS-15	0.97	4466	15	60.1	435	19	68.0	466	21	56.4	285	15	63.8	382	23	58.4	677	16	(123.7)	519	6	2764
20	Tony Burton	RS-15	0.97	4270	20	67.3	530	11	76.8	605	12	(105.0)	206	19	72.8	514	20	(137.0)	245	22	(123.7)	519	6	2619
21	Colin Tootill	ASW-20	1.10	3802	24	(167.2)	236	22	71.6	523	18	52.5	257	16	80.2	p584	15	52.9	p388	21	(123.7)	p494	14	2509
22	Bob Carlson	PIK-20D	1.06	3472	28	(220.8)	348	20	59.8	335	23	(112.4)	220	18	75.7	p403	22	(222.1)	397	20	(126.5)	533	5	2236
23	Jock Proudfoot	ASW-20	1.10	2557	35	(156.6)	247	23	69.1	483	20		dnc		77.4	582	16	(0.0)	0	25	(123.7)	p494	14	1806
24	Seth Schlifer	HP-11A	0.91	2375	36	(207.3)	326	21	41.2	217	25	(62.8)	123	21	53.7	237	24	(65.3)	117	23	(62.8)	214	23	1234
25	George Reid	SGS 1-35	1.03	1576	39	(147.7)	233	25	59.6	331	24	(34.6)	68	24	(88.1)	101	25	(9.5)	17	24	(62.8)	214	23	964

STANDARD

1	Jim Carpenter	LS-4	1.03	4820	6	72.2	1000	1	75.3	692	4	64.1	640	2	84.8	788	2	75.5	955	1	(61.0)	205	3	4280
2	Dave Webb	DG-300	1.03	4742	8	63.6	896	4	83.0	815	1	62.3	621	3	85.9	802	1	69.5	854	3	(61.6)	p183	5	4171
3	Jörg Stieber	LS-4	1.03	4139	21	(158.4)	447	12	68.7	587	6	64.7	647	1	79.8	723	3	70.2	865	2	(65.2)	226	1	3495
4	Bryce Gormley	LS-4	1.03	3682	26	62.9	888	5	63.4	503	8	44.8	434	7	63.8	519	7	64.2	763	4	(59.7)	199	4	3306
5	Larry Hill	ASW-19	1.02	3686	25	66.0	925	2	77.3	724	2	(35.9)	106	13	72.3	628	4	59.6	685	5	(61.6)	p183	5	3251
6	André Pepin	Jantar Std	1.01	3490	27	63.8	898	3	76.8	715	3	52.3	514	4	70.5	605	5	(109.2)	224	13	(43.1)	115	11	3071
7	Ian Grant	Club Lib.	0.91	2989	30	57.0	816	7	50.7	299	13	(62.8)	185	10	65.6	542	6	53.1	575	8	(28.8)	44	12	2461
8	Ian Spence	Jantar Std	1.01	3014	29	57.7	825	6	62.3	484	19	(82.6)	243	9	(156.0)	272	12	44.5	443	10	(61.6)	p183	5	2450
9	Stephen Newfield	Jantar Std	1,01	2753	34	(160.3)	452	11	64.4	518	7	(35.9)	106	13	61.7	491	8	58.4	665	6	(45.2)	126	10	2358
10	Walter Herten	Jantar Std	1.01	2793	33	(167.2)	472	8	(203.1)	285	14	48.2	470	6	62.7	p344	11	(213.9)	439	11	(61.6)	p183	5	2193
11	Paul Thompson	LS-4	1.03	2903	32	(167.2)	472	8	70.0	607	5	48.3	471	5	(88.1)	154	13	49.0	p316	12	(51.9)	160	9	2180
12	Robert Binette	Lib. 201	0.96	2983	31	(63.1)	178	13	62.2	483	10	44.0	425	8	(77.9)	136	14	57.7	654	7	(61.6)	208	2	2084
13	Stewart Baillie	Std Cirrus	1.00	1935	37	(20.0)	56	15	58.6	426	11	(62.8)	185	10	58.5	450	10	50.1	525	9	(0.0)	0	13	1642
14	Sid Wood	Hornet	0.97	1633	38	(167.2)	472	8	54.1	354	12	(62.8)	185	10	59.7	466	9	(0.0)	0	14		dnc		1477
15	Kurt Meyer	Ka6E	0.87	250	40	(63.1)	178	13	(35.4)	50	15		dnc		(0.0)	0	15		dnc			dnc		288

( ) values in brackets are distances in km
"p" with score indicates a penalty applied

a dozen pilots who landed at Stratford airport on the last day for incorrectly declaring on their landout cards that they had reached the Stratford turnpoint (the hangar. This was only true if it had been photographed before landing, and it affected the achieved distance. The jury will be reviewing this penalty. It can be seen of course that Ulli's third place in the total is less than 25 points behind Stan's; so, at the time **free flight** goes to the printers, the winner of the Silver medal and the Canadian champion of the 15m class is in doubt.

Karl Doetsch was unlucky in having his film of the last day go missing from the contest office. He also landed at the airport, but was so far "off-course" from the first leg to Rockton that he received no points. This is also being appealed to the jury, and their decision could raise his standing from 14th to as high as 6th.

Perhaps it's significant that Art announced to all that the next competition will see him in the air rather than on the ground.

A new competition trophy was introduced at the banquet this year, which has been donated by Bacardi to the best overall pilot at each nationals. Along with the best novice pilot trophy, it was awarded on the basis of the "Competition Class" scores which ranked all pilots on a handicapped basis. These awards are welcome in giving pilot skill — of both oldtimer and tyro — its own reward, and in giving the contestants a second goal to aim at.

If the combined handicapped scoring is maintained as the basis of awarding these two trophies, sailplane handicap factors may for the first time be of more than academic interest at our Nationals, and more work will have to be done to see that they are current, and also important, are accepted as being "honest". As a matter of fact, one of the meetings of the jury at this competition was to review and make some adjustments to the published handicap values for this contest.

It's always a diversion to "what-if" a score sheet... Wilf Krueger is no doubt regretting his landout on Day 1, and Mike Apps his navigation problems on Day 2, and I sure wish I hadn't headed for a thermal that was the exclusive property of Andy Gough on Day 5.

Some performances stand out: Tom Knauff's three wins in a row to retrieve first place after a disastrous Day 3, Jim Carpenter's steady excellent performance to win the Standard class after having been absent from competition for four years, Walter Weir's fine placing as a novice, and Stan Janicek's ability to wring the most out of Webb's old warhorse "Tinbus". That the top four Canadian 15m pilots finished within 33 points of each other is a remarkable conclusion to a very hard fought competition.

At the banquet, I asked Karl what aspects of this contest stood out in his mind. He said he thought there was a real maturation of the Canadian contest scene, particularly in the 15 m Class. The scores stayed close, and there is now a much larger group of pilots capable of winning a task on any given day. He also remarked on the very friendly atmosphere of the event.

A friendly atmosphere, a drum-tight competition, no accidents ... I don't think there's anything else lacking — except maybe 350 km. □

A THERMAL WORTH A CHAMPIONSHIP

A moral for all sportsmen — never give up

Leonardo Brigliadori
from Volo a Vela

It is the first day of competition after three days of rest for us in the Standard class. I have begun to get used to, and love, this leading position I have reached three days ago. But if the rest period has on one hand safeguarded my placing, it has on the other given me a lot of time to reflect and consider how precarious and thin my lead is.

Although I have tried not to get nervous, I must admit that today, Thursday the 8th of August, things commence to go wrong from the very first moment.

Just after tow release my variometers are stuck on two metres in descent, and the reading does not change even when I am positively in lift; it is clear that water is trapped in the system and that I have to land back. My team rush to work on my instrument panel (I seem to be in a Grand Prix pit stop) and in moments they restore my instruments to serviceability.

But meanwhile, the entire Standard class has taken off, and Egidio informs me that I will be launched after all classes are towed up. Too bad, the task is over 500 km and some pilots in my class are already crossing the start line. That's it for me.

Eventually I am airborne in a sky which, unusually, is becoming empty of sailplanes, and the lift I contact is weak. I do not even succeed in attaining the ceiling, but it is 2:15 already and I decide to get away from the field with only 1800 metres altitude, while cumulus over Rieti are becoming more scattered, as generally happens here as the day grows older.

The first glide out is disastrous. I am unable to intercept good lift and attain a reasonable altitude. Thus toilsomely I reach the Roveto Valley and enter it with a bare 1000 metres altitude, placing hope in the westerly winds.

Here I finally find ridge lift to sustain my wings; the flight now progresses quickly and easily almost to the turning point of Castel San Vincenzo. But where are the others? I have caught only a few glints ahead of me in the Val Roveto, then long, solitary periods. In consideration of the fact that ridge lift was working nicely in the Val Roveto, I decide to fly back along the same track, even though the course for Campotosto runs farther east.

For at least one hour and a half from this moment I am completely alone. In this period I feel and sense that the championship is irremediably lost. My flight proceeds too clumsily not to let me think that I am the very last one, delayed and beyond the time limit. To confirm this sad conviction of mine, a message arrives from Marco who has already reached Mount Gran Sasso and is at 2000 metres, while I am still in the plain of Fucino at 1400. Marco had gone across the gate possibly 35 minutes earlier than I, but I am at least 50 minutes late now. Don't mind, Leonardo, you'll never win a world championship!

Following a crazy route that passes west of Salto, then bends to the right over Monte Ocre, and later over L'Aquila (thank goodness it is working fine here, and cloud base is at 3000 metres), I reach Campotosto where, to my surprise and delight, I see the sky crowded with Standard class gliders; and, even more important top pilots are here: Leutenegger, Kuittinen, Simenc. So, what had happened then?

Is it possible that a flight which is so "out of tune" may still keep me in the race?

My morale, which was very, very low, regains height while my flight continues rapidly and smoothly, thanks to the lift of Mounts Gorzano, Vettore, and Pennine.

Then, at this point, the third phase of the flight commences: a very hard upwind flight toward Cortona with ceiling at 1000 metres and one metre thermals. Gavazzi, who has lost some of his lead by flying an entirely different course, informs me of all enroute difficulties approximately half an hour in advance, while the base radios the information of the first outlanding of the day, Nietlispach's.

Over Cortona I meet the gliders of the Open class, coming back from a turning point up in the north and flying a task of over 600 km. However, the chances to make it home seem rather scanty under the existing conditions. It is already 6:54, there are no cumulus around, but many low gliders. Marco is at 350 metres, close to Todi, and all of a sudden he finds 1–2 metre lift which takes him to 1300.

He explains to me that it is necessary to keep decidedly to the west in the Tevere Valley, looking for cumulus that strangely form downwind of the hills in the region of Orvieto.

I start my glide to there at 1000 metre but I do not feel very hopeful. Skirting by Lake Trasimeno, I pass west of Perugia and enter the Tavere Valley, but not the slightest trace of lift displaces the pointer of my vario from a constant minus one.

Marco's information seem to be no longer applicable now that I am in the area, and with this westerly blowing, as clearly shown by the smoke trails in the valley, the Martani appears to be my only hope. Altitude however is decreasing, I begin to observe the fields that are still plentiful, Todi should now be some 10 km away. I am reading almost 100 metres on the altimeter as I reach the first hill of the Martini: zero, but nothing more; one spiral, two spirals, still zero. A deep feeling of envy fills me: Marco has already started his final glide; and again a disheartened resignation for a championship that is hopelessly lost grabs me.

But — is that a cumulus, or is it a mirage? Six kilometres west of my present position a wonderful, blossoming, small cumulus revives an already dead sky and, to confirm that it works, a tiny glider just a little higher than me is spiralling very, very steeply beneath it.

I cannot decide whether to consider it a practical joke or not, because I think I will never succeed in getting below that cumulus, my residual height being so scarce; instinct however is for the fight: either I make it or I lose everything. If I reach there on the ground, I'll land in that yellow spot of already harvested wheat. These are three eternal minutes, but the air keeps me aloft and my zero persists even when I am flying straight; I am below the little glider, now I am descending, the air is moving: a glance at the altimeter, 80 metres! Then, incredibly the vario reads 1-1/2 climb. The spiral is rapid but extremely attentive. The championship is at stake right now, I realize. While discovering that the glider above me has now become two, a conviction starts seeping into my mind: this thermal is a gift, something has miraculously sustained my wings to let me fly these six kilometres! To climb to 1600 at this time of the day is against any logic.

Bob is beaming with happiness when he hears that I am on the final glide; his voice betrays his emotion when he lists all the outlandings reported thus far. All my direct opponents have landed out; only those in the middle or well down in the list, Marco and I make it home. And this is again against any logic. My worst flight, the one during which I have twice lost all hope, is the one that affords me the greatest success in terms of score. I gain more than 200 points over my closest adversaries, against any logic ... again. But in the end some logic should exist in all this: living this absurd, this paradoxical, this inconceivable reality, lets the idea of some kind of predestination form in my mind, the idea that some sort of "Superior Assistance" whom I have pleaded for (why not?) is now here to fulfill my wish.

After having given me the tangible token of a thermal worth a championship, a trustful feeling in a gracious magic that doesn't leave me slowly replaces the pessimism and discouragement of the earlier day. □

THE LIGHT GLIDER

Ann Welch
from AERO-REVUE 7/86

Today's high-performance sailplane is probably the most elegant type of aircraft ever built. It is the result of 60 years of design refinement, with the primary objective of achieving the flattest possible glide angle, so that its pilot can use the air's free energy with the maximum efficiency.

It is why flights of over 1000 miles and average speeds better than 195 km/h have been obtained. This almost incredible improvement in performance over the last 60 years has been realized by:

- increase in aspect ratio to 35 or more, and wingspans up to 24.5 metre
- extreme refinement in shape, wing profile, and surface finish.

The Nimbus 3, for example, has a glide ratio of almost 60, or better than 1°. The greatest step forward came with the introduction of glass and carbon fibre construction, now used for all sailplanes where high performance is the priority. Unfortunately, these beautiful and efficient sailplanes are not cheap. A Nimbus 3 costs $60,000 not including a further $10,000 for the trailer, instruments, parachute, etc. Less exotic 15m production sailplanes, such as the LS-4, are a little over half this amount, but it is enough to put them beyond the reach of many aspiring pilots, even as syndicate members. As a result, gliding is no longer growing, numerically, almost anywhere in the world; and the average age of glider pilots steadily climbs.

So what is the answer? The re-appearance of slow, light gliders is one which some enthusiasts may be reluctant to face. After 60 years of passionate search for higher and higher performance, any idea of going back to a level which made it a struggle to get round a 100 km triangle on a good day is heresy. This is understandable, and I have no intention of suggesting that any pilot who is used to exotic sailplanes of superb performance should fly anything else. There is never anything wrong with the continued pursuit of excellence. But what about those pilots who have much less money, particularly the young ones? Are there not potential glider pilots who would be content with less performance just to be able to fly? And are there not a few existing club pilots who would actually prefer to putter about in the sky instead of chasing 300 km triangles? And what about those pilots who do fly the exotica, but not frequently enough to operate safely such fast and heavy ships out of reach of the airfield? These are the people who want, or need, air time rather than high speed. Is there not a need for some dinghies — if one likens the overall scene to that of sailing?

There is, of course, hang gliding. These basic gliders have developed fast in the last ten years, and can now fly distances over 350 km. They have been restricted to the hills, like gliders were in the early days, but now that winching, and aerotowing with microlights, are coming into use, this limitation is departing. The capital cost of a hang glider is about a quarter that of a very ordinary second-hand sailplane, and in comparison the running costs are negligible. But although some old, and even disabled, people enjoy hang gliding, it is most suited to the young and physically active. From this end of the spectrum, too, there would appear to be a need for something in the middle; as is the sailing dinghy between the windsurfer and the yacht. At present, this wide open space is almost empty. A few individuals have ideas and an even smaller number have turned them into hardware; John Lee and his Lightwing, for example. One reason, perhaps, for this wide open space is that big, innovative steps are not often initiated by people fully involved in mainstream development. The glass fibre sailplane makers will continue to go for the best possible performance for their price range, and the top manufacturers of hang gliders will do the same. They cannot, indeed, afford the time, money, or their reputation to branch out into an unknown market. Hang gliding was started by people outside mainstream gliding, and if the "wide open space" is to be in any way occupied, this is most likely to be done by new designers with fresh ideas and no established manufacturing reputation to lose.

What is needed is a coming together of the technology of the hang glider, and a reappraisal of what was achieved with the light, slow, sailplanes of 40–50 years ago. It is often said that a sailplane with the performance of a K8 cannot be made any cheaper than a K8, but this is no longer valid if hang glider construction is studied and — wheels almost going full circle — to see how it has been modified for use in "aeroplane" microlights, some of which could be relatively easily turned into quite effective basic gliders. Rigid wing hang gliders with 3-axis control, such as the UP Arrow, never became popular because of the difficulty in foot-launching tailed aircraft off hilltops — where they are also easily blown over. Such problems lessen with flat-site launching and towing; and it is then not a very big step for the pilot to put his feet up and roll off on a wheel. This "blurring of the edges" of three-axis control hang gliders and simple, light sailplanes is probably inescapable. The weight shift hang glider will continue to flourish in its own right because it will almost certainly remain the simplest and cheapest soaring aircraft, and it provides great satisfaction to its pilots.

The key questions which concern the light glider, and whether it will find a place in the soaring world are:

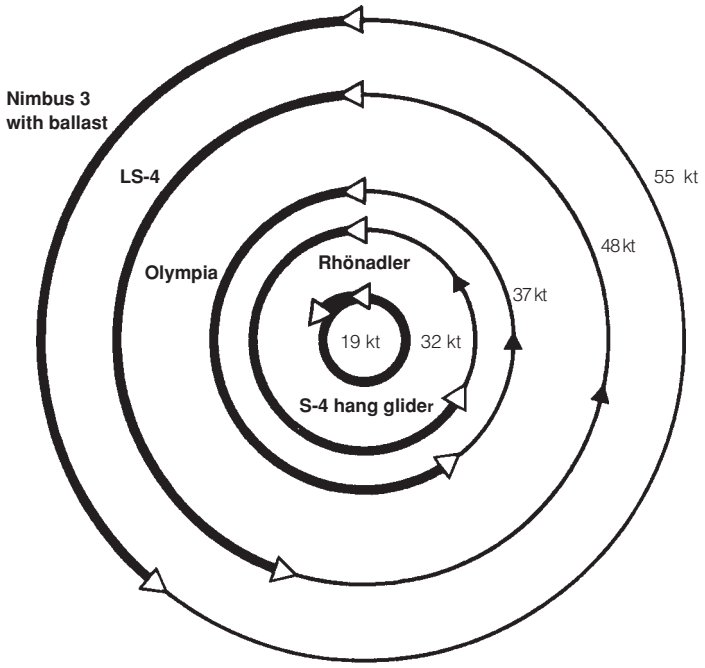
- what is the minimum acceptable cross-country performance, and
- how can such performance be obtained at lowest cost?

In 1935, four pilots flew, on one day, the first ever 500 km distance flights. One of them was Ernst Steinhoff in a Rhönadler, with a glide ratio of 20:1. With its high lift Göttingen 652 wing section it had no high speed performance; at 45 knots its 20:1 would have degraded to perhaps 14:1. In 1983, Larry Tudor flew his Comet 2 hang glider 359 km; glide ratio 10:1 at best. Certainly, today's pilots know more about the techniques of soaring than those of the thirties, but is this the only reason why the Comet, with glide ratio 10, can soar a comparable distance to the old Rhönadler?

Surprisingly, it may seem, the effective speed range of the hang glider is slightly better than that of the Rhönadler. In both, serious decline of the glide angle is occurring by 45 knots, but whereas the Rhönadler's minimum-sink speed was about 31 knots, that of the hang glider is 20 knots, some 10 knots less.

It is the very low stall speed — and minimum sink speed — of the hang glider that makes it such an effective soaring device. It can circle tightly in the strong cores of thermals denied to the fast sailplane with its appreciably larger turning circle *(Fig. 1).* It can make more circles per minute which, combined with its ability to maneuver rapidly, gives it a better search and sampling rate for best lift. The very low flying speed also allows it to explore and use smaller areas of weak, and sometimes unexpected lift, and it can continue to soar safely at lower heights because it can be easily landed in very small spaces. The hang glider may always be better than a

Figure 1 Relative circle diameters for various gliders at 35° bank. Heavy arcs represent the distance flown in 10 seconds.



3-axis-control glider of the same stall speed in both rapid maneuvering and small-space landing.

Table A shows the minimum sink and maximum glide ratio performance for some representative aircraft (as accurately as can be found from various records). It will be seen that although the minimum sink rate of the hang glider is about 0.3 knots worse than the Nimbus 3, this is of no great importance if the hang glider is able to use thermal cores much more efficiently. The one big disadvantage of the hang glider, or any slow, light sailplane, is that glide ratios are much worse, and they cannot fly at anything like the glass sailplane's speed through the air. They make little progress, except downwards, against fresh or strong winds, and so are only capable of triangle flying in light breezes. But is this a serious disadvantage for pilots who want to fly for fun at a price they can afford? Glider pilots could not fly big triangles in strong winds until the advent of glass, but I do not remember anyone being unhappy about the flying their old wooden gliders gave them. It was just different.

The idea of a light, cheaper glider is not new, but concentration seems to have been rooted on smaller spans and wing areas to reduce cost, with relatively high wing loadings for penetration. Such gliders have not been successful, as they cannot compete with sailplanes of better glider performance, nor do they have the ability to float around in weak lift. They are invariably too heavy. In case it seems confusing as to why the light glider should be as light as possible when sailplane pilots fill up their aircraft with 100–200 kg of water ballast to make them heavy; it is the difference between the objectives of time in the air or speed. If speed is not necessary the glider can, and should, be light, cheap, and simple. The FAI Sporting Code for Gliding (CIVV Section 3), defines a light (ultralight) glider as one having an empty weight not exceeding 100 kg. Let us now consider a glide ratio of 20:1, minimum-sink rate 1.4 knots, and stall speed of 20 knots for our glider, which will of course be a single-seater.

Taking the above as a basis, the permutations are considerable; if you increase the aspect ratio, the weight, stall speed and minimum sink speed will go up. Accept a low aspect ratio and you can get more of a light, slow floater. I think John Lee has the right approach, because his Lightwing gives him easy airborne time in slope lift, thermals, and in just subsiding slowly to earth. He has succeeded in avoiding the unsuccessful compromise that has beset so many designers of small sailplanes, and has accepted that what he has is a floater for fun.

Configuration

Put simply, the choices are tail at the back (conventional), tail in front (canard), tandem wing (latter day Pou), and no tail. It may save time to discard tailless at an early stage, despite having no tail to design, build, pay for, or repair. Tailless aircraft with stick and rudder control do have pitch stability complications which, in being overcome, often lead to more drag, or expense, than when

Table A: Minimum-sink and maximum glide-ratio performance for some representative aircraft

Glider	Year	Span (m)	Wing Area (m^2)	Aspect Ratio	Empty Weight (kg)	Flying Weight (kg)	Wing Loading (kg/m^2)	Stall (kt)	Max. Glide Ratio and Speed(kt)	Min.Sink Rate and Speed(kt)
Rhönadler	1932	17.40	18.00	16.8		260	14.40	25	20.0	1.2/29.00
Scud II	1933	12.19	9.29	16.0		145	15.60	25	22.0	1.30
Minimoa	1935	17.00	20.00	14.5	200	310	15.50	26	26/38.0	1.18
Gull I	1937	15.30	14.86	15.8	172	285	19.10	29	24/36.0	1.42/32.00
Olympia[1]	1938/48	15.00	15.00	15.0	195	304	20.20	30	25/39.0	1.32/34.00
Woodstock (home built)	1980	11.90	9.73	14.5	107	205	21.10	30	24.0	1.56
Solitaire (canard sailplane)	1981	12.70	9.5 incl.can.	21(wing)	145	240	18.90		30/53.0	1.5/47.00
LS-4[2]	1981	15.00	10.50	21.4	235	472	29.00	37	40.5/55.0	1.2/44.00
Nimbus 3[3]	1982	24.50	16.76	35.6	390	483	28.80	36.7	57/43	0.7/ 40
						750	44.75	46.0	54	0.85/50
Lightwing	1984	10.70?	14.20	8.0	75	160	11.30	19	16/22.0	1.50
Proposed Light Glider	1986?	?	?	?	90	170	?	20	20/22.0	1.40
Guggenmos Bullet (hang glider)	1984	11.00	15.20	7.5	28	108	7.10	17	10/26.0	0.95/19.00
Typhoon S-4 (hang glider)	1984	10.40	16.70	6.4	31	111	6.65	16	10/25.0	0.95/18.00
Sirocco (microlight)	1983	10.10	14.00	7.3	105	205	14.90	21	12/34.7	2.2/27.00
Pipistrelle (microlight)	1983	11.20	13.50	9.3	115	202	15.00	21	14.0	2.0/29.50

1 The Olympia was built in 1947 by Elliots of Newbury from the German Meise, and was heavier.
2 LS-4 without ballast.
3 Nimbus. Top figures without ballast. Lower figures with ballast.

there is a tail somewhere. They have been tried as aeroplanes (Westland-Hill Pterodactyl), gliders (AV-36), rigid wing hang gliders (Fledge) and microlights (Mitchell Wing), but popularity has never been sustained. It is not anomalous that weight shift hang gliders are tailless. As well as being controlled by cg shift, the reflex in a soft wing adjusts to increasing speed. Canards and tandem or semi-tandem configurations do work, both in pitch stability and ease of construction, they blow over less easily on the ground, and the pilot also sits nearer the cg. But none has yet become popular as a canard sailplane. To avoid any of the above complications the configuration considered here will be the old, unenterprizing one of tail at the back and a good pilot view in crowded thermals.

Construction and Materials

Broadly, these include:

- Conventional, including wood, welded steel tube (for fuselages) and aluminum sheet.
- Synthetics; foam covered with glass fibre, or glass fibre, like sailplanes.
- Hang glider aluminum tubes and Dacron (the cheapest). Microlights would probably not have appeared without the remarkable success of aircraft made from a heap of tubes.
- A combination of the above.

Such a wide variety of materials gives plenty of opportunity to play tunes with cost, weight, and complication. The Sirocco microlight, for example, has a glass fibre D-nose main spar, an aluminum tube "rear" spar, root, and tip tubes, and shaped glass fibre battens for top and bottom surfaces. It looks as good as a J-3 Cub wing and rolls up in its own Dacron. But how simple, cheap, and light can a wing be and still provide a 20:1 glide ratio and 1.4 knot minimum sink? FAI defines the empty weight as maximum 100 kg, but is there need to make it so heavy? The Lightwing weighs 70 kg. However, the old adage, "simplicate and add lightness" has always been a forlorn hope, so let us go for 90 kg with basic instruments and have an 80 kg pilot. At this all up weight of 170 kg, a wing area of 14.1 m^2 gives a wing loading of 12 kg/m^2. An increase in span from 11.9 to 13 m, and aspect ratios respectively of 10 to 12 would give an L/D improvement of about 1.25 for example, from 15 to 16.25:1, but it will be a heavier or more expensive wing. For this reason, it might be sensible for future FAI competition rules to include an aspect ratio limit of, say, 12, to keep down the cost.

The Lightwing aspect ratio is eight for a cantilever span of 10.7m using traditional construction, while the Sirocco microlight has a wire-braced wing of 10.2 m span and aspect ratio 7.3. However, it is a parallel chord wing and to obtain satisfactory circling characteristics the wing should be tapered. Extending a Sirocco wing to, say, 12 metres, and giving it appropriate taper, should not be very difficult and, without an engine, cause no increase in weight.

The fuselage offers plenty of opportunity, from the creation of a loving work of art in plywood to a simple tube on to which are bolted goodies, such as the wing attachment structure, tail, pilot's seat, etc. but probably the most effective is a simple but elegant glass fibre molding with integral pod and fin. Built in two halves using polyester resin and stuck together with epoxy it is not difficult to make and need not be expensive. The tail can be high, low, or vee, but the disadvantage of a low tailplane on a glider is that when the wingtip is on the ground, so may be the tail plane. A vee-tail is better. The T-tail's most likely problem is the torsional stiffness of the fin or fuselage. The temptation to build an all-flying tail should be resisted, as a lightly loaded glider gets bounced around enough in gusts without having twitchy controls as well.

It is odd that possibly the quickest way to make a workable light glider might be to start with a microlight, such as the Sirocco or Pipistrelle. Development could be done in stages, starting with different wings of similar construction. If the pilot finally wanted an enclosed cockpit, this could be as on the Falcon microlight, with a flexible transparent sheet wrapped round and attached with Velcro. There are many possibilities if one does not intend screaming through the air at over 50 knots. Before going further, consider how the light glider may be used. Like any sailplane it must be quick and easy to rig and de-rig, with the fewest detachable bits — preferably none at all. Wire bracing inevitably adds complication here. If possible, it should be transportable on a car roof like a windsurfer. In a complex world, active people like to be free of clutter and the *need* for helpers, which is not the same as operating together with friends. With some types of construction, a trailer may be necessary, and could double as overnight accommodation! If a glider is complicated and slow to assemble, it is unlikely to become popular. Obviously, the light glider should be easy to inspect and repair.

Launching by aerotow, winch or car tow, or bungie should be free of difficulty. Aerotowing behind conventional powerful aeroplanes is unlikely to be satisfactory, and it might be better to use microlight tugs. Car towing and winch launching are cheaper, which is why there are usually queues waiting for launches. Inevitably, there would be a move towards private towing from a friendly farmer's field, because an ordinary pick-up would be more than adequate to provide the power. This same independence would exist with bungie launching from hills, but in winds over 15 knots self launching would work.

Finally, the light glider should, above all, be easy and pleasant to fly. It should have airbrakes or spoilers, and a landing wheel, not only a skid. The desire today for independence from establishments and bureaucracy should not be underestimated, but for the light glider, it could be to some extent counterproductive. Gliding works well because of its club structure, which allows education of new pilots to be comprehensive. Hang gliding works well because its clubs have made arrangements for using the hills, and microlight and light aeroplane pilots fly from farm fields on the same basis. In all cases, self-discipline is strong, with the occasional cowboy quickly dealt with by his fellow pilots. Although it is unlikely that new light gliders will suddenly arrive in quantity, it might be wise to think how they can best be helped to operate within existing organizations, rather than lone pilots spoiling the fun of others in ignorance. Until recently, expeditions into the hills were part of gliding club activity, declining as sailplanes grew heavier. With the light glider exploration could return, with the pilot having to learn — or re-learn — different soaring techniques, like flying close to the ground without running into it. For the computerized sailplane pilot such seat-of-the-pants flying may seem a relic of the past, but the light glider will be flown this way, and it is no bad thing for a pilot young in experience to have to develop a bit of instinct and animal awareness in his aviating.

It has not been the purpose of this paper to design a new light glider, but to look briefly at those factors which appear to favour lightness, cheapness, and floatability. It may be that the proposed 20:1 L/D cannot be achieved without giving way a little on one or other of the parameters, but that will be for some new designer to use his ingenuity □ discover.

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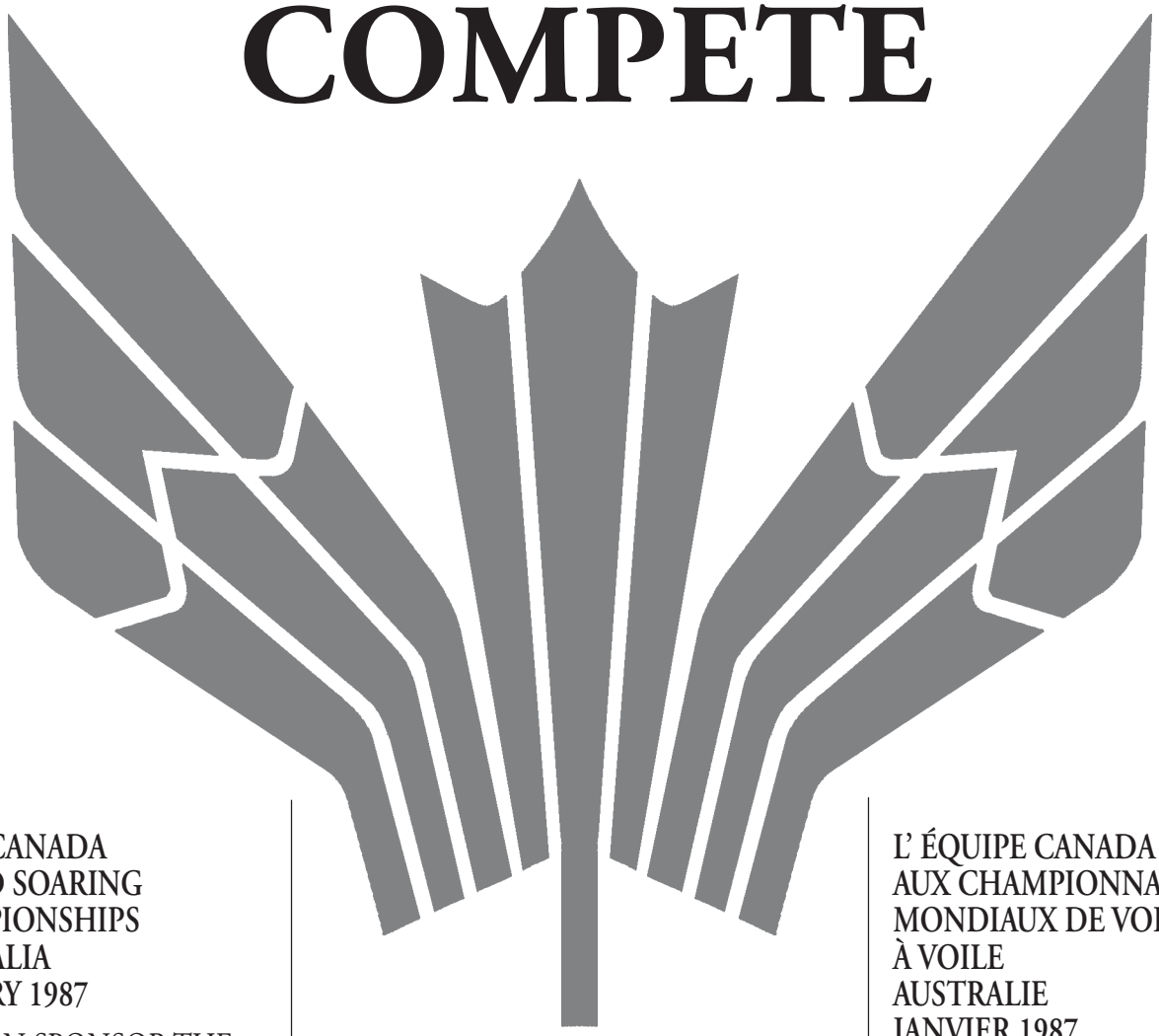
continued from page 2

However, surely it is ludicrous to devalue the achievement of long established standards at a time that has seen enormous improvements in glider performance. Furthermore, in Britain we have been particularly fortunate that the ultimate badge requirement has always provided a tremendous challenge. Surely there is no case to alter the basis of these achievements and aspirations. And, if this were not reason enough, even more important is the likely effect on the future of gliding. Once it is generally perceived that the ultimate goals of performance flying can be fulfilled within a corridor 50–90 miles either side of the base airfield, we will lose not only the interest of the public but also a crucial argument in our efforts to keep reasonable amounts of free airspace available for our sport.

In other words, acceptance of these rules runs contrary to the gliding ethic. I feel strongly that the BGA should not recognize claims for flights submitted under the new rules. Let such flights be seen for what they are — an interesting way to spend a day, perhaps competing with others, when the weather precludes flying over a wider geographical area. □

I know OOs in at least three clubs who refuse to officiate quadrilateral tasks, particularly for Gold distance and particularly for pilots with glass ships. They consider such flights "chinzy": no way comparable to previous efforts. Should our Sporting committee place some restriction on quadrilateral flights in this country which is generally so favourable for cross-country soaring? Tony

CANADA WILL COMPETE



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ED HOLLESTELLE
MIKE APPS

THE MACHINES RESERVED:
LS-4-DISCUS-ASW20B

THE PRIDE OF OUR SPORT
IS AT STAKE
WE WILL NO LONGER STEP ASIDE

CANADA WILL COMPETE
LE CANADA DANS LA COURSE

L' ÉQUIPE CANADA
AUX CHAMPIONNATS
MONDIAUX DE VOL
À VOILE
AUSTRALIE
JANVIER 1987

BECOME A PROUD MEMBER ON THE LIST OF THE CANADIAN TEAM SUPPORTERS.
SEND YOUR CONTRIBUTIONS TO:
WORLD TEAM FUND
SAC NATIONAL OFFICE
485 BANK STREET
OTTAWA, ONTARIO
K2P 1Z2
OR THROUGH YOUR CLUB'S TEAM CANADA REPRESENTATIVE.

CLUB NEWS

THE GROOM WORE A T-SHIRT, CORSAGE, AND CUTOFFS

This year's Cowley summer camp began officially with the first pilot's meeting and the flag-raising on Sunday morning, July 27 Wave was evident that morning, and the pilots lost little time in getting airborne. The flying paused at 13:00, however, to have a dedication ceremony honouring Jack Davies, who lost his life at last year's wave camp. A plaque has been erected between the flagpoles, and it was unveiled in the gathering presided over by Bob Baptie. Chief towpilot Iain Colquhoun gave a touching tribute to Jack and his flying and Hans König read a psalm. Alice Davies, Jack's wife, was present for the remembrance.

Two representatives from DoT arrived on Monday, in part for spot checks of documentation. One of the representatives was Dr. Mark Haskell, a specialist in aviation medicine, who gave an interesting presentation on the effects and dangers of hypoxia and dehydration.

The wave continued through Tuesday and gave a few personal record flights, including one climb to 27,000 feet. After Tuesday, thermal activity gave ample opportunity for both official and unofficial badge flights including five hour flights and 300 km triangles. On the way back home to Winnipeg, Russ Flint flew 550 km.

The Alberta Soaring Council sponsored two barbecues during the week, and over 100 people attended the last one, enjoying the beans and chilli made by Stu Tittle of Oregon and Pete Addison of Pacific Soaring in Nanaimo, BC.

About 95 pilots registered throughout the week, including visitors from Oregon, Washington, British Columbia, and Manitoba. In addition, two pilots visited with their families from Denmark and Germany, although they did not fly. There were about 40 aircraft on hand, including seven club gliders and three towplanes.

The climax of this year's summer camp was the marriage of Cu Nim member, Steve Weinhold, and his fiancee, Shirley Wilson. Cowley was chosen because that's where their romance blossomed last year, and Shirley remembered it as one of the "funnest" times she ever had. The ceremony began on the last Sunday evening within a circle of gliders placed wingtip to wingtip on runway 07. The bride and groom arrived in style via Blanik. The bride wore a short white dress and white moccasins, while the groom wore T-shirt, corsage, and cutoffs. Ursula Wiese and Fritz Bortenlänger served as ring bearers while Kevin Bennett, Jos Jonkers, Stu Tittle, and Rick Ryll participated by doing flybys in their sailplanes at appropriate places in the wedding.

Bruce Hea

Len Gladstone, JP, presides over the wedding in the middle of the Cowley runway.

Of course rice and confetti were thrown, champagne uncorked, and a few happy tears shed. After an evening of mingling at the camp, the bride and groom retired to their van which had been redecorated with toilet paper ribbons.

It was a very unusual and exceptionally lovely way to end the camp.

Loraine Fowlow
Cu Nim

the fine print

SAC has sold the last blazer crest in stock. Before ordering another supply, the National Office would like to know if you consider purchasing a blazer crest in the near future. If SAC is sure of a demand for at least 20, the National Office will proceed with having a quantity produced. These are most attractive crests and of good quality on navy blue flannel. Clubs, don't forget to order your '87 calendars

BLUENOSE SOARING

We've had over 640 flights as of the end of June. Our flying week was quite successful but not as good as last year. We only had the New Brunswick Soaring Association 2-33 for six days, as it was involved in a small accident. Same old stuff — low on final in a strong wind, pulled up to miss power lines, hit small trees and fell to earth in small bushes and mud. There were no injuries except to pride, and remarkably little damage to the glider: it was repaired the next day, and in the air the next. We were lucky, *again*.

Hope and George Graham joined us at the flying week. It was most enjoyable to see them again — they were in the process of moving from Resolute Bay, NWT to some place near Whitehorse. I believe George did much valuable teaching and Hope was a student, but wasn't on hand long enough to go solo. We would like to have them back permanently as soon as possible.

We have had few good cross-country days, even for the weekday pilots, but the last week has shown some improvement. Last weekend we flew some Cubs and their leaders, starting at 7:30 am, then taught four students with four flights each, then soared all afternoon under 5000 foot cu before packing by 8 pm. A full day!

We plan a 10 year anniversary grand gala in September. We have survived at Stanley on sufferance with no lease and no tenure of any kind under the baleful gaze of a disapproving EAA chapter — this must be some kind of record. More on this later in the season.

Bob Carlson paid us a visit in early June. It was great to see him. Our winch was not on its best behaviour and several stumbled starts attracted immediate attention: however we eventually got the president into the air in good order. By this means, he was able to observe the other half in action. I wonder what he thought

Regards from the fog and rain,
Dick Vine

POSSIBLE CHANGE TO RCFCA MANDATE MAY AID SAC ADMINISTRATION

At present, the Royal Canadian Flying Clubs Association (RCFCA) connection with SAC is as the Canadian representative to the FAI and the office space we share with them. However, the mid-September RCFCA AGM may see all the commercial flying clubs transferring their "allegiance" to the Canadian Air Transport Association. If this occurs, the existing mandate of the RCFCA will be significantly diminished. Howard Goldberg, the Executive Director of RCFCA, has suggested that the major emphasis of the association then be redirected to providing core administrative support to all the aerosports (soaring, hang-gliding, parachuting, ballooning, etc.) and to becoming aerosport's Olympic representative, as well as carrying on with its FAI function. This appears to be an attractive idea given SAC's national administrative overhead, and Bob Carlson has written to the other sports for their opinion.

For this and the budgetary considerations, SAC has delayed the hiring of a full-time Executive Director to replace Jean, until more concrete information and proposals come from RCFCA and the other aerosports. The fall meeting of the SAC Board of Directors will now take place in Ottawa, 17–20 October (instead of in Halifax), to consider the significant changes which could occur in our national administration.

There are a lot of "ifs" at this time, but the concept of establishing closer ties amongst the aerosports may be an idea whose time has come and, at any level, bears examination. We have complimentary airspace usage and problems, for example, to which our combined numbers could add weight in dealing with the federal government.

Tony Burton

SSA REGION 8 CONTEST

This year there was a large contingent of Canadians participating at Ephrata, Washington: in the 15 metre class was Mike Apps, Kevin Bennett, and Rick Matthews from Alberta; and in the Standard class Jos Jonkers from Alberta and Peter Timm from BC. Dennis Vreeken and Helmut Gebenus from BC formed a team to fly their 19 in the Sports class. This helped to boost the number to 25 contestants in total. Standard and 15 metre class ships flew the same task each day — as dictated by the contest committee, while the Sports class was able to choose their task after take off as long as they flew the required distance decided by handicapping factor.

Unfortunately, the weather was most unseasonable — cold and even wet! There were four contest days in Standard and only three for 15 metre and Sports. Most of them were very tricky days with thundershowers, high winds, cirrus, and other phenomena to contend with and only the final day proved to be a typical speed task day with just about every glider completing — it made for some spectacular finishes at last!

Tension was high on the last day, as until every last Sports class glider was accounted for, the winning pilot was unknown — but the wait was worthwhile and we were able to congratulate Dennis and Helmut as consistent flying had won them first place. In the 15 metre class, the Canadians acquitted themselves well with Mike Apps and Kevin Bennett taking second and third place. Both competed well throughout the contest. It was interesting to note that overall, however, on speed days it was the Standard class which flew faster and in fact on the last day, the first five Standard finishers flew faster than the winner of the 15 metre class, over the same course. This year, Standard was won by George Allen from Idaho, with Jos Jonkers placing second, and Peter Timm placed fifth overall. However, he did win a day — (and a pizza for the crew!) and was very happy with the performance of the club Jantar.

As usual, the day after the contest provided super soaring and fortunately, Peter was able to take advantage of it. We filled the Jantar with water before the Awards brunch, and with Dennis Vreeken observing, we had him launched by 1220. Six hours and 20 minutes later, he touched down after finally making his 504 km. It was an 'easy' flight compared to those of the previous days and needless to say, he was a very happy man.

from Vancouver Soaring Scene

CORRECTION

The correct base frequency for the Beaver Valley Soaring Club (information on which was given in issue 3/86, page 16) is 122.9 MHz, not 121.9.

SAC DIRECTORS & OFFICERS

PRESIDENT & DIRECTOR-AT-LARGE
Bob Carlson (1986)
57 Anglesey Boulevard
Islington, ON M9A 3B6
(416) 239-4735 (H)
(416) 365-3558 (B)

VICE-PRESIDENT & PACIFIC ZONE
Harald Tilgner (1986)
90 Warrick Street
Coquitlam, BC V3K 5L4
(604) 521-4321 (H)
(604) 263-3630 (VSA)

ALBERTA ZONE
Al Sunley (1986)
1003 Keith Road
Sherwood Pk, AB T8A 1G2
(403) 464-7948 (H)
(403) 453-8330 (B)

PRAIRIE ZONE
Jerry Dixon (1986)
Box 124
Sintaluta, SK S0G 4N0
(306) 727-4917 (H)

EXEC SECRETARY
position
currently
vacant

ONTARIO ZONE
Dixon More (1985)
27 Roslin Ave South
Waterloo, ON N2L 2G7
(519) 886-2424 (H)

QUEBEC ZONE
Alex Krieger (1985)
1450 Oak Avenue
Quebec, PQ G1T 1Z9
(418) 681-3638 (H)
(418) 656-2207 (B)

MARITIME ZONE
Gordon Waugh (1985)
5546 Sentinel Square
Halifax, NS B3K 4A9
(902) 455-4045 (B)

DIRECTOR-AT-LARGE
Gordon Bruce (1985)
154 Shannon Park
Beaconsfield, PQ H9W 2B8
(514) 697-1442 (H)

TREASURER
Jim McCollum
Box 259, R.R. #3
Manotick, ON K0A 2N0
(613) 692-2227

COMMITTEES

AIRSPACE
Dave Tustin
581 Lodge Avenue
Winnipeg, MB R3J 0S7

FLIGHT TRAINING & SAFETY
Ian Oldaker
135 Mountainview Road N
Georgetown, ON L7G 3P8
Mbrs: G. Eckschmiedt
John Firth
Denis Gauvin
Alex Krieger
Chris Purcell
Manfred Radius
Ed Sliwinski
Al Sunley

FREE FLIGHT
Tony Burton
Box 1916
Claresholm, AB T0L 0T0
COURIER ADDRESS
Claresholm Local Press

FINANCIAL
Gordon Bruce
Bob Carlson
Jean Matheson
Jim McCollum

HISTORICAL
Christine Firth
542 Coronation Avenue
Ottawa, ON K1G 0M4

INSURANCE
Bryce Stout
2244 Belfast Crescent
Mississauga, ON L5K 1N9
Mbr: Al Schreiter

MEDICAL
Dr. Wolf Leers
#201, 3271 Bloor St. W
Etobicoke, ON M8X 1E2

METEOROLOGY
position
currently
vacant

PUBLICITY
Joe Somfay
442 Union Street
Salem, ON N0B 1S0

SPORTING
Jim Oke
551 Bruce Avenue
Winnipeg, MB R3J 0W3
Mbrs: Robert DiPietro
Wilf Krueger
Al Sunley
Hal Werneburg
Ulli Werneburg

• FAI AWARDS
Boris Karpoff
14 Elmwood Avenue
Senneville, PQ H9X 1T4

• FAI RECORDS
Russ Flint
96 Harvard Avenue
Winnipeg, MB R3M 0K4

STATISTICIAN
Dennis Miller
108 Midcrest Cres SE
Calgary, AB T2X 1B5

TECHNICAL
George Adams
12 Hiawatha Parkway
Mississauga, ON L5G 3R8

TROPHIES & CLAIMS
George Dunbar
1419 Chardie Place SW
Calgary, AB T2V 2T7

WORLD CONTEST
Al Schreiter
3298 Lone Feather Cres.
Mississauga, ON L4Y3G5

SAFETY

A DAY IN THE LIFE OF A CLUB OPERATION

The following events were observed during just one day at a soaring club in Canada:

• The Jantar Standard was assembled by a pilot who used to own a Jantar Standard 2. Fortunately, he asked someone to preflight the sailplane. This someone else shook the horizontal stabilizer a bit and found it very loose. The stabilizer was forced into place incorrectly and the alignment pin did not find its correct place. It is horrifying to speculate what could have happened at some stage of the flight.

• A very experienced pilot with all kinds of ratings in Canada and the USA, instructor, club director, towpilot, photographer, engineer, etc, etc. brought out a friend for a glider ride in the Blanik. The friend lifted his 2–3 year old daughter into the Blanik. When the club's Safety Officer politely questioned the move, he was informed that the friend is a power pilot and that he usually takes his daughter up flying, and that she seems to enjoy it, and that the club's ex-president did the same thing last year with his son. The Safety Officer, not wanting to create more tension than there was already, walked away. The friend took the child in his right arm, the canopy was closed and the flight was completed. Later, he was told by the pilot that the Air Regulations have provisions for infants in aircraft, and that the friend is a doctor, a forensic psychologist. The Safety Officer was seen mumbling to himself, wondering about who is needing the services of whom, of how an infant child can appreciate the sensation of any flight, the judgement of the friend about his child, the judgement of the pilot performing the flight, the insurance implications in the event of an accident, and the intent of the regulations referred to. Oh, by the way, the regulations can be found in the A.I.P. Canada, RAC Annex 1-9. Look it up and compare your judgement with the above two pilots.

• After the tow rope tightened and the tow just began to move, the towpilot announced tow abort. He said that the repeat signaller stopped circling his arm. Not knowing why, and in the interest of safety, he thought it was better to stop the tow than to proceed. Very true. However, the SAC Soaring Instruction Manual, page 5 reads: "The signals are continued *until the glider wing is released."* No reference was found for continuing signalling until the towpilot passes the signaller (evidently, this is the practice with the Air Cadets). But this pilot had been towing with the club for many years and this had never been an issue. Perhaps it is time to make it an issue. But let's try to make it an issue with words first.

• The Jantar took off with the dive brakes half open. The wing runner assumed that this was intentional as others have tried it, but he did not query the pilot. Fortunately the loud yelling, the ground station, and the glider radio worked, and the pilot closed the brakes in time to avoid further events. The Safety Officer was the wing runner.

Just on one day. What happens on the other days, at your club.

Let it be said that there has been a lot of private flack on the above story. I know the club and the anonymous reporter (who freely admitted to me to being one of the sinners in the account). So regardless of the private interpretations each character places on the events described, I have printed it in the hope that every club carefully examine its soul each time it has its string of incidents. The unexamined incident invariably returns as next month's insurance claim ... or worse. Tony

LARK PROBLEMS

Owners of sailplanes manufactured by I.C.N. Brasov, Romania, may obtain applicable Service Bulletins by contacting the exporter, Foreign Trade Enterprise C.N.A. Telex No. 10660 CNAER-R or the Manufacturer; I.C.N. BRASOV, Telex No 61226ICAER-R.

We would appreciate being informed of any difficulties experienced while obtaining necessary Airworthiness Directives and Service Bulletins from sailplane manufacturers and Canadian sales representatives. Sailplane owners should inform the manufacturer of their address and model of sailplane so as to receive all applicable Airworthiness Directives.

May we also remind sailplane owners of the advantages of the Difficulty Reporting System, see N-AME-AO 1/85 for information. A sample report of available information is enclosed to convince you that the system works! *(The report contained several occurrences of broken brass lockwire in the rudder control system.)*

Instances of failures or possible failures should be reported to your local MoT District Airworthiness Office. You may wish to publish the above information in free flight.

Thank you for your cooperation.

Glenn Lockhard
A/Superintendent
General Aviation
Airworthiness Branch

FAI BADGES

Boris Karpoff
14 Elmwood Avenue
Senneville, PQ H9X 1T4 (514) 457-9707

The following badges and badge legs were recorded in the Canadian Soaring register during the period June 1, 1986 to July 31, 1986.

DIAMOND BADGE

62	Ursula Wiese	Cu Nim
63	Hans W. Berg	Windsor
64	Manfred Radius	Arthur
65	Charles Wilson	ASTRA
66	Josef Gegenbauer	ASTRA
67	Kerry Bissell	Edmonton
68	Robert Gairns	Montreal

GOLD BADGE

225	David Frank	Rideau
226	Terry Southwood	Cu Nim
227	Andrew Jackson	Edmonton

SILVER BADGE

729	Dave Fowlow	Cu Nim
730	Leslie Waller	SOSA
731	Dugald Stewart	Rideau
732	Bruno Schrein	Blue Thermal
733	Terry Southwood	Cu Nim
734	Paul Daudin	Outardes

DIAMOND DISTANCE

Ursula Wiese	Cu Nim	607.0 km	Ka6CR	Chipman, AB
Hans Berg	Windsor	524.0 km	RHJ-10	Ridge Soaring, PA
Manfred Radius	Arthur	506.4 km	Salto	Ridge Soaring, PA
Charles Wilson	ASTRA	506.5 km	Astir CS	Invermere, BC
Joseph Gegenbauer	ASTRA	506.5 km	ASW-20	Invermere, BC
Kerry Bissell	Edmonton	607.5 km	Libelle 201	Chipman, AB
Robert Gairns	Montreal	506.4 km	ASW-20	Ridge Soaring, PA

DIAMOND GOAL

Andrew Jackson	Edmonton	307.0 km	Jantar Std 2	Chipman, AB

GOLD DISTANCE

David Frank	Rideau	306.0 km	Pilatus B4	Kars, ON
Andrew Jackson	Edmonton	307.0 km	Jantar Std 2	Chipman, AB

GOLD ALTITUDE

George Szukala	—	4780 m	Grob 103	Minden, NV

SILVER DISTANCE

Susan Eaves	London	61.0 km	Grob 103	Embro, ON
David Fowlow	Cu Nim	64.3 km	Open Cirrus	Black Diamond, AB
Leslie Waller	SOSA	80.0 km	Ka6CR	Rockton, ON
Dugald Stewart	Rideau	68.0 km	1-26	Kars, ON
Bruno Schrein	Blue Thermal	58.0 km	Blanik	Chipman, ON
Paul Daudin	Outardes	72.0 km	1-34	St Charles de Mandeville

SILVER DURATION

David Fowlow	Cu Nim	5:08	Open Cirrus	Black Diamond, AB
Dugald Stewart	Rideau	5:01	Puchacz	Kars, ON
Terry Southwood	Cu Nim	6:02	ASW-20	Black Diamond, AB

SILVER ALTITUDE

Shirley Dashper	SOSA	1463 m	1-23	Rockton, ON
David Fowlow	Cu Nim	1420 m	Open Cirrus	Black Diamond, AB
Lorraine Baker	—	2225 m	Blanik	El Tiro, AZ
Leslie Waller	SOSA	1798 m	Ka6CR	Rockton, ON
Dugald Stewart	Rideau	1206 m	1-26	Kars, ON
George Szukala	—	4780 m	Grob 103	Minden, NV
Paul Daudin	Outardes	1257 m	1-34	St Charles de Manville

C BADGES

Stephen Johnson	Vancouver	1:30	Blanik	Hope, BC
Douglas Eaton	Base Borden	1:04	2-33	Borden, ON
Peter Van Vliet	Regina	1:16	?	Strawberry Lk, SK
Peter Peeters	Kawartha	1:08	Blanik	Omemee, ON
Michael Collins	Montreal	1:07	2-33	Hawkesbury, ON
Francine Dainous	Winnipeg	3:02	1-26	Starbuck, MB
Christopher Gadsby	Winnipeg	2:14	1-26	Starbuck, MB
Bruce Ferguson	Monreal	1:10	2-33	Hawkesbury, ON
Terry Southwood	Cu Nim	6:02	ASW-20	Black Diamond, AB
Don Jessee	Cu Nim	2:15	Ka6CR	Black Diamond, AB
Paul Daudin	Outardes	—	1-34	St Charles de Manville

Would you believe seven more Diamond badges! That is eleven for this year so far, and a great increase over previous year's accomplishments.

GOOD FLIGHTS

550 km, dirty downwind dash (same as last year), 4 Aug, Russ Flint, Std Cirrus. Heading home from Cowley Summer Camp, landed near Secretan, Saskatchewan.

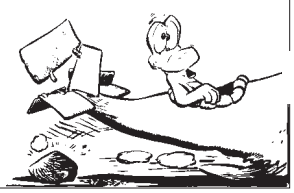
SAC Trophies & Certificates

Once again, it is now time for pilots and OOs to send their flight information to George Dunbar, our SAC expert in giving you the recognition you worked hard for and richly deserve. Fill in the enclosed SAC Trophy Nomination form and mail it out as soon as possible. Also, use the form to reord any flight that is unusual and significant to the sport in any way — you may as well get national recognition for such a flight and a "Significant Flight Certificate" to grace your wall.

CROCODILE CORNER

Perhaps our luck is averaging out. There have been no claims against our insurance since the ASW-20 crash in mid-June. But be careful out there — I know there are a lot of potential accidents sitting on the launch line at your club.

Don't let the same thing happen as last year, when expensive late season claims almost blew our insurance out of the water.



Trading Post (page 20), and back pages omitted