1/91
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# free flight • vol libre

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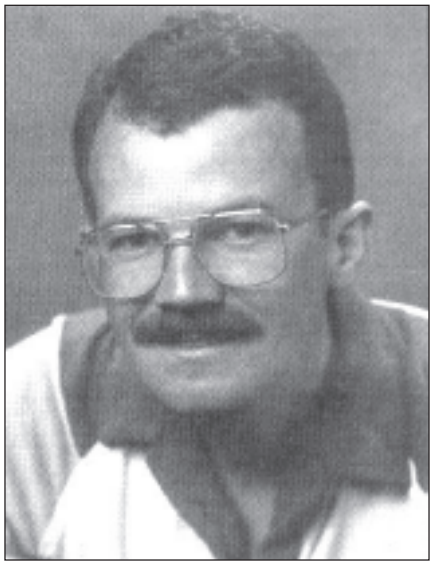


The SAC Annual General Meeting, Workshops and Awards Banquet will soon be upon us. Have you made your plans to attend? As you'll read in this issue of free flight it will be held at the Château Frontenac, Québec City, March 1-3. You're probably thinking that AGMs are boring. Yes, they can be (a president always hopes for a "restrained" AGM), but on the Saturday there will be various informative workshops and on Saturday night there is our annual awards banquet, where you'll dine with the pillars of the Canadian soaring community.

This year's Pioneer Trust Fund drive was a great success with over $7000 collected. Eventually we hope our income from this fund (1/2 the interest that it makes each year) will replace the government funding which has dried up. This is a lot more dependable than such funding and puts us in a more stable financial position. Your donations are accepted year round and we'll send you an income tax receipt.

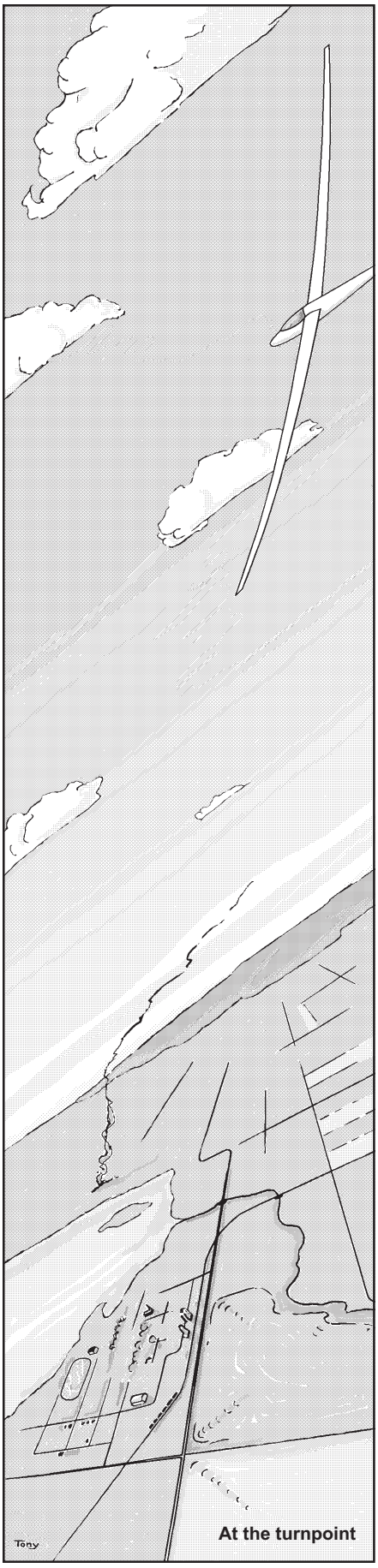
On New Year's Day Sue and I visited the SOSA Gliding Club which traditionally flies on the first day of the year, weather permitting. This year was no exception, with about 50 keen members braving the cold for a no–lift flight which most would think not worth a tow in July. But this isn't July — it's January, just being airborne and out at a gliding club amongst friends was worth putting up with the cold.

Most clubs have either just had or will soon have their annual meetings, so don't forget to show your directors how much you appreciate what they've done. They've added something to the way you enjoy your life. We spend most of our recreational time at the club, which wouldn't be able to operate without many people spending some part of their recreational time to the benefit of others.

Get more involved!  Soaring is a great sport with great people. Don't think that someone else will do it — volunteer yourself. You can achieve great personal satisfaction from doing your bit. There is an endless number of jobs that need to be done, at your club, provincial association and in SAC. Don't wait to be asked or have your arm twisted, volunteer your services!

Lastly, it has been brought to my attention that US Customs is now more diligent in preventing the export into the US of any trailer which does not have with it proof of compliance with US Federal Safety Standards at the time of manufacture. This of course could affect SAC members selling their gliders across the border, and could be a significant problem for homebuilt trailers. SAC is following up and will report.

*Chris Eaves*



At the turnpoint

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1/91 Feb–Mar

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

ISSN 0827 – 2557



## Cover

The end of the Cowley wave camp! The desolate scene is the morning after the 11 October snowstorm which shut everything down. The Dart in the foreground belongs to "Bingo" Larue in which he enjoyed his first wave flight to over 30,000 feet three days previously, and the 1-26 is the Cold Lake Soaring Club's trusty "Spam Can". **photo by Bingo Larue**

# LUST The 7 deadly sins of gliding

**"Platypus"**
from SAILPLANE & GLIDING

For male pilots it is well established that sex is a substitute for gliding, not the other way round as supposed by Freudian psychologists. The reason is fairly straightforward. Male pilots assume that their womenfolk (I'm talking about those men that have womenfolk; large numbers of gliding men don't want anything to do with women) are available for their pleasure at any time, whereas the marvellous combination of an available glider and good soaring conditions is so rare that it must be seized, and everything else can wait. But I wonder if the men don't assume too much.

There must be huge opportunities for a ruthless seducer at gliding clubs. Think of all those bored, neglected women, their men miles away, in mind if not in body. Now I myself have never stooped to take advantage, not even when it was unsoarable. I have to say it is mainly cowardice rather than conscience. Think, for a moment, of the consequences if you actually stirred a fellow member to a fit of jealous passion. (Hard to imagine at my club; about the only thing that would stir a fellow member to any kind of jealous passion would be if you sneaked your glider into his place on the aerotow queue.) But it is just possible; then, imagine, halfway through the takeoff run you discover you have 200 lbs of water ballast in one wing and none in the other; or the elevator is disconnected; or you go into cloud and the terminals on the turn and slip have mysteriously been reversed. You are playing with fire. That is why at gliding sites, in comparison with what I'm told goes on at golf clubs or fox hunting circles, I hear so little scandal.

There is one small exception. Well, it is a pretty big exception really, and it's — I am told it is rampant — rife. ....Long before those terrible storms it was a rule at [Club X] that the housetrailers had to be tethered firmly at both ends with steel hawsers. They didn't worry about the gliders or their trailers, so they blew all over the place in the last hurricane, but the housetrailers have to be secure. I think the committee were more concerned about noise pollution rather than about them getting loose and bouncing their way down the perimeter track in broad daylight.

So I've often thought, since for the reasons I have mentioned it's not a good idea to do it on one's own doorstep, that it might be fun, on a day when my partner has the glider, to nip down to another club and make a few low passes, so to speak. But I know that with my luck and my character, at the end of the day it would be an emotional disaster of guilt, remorse and self-recrimination. Because, when the tomcat crawls home at the end of that day of debauchery he will switch on the answering machine and hear his partner's voice: "Hello Plat, this is Fred at 9 am. I have been re–rostered and have to fly a 737 to Frankfurt this afternoon, so the glider's all yours, rigged and ready to go. Looks like a 600 km record day. Happy soaring!"

Aaaaarrrrgghhhh! What have I done? What a stupid, mindless waste! (Bangs head against door.) Miserable, lascivious wretch! This is your punishment; the Day of Days, thrown away in a trailer with the blinds drawn! Where's the gin bottle? etc. etc.

The moral is: men who are tempted to infidelity, stay faithful to your loved one, do not stray, for that can only lead to woe. That's right, stick with your glider. Take a cold shower every morning and go up to the club without fail; you never know, the Lord may smile on you and drop the wingroot on your partner's foot. Your reward will be in Heaven — ie. anywhere over 5000 feet clear of restricted airspace. Here endeth the lesson.

PS My apologies to women glider pilots for leaving them out of this farrago. Researches into this small but increasingly important group are only just beginning. Offers of information and assistance gratefully accepted. First-hand accounts preferred.


**The SOARING ASSOCIATION OF CANADA**

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

**free flight** is the official journal of SAC.

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

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

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

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**L'ASSOCIATION CANADIENNE DE VOL À VOILE**

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

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

**vol libre** est le journal officiel de l'ACVV.

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

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

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

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

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

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

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# Letters & Opinions

## COMPLACENCY INSIDIOUS

The business of complacency contributing to accidents seems an insidious danger. Last year, on the same day, I made two passenger flights a little too far from the field but got back safely with some last minute lift and a downwind landing. Too casual. Perhaps it is just this overconfidence that gives other club members the idea that you know what you're doing, thus preventing them from cautioning you before the flight.

Maybe we should be looking for this confident behaviour and seeing it as a warning signal (if it is not appropriate to the situation).

**Kemp Ward**
Appalachian Soaring

## GHOST AIRFIELDS REVISITED

Terry McElligott's letter describing a hard–to–find airfield (in Club News, *free flight* 5/90) rekindled memories for me. You see, for several years, I was Terry's partner in our Club Libelle, XR. And I too have had difficulty finding that airfield in time of need ...

The occasion was Day 2 of the 1985 Ontario Provincial Championships. Our task (my logbook reminds me) was a 180 km triangle from SOSA's field at Rockton to the small towns of Tavistock (more famous for its cheeses) and Arthur, nearby the home of York Soaring. When the contestants took off, soaring conditions were good. This was only my third cross–country, so I was satisfied, a couple of hours later, to have rounded both turnpoints, and was happily contemplating a final glide. Alas, it was not to be.

Still about 50 km out, climbing in what proved to be my last thermal of the day, the sky ahead was devoid of cumulus. A stable airmass had moved north, killing thermal activity, and with it, any chance of getting home. So, I climbed as high as I could, and pushed off into the blue.

The descent at best L/D seemed to take ages. Eventually, reaching a prudent height, I scanned the landscape below for a place to put down. A big, square earthen field, with green traces of new vegetation, caught my eye. A brief circuit lined up an approach past the farmhouse, then XR settled gently on to the soft ground. In the ensuing silence, I thanked whatever saints look after outlandings, swung open the canopy, and climbed out of my trusty steed.

To my surprise, another glider was visible in the air, spoilers extended, heading directly towards where I stood. "How pleasant", I thought, "Another competitor is joining me." Whereupon the glider turned smartly left, and landed in what only then became apparent to my astonished eyes, a grass strip in the next section! This was the strip Terry had trouble spotting. At that time it was the base of Caledon Gliding Club. Their CFI drove over in a cloud of dust, demanding to know why I hadn't landed on the runway. I had to admit I hadn't seen it — and we had a good laugh.

I've since flown over that area many times, and still get a chuckle when I look down at "my" field and the strip nearby. So I was glad to hear that X–Ray Romeo, guided by Terry, finally found its way in. Soaring is indeed a wonderful thing!

**Ian Grant**, SOSA

## CHEERS FOR SAC

At a special MSC general meeting on November 10, Gordon Bruce (the SAC Treasurer) gave members attending a briefing on the SAC financial organization. The briefing was well presented, logical and lucid. More to the point, it was extremely rewarding to see and hear the creative ways that SAC has found to deal with the need to raise funds to meet the hole left by Sports Canada and, through the Pioneer Trust Fund, to ensure operating funds to meet the needs of the future. All those associated with the conceptualization, planning, and implementation of these projects are to be highly praised.

How fortunate we are in SAC to have persons with vision to see our needs, courage to pursue the answers to them in the face of daunting challenges, and the resolution to see the projects through to completion. It would appear once again that the old saying "the cream rises to the top" still holds true today.

**Peter Trent,** Montreal Soaring Council

## SKIMMING THE CREAM

Elsewhere in this issue there is much concern over many "low risk" private owners dropping out of the SAC insurance to take cheaper policies with other brokers. It is a classic case of "the tragedy of the commons" — the ecological example of the destruction of a shared grazing area when each farmer, acting in his individual short term interest, puts as many of his stock as possible into the field.

The more private owners are tempted to take this route, forgetting their long term financial interests, the more the SAC group insurance is in peril. US pilots now have difficulty getting insurance for just this reason. The SAC Board is doing nothing, hoping that private owners will collectively see the light and do right. Sadly, I have my doubts, as did the Insurance committee.

SAC must present an additional incentive or stick to draw the lost sheep back. Other group insurance plans use such survival clauses — they should be studied and one used. Come to the AGM with your concerns.

**Tony Burton**, Cu Nim

# THE MARGAREE ADVENTURE

Scouting out a new soaring site on rugged Cape Breton

**Dick Vine**
Bluenose Soaring

SINCE OUR CLUB is the only soaring outfit east of Quebec, and has a small population to draw from, it is necessary to keep costs to a bare minimum so as to attract a large enough membership to keep it at a sustainable level. This means that the workload per member is considerable. Now the excitement of learning to fly and to thermal near the field is enough to engage most people for one or two seasons — may be three; after that, it is important to have an advanced level of interest to retain our senior people or the club becomes largely a teaching institution, to the detriment of the instruction staff who each year are confronted with a band of eager ab initios. By the time they are solo, the best part of the soaring season is gone for another year. Therefore, we decided to explore our soaring environment to promote a higher level of activity for the seniors who pay their fees every year and are somewhat left to their own devices; of course they could go to the New England states, or Ridge Soaring for adventures, but both are a long trip and not possible for those flying club aircraft.

Our mobile winch was built to take advantage of all the opportunities our terrain has to offer. Once we had proved that the North Mountain ridge was soarable, and since we couldn't always be sure of having Chris Purcell's Cub on hand, it was necessary to have access to winch power off field. This has now proved to be fully effective. In fact our Margaree adventure has given us confidence that the North Mountain ridge site airstrip in the Annapolis Valley will be well within our capability to operate safely from. In a 35 knot headwind, we have seen that 1300 feet can be gained, which is plenty to blow back onto a 750 feet ridge only two miles away, with an excellent level field right at the foot of the hill. The photographs and illustration will give some idea of the area we are working, and if you're out our way, drop in for a visit and a welcome.

Much aid and encouragement have been received from Tony Lock, last season's Off Field director, and Charles Yeates, who is always on the lookout for opportunities to advance his and others' exploration of the soaring environment. Last season's adventures on Cape Breton Island are to be further developed this year — in fact one expedition has already been to the Margaree airfield. A winch, one K8 sailplane, Phillip Backman and Allan Gillis set off and met Tony Toole at his plant at Port Hawkesbury, stayed the night and completed the journey next morning.

The interest in John Cabot Trail country is to establish whether the wave–like cloud formation seen on satellite photographs really do mean what they say.

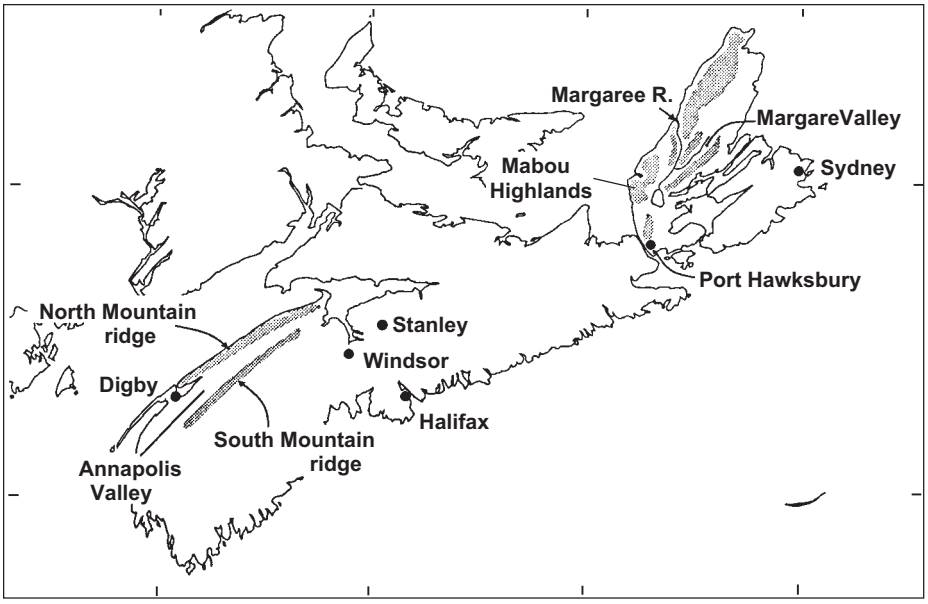
This time, the Margaree strip was chosen because the highland pastures at Mabou which we visited last October while looking for ridge lift are still occupied by cows this time of year. The strip is only 2600 feet, minimal for winch launch, but our agile little K8s are just the thing for the work, achieving 1100 feet at times. Many circuit flights were done until, lo and behold, Allan found a thermal and climbed away. A few minutes later straight ahead lift was encountered and RCE began to slowly climb above the level of thermal activity in soft gentle 1 1/2 knots up. At 4700 feet Allan came back to let another pilot have a go, but no further lift was found that day or the next, but we're convinced.

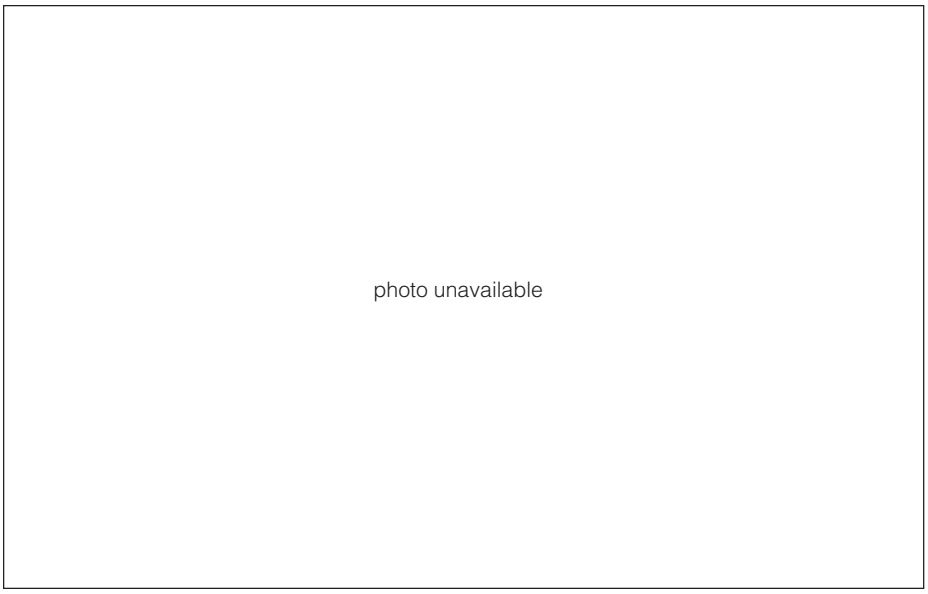
Anyway the weekend of 22–23 September worked out very well. The K8, C–GAWA, was loaded and hooked to the new winch and six plus Bluenosers were on their way for further fun and frustration in furrin' parts, departing at 6 pm Friday after our flying day at Stanley for Port Hawkesbury. The Open Cirrus UIL was also coming along for added interest. After a night's rest the pilots left for Margaree by 9 (too late, of course, since it was a super clear day, and not to be wasted doing mundane things like eating breakfast — it's hard keeping the ballast out of the birds!)

Our arrival on the Margaree International runway at 1030 was soon followed by a good deal of to–ing and fro–ing with two aircraft to rig and the winch to place and DI. The first launch was done after 45 minutes. No battery for the K8 — we always forget something of course, though not as bad as last time when a wire break with no mending tools required a long splice, which takes an hour.

The prospect of that short strip chills the blood. I propose a couple of launches in the K8 first to spy out the land(ing) before hooking up the heavy gear. There are landable fields, but I hope this first adventure doesn't end up as an ignominious hop over the hedge. So far we haven't been able to take a K7 two seater as our new trailer isn't quite ready yet; this has meant that this year's crop of new pilots don't have the advantage of company for their first look at the new terrain, so extra care will be required with the pre–flight briefing. The first K8 launch to 1100 feet resulted in the immediate modification of the standard Stanley circuit, lack of launch height kept the search for lift much closer to the circuit entry point and the overall distance to fly in the circuit about half the usual.

The search area was close to the downwind ridge which seemed to produce thermals more regularly than any other point, but not ridge lift, since the wind was very light. The Cirrus, with its greater reach, was able to explore closer to the high ground and leave for a landing visible only occasionally through the trees; very exciting for the onlookers. What wind there was seemed always slightly behind on launch, although we had changed ends with the winch as soon as we got started. My first launch in UIL was only 550 feet agl, very scary. The trip to circuit entry went through a little two up and my first turn downwind showed a small gain, so — if I ain't going down, I ain't going down, so another turn; assess, and another, then — after a very long






Dick Vine

An indistinct but usable wave over the hills near the Margaree airstrip.

time, and with some anxiety I managed to climb away; not safe on a windy day, but under the circumstances okay. There was good looking cumulus by this time and thermalling to 4200 feet showed a good deal of distance to the Bras d'Or lakes to the southeast, Northumberland Strait to the west and the Mabou Highlands off to the southwest. It is amazing how much more possible things look from the air than from the field.

The country around Margaree has been carefully researched by Bluenose pilots both by car and in a Cessna flight from Stanley and a number of landable fields are to be found in the valley and are marked on our 250,000:1 maps, cut into strips and folded to cockpit size. An opportunity to see all this from the familiar seat in a glider shows that what was considered unlikely to be safe from the ground is quite achievable from 4000 feet. The Cirrus reached out to the coastal valley where there was little cumulus and back into the solid looking stuff over the ridge with plenty of height to regain altitude. K8s need a little more allowance for possible sin, but provided the exploration is done upwind the return is far easier than seems possible from the ground.

Our training for safety makes us overly cautious, and it takes a lot of cross–country experience to exploit the abilities of our aircraft anywhere near their limits; in fact, when this does happen, it is usually by accident — which further emphasizes caution. As Mike Apps says in his judgement seminar, "If you haven't made a decision in the previous 30 seconds, the glider is flying you." So learn the numbers and fly them (I tell myself).

Our first day ended with circuit flights as the lift gradually calmed out in high cirrus brought up by an approaching low. The power contingent — Chris Purcell and Don Clark in the Piper Cub (which has been involved in Bluenose's off–field events in a previous report to this journal), had been exploring hill lift at altitudes the gliders were not prepared to risk. The gliders were secured for the night and we all repaired to the clubhouse for food and fables.

Next morning the forecast southeasterly gale was aloft but not yet on the ground, so a look at the maps suggested that a serious search for fields near the workable ridge downwind of the strip would be a very good idea, so some early (6.30 am) driving began.

The choices turned out to be pretty marginal, particularly for the Cirrus. On returning to the field, no one stirred, so a little banging around soon produced groans and curses from the crumpled mounds on the clubhouse floor.

By nine the gear was ready, the wind was gusty, south, and right down the runway. Two K8 launches let us know right away that there was plenty of wind aloft and the gradient was very exciting. Thirteen hundred foot launches and much overspeed made the winch driver's job a challenge since, with the short runway, the glider was kept on the wire until almost overhead. On release, the operator ended up with a lap full of wire if he wasn't quick at picking up drum speed. A Cirrus launch ended at two hundred feet with a wire break (only the second this year), then rain stopped play. Our kind host Don MacDermid, who is in charge of the field, made some space available in one of the hangars for the K8 behind a handsome ultralight which he built himself. The winch was parked in his garden and UIL went back to Port Hawkesbury to await a further bash next weekend. Though we found no significant ridge or wave, it was a valuable experience for all and good preparation for future opportunities.

The following weekend only the fanatics did the trip in the face of a despicable forecast. Saturday was spent doing the chores and looking after some make and mend on the birds and winch, and although the rain stayed away, it was felt that no one needed circuit practise. Sunday dawned far better than expected and early high cloud gradually drifted off to the east. For a short period some bars of very high and turbulent looking cloud appeared. There was a scramble to get aloft and the Cirrus was soon climbing out on 4 to 6 knot thermals. Don Rankin flew AWA for one and a half hours, working up and down the ridges. Once again, very little wind, so our quest for ridge or wave lift went no further.

The Thanksgiving long weekend had a much better looking weather prognosis and attracted Allan Gillis, Don Rankin, yours truly, Evan Locke, and of course our Port Hawkesbury host, Tony Toole.

We arrived on the field at a reasonable hour Saturday and prepared for flight. No wind and no lift. Sunday showed a much more interesting sky, with a large lenticular lounging over the east ridge and a larger one over the west. Photographs seemed appropriate, after which the search for up took over. A 30 knot wind suggested a short checkflight in the K8 which it developed into our second real wave flight.

Launch height was 1200 feet and there was zero sink for a while, so AWA was allowed to blow down onto the east ridge where 1-1/2 knot lift soon began to cause visibility problems, as the lennie was virtually resting on the hilltops and reaching out over the river valley. Advancing upwind, the lift slowly improved until the bird was in the clear, just upwind of the wedge–shaped cloud and level with its sharp edge. A traverse along the face showed steadily improving lift and, in smooth air, the altimeter began to wind up. Through 2, 3 and up to 4000 feet we climbed while beating back and forth along the east ridge when suddenly the world took on a misty look, and out came the spoilers and slip to return to visibility again. With clouds having a solid content of Cape Breton, the time for retaining contact with the realities of life was at hand. Flying upwind toward the westerly ridge showed no change in the lift of 8 knost, absolutely steady, smooth air. At last, we had shown positive proof of wave lift, visible on satellite shots and recognized by Tony Lock, and now clearly identifiable by cloud formations and zero turbulence. If only the air were drier, who knows how high ...

While the K8 was greasing about the sky, UIL was launched and followed the same route, but the wind on the ground was less strong by this time. With only 900 feet to work with Tony could maintain height but not gain and after 19 minutes ended up back on the field. Many other attempts were made, but as the lennies evaporated it was decided to await stable air in the evening. Some signs of wave did appear, but nothing was reachable from a winch launch on such a short runway.

On Monday, the overcast and calm suggested a pack up and go, with a relaxed drive back to our homes, and since no announcement of further weekends had been made, we decided to acquaint ourselves with family and friends and to spread the word about the chance to fly the Cape Breton Wave.

Our efforts to widen our experience have come to an end for this year, although the winch is at the end of the storage building and a K8 is on the trailer, both ready to go if a southerly with a high wind and high ceiling should appear before snow comes and makes the terrain unusable. The Annapolis Valley's North Mountain is always ready for a Diamond 300 km attempt, with the turnpoint all worked out and posted on a declaration form. Keep the faith, and fly safe. •

# UN CAMP D'ONDE ... BOF, À QUOI ÇA SERT?

**Claude Bisson**
CVVQ

Après tout, déménager tout ce cirque, ça prend beaucoup d'énergie; le terrain coûte beaucoup de sous et, pour finir, il faut ramener toute la patente les deux mains gelées en novembre.

Alors pourquoi y a–t–il des gens assez fous pour faire tout ça, sans ménagement à chaque année, sans se lasser? HUMMM... allons voir.

**Le Spot**
L'on m'a expliqué vaguement la place, avec une carte à l'échelle de la planète. C'est pas évident à trouver, mais on y est. Je stationne donc la rutilante présidentielle Chrysler Imperial LeBaron 1975 blanc (dans le temps, y marchait) avec air conditionné AutoTemp Two (y a jamais marché).

A prime abord, étant habitué à un terrain carrément immense à St–Raymond, la piste semble étroite et courte. A vrai dire, j'ai de forts doutes qu'une corneille puisse y décoller par vent de dos sur la 19 sans aller se fraiser dans les arbres au bout de la piste ... c'est court. En plus, le seuil de piste 01 est presque le fleuve St–Laurent à marée haute. Enfin, on n'est pas venu ici pour rien. On va essayer puis retourner voler à St–Raymond, c'est plus sûr.

**L'Environnement**
Mon premier vol de familiarisation avec IMP fut sans problème. Effectivement, la piste est assez longue (surprenant ...). Après le larguage, ce fut le premier choc. Le paysage. Après le deuxième, le troisième, etc. — même chose. Baie St–Paul, c'est jamais pareil. C'est un immense cube qui bouge et en plus, jamais tel qu'escompté. De quoi retourner un prophète à ses cultures.

Tout ça c'est bien beau, mais on ne vient pas ici pour le paysage j'espère?

**Le vol de pente**
Ma première expérience de pente fut en solo sur IMP. C'est spécial de voler à moins de 2000 pieds jusqu'aux eboulements. Le vol de pente est calme, rassurant et sans turbulence. Le "trip" avec la pente, c'est qu'elle fonctionne aussi par temps nuageux. Lors-qu'elle fonctionne, plusieurs planeurs longent le fleuve dans un va et vient presque religieux (en parlant de culte, je ne vous ai pas dit qu'il faut déplacer la clôture d'un cimetière pour élargir la piste ...).

Jusqu'ici, ça me plait et je reviendrai sûrement l'an prochain. Je me sens quand même un peu mal à l'aise de dépenser tant d'énergie pour venir ici. Etes–vous certain que ça en vaut la peine?

**Le vol d'onde**
J'en ai tellement entendu parler comme une procédure compliquée réservée exclusivement aux astronautes que j'ai certaines craintes à essayer.

Jusqu'à un certain matin ensoleillé et très venteux où les pilotes présents montaient frénétiquement leur appareil. Un tirage au sort détermina l'ordre d'envol. Ma malchance habituelle me catapulta au troisième rang, non sans un certain soulagement; l'histoire de voir ce que mes confrères expérimentés allaient faire. Hé bien oui, l'onde était là. Mais entre le sol et la première vague, il faut traverser le rotor dont la réputation était digne d'un roman policier (à ce que l'on m'avait dit).

Jugeant mon expérience suffisante pour ce vol, je décolai donc avec ADR sous le regard ébahi des piétons et des Bonnes Sœurs qui n'en finissaient plus de faire des signes de croix. Le rotor ... c'est de la p'tite bière à coté d'une réunion du conseil d'administration. Et puis vint l'onde. Quelle révélation. Quel silence. Immobile. Suspendu dans le temps et l'espace.

C'est bien beau tout ça mais c'est "fret" pour les pieds. Je n'ai jamais dépassé 18,000 pieds. Lorsque l'on redescend de l'onde tous aérofreins ouverts, je vous jures qu'à 10,000 pieds l'on fait le CRAVVT, tant on se pense bas. Mais en descendant, qu'est–ce qui nous attend? Bien oui, le rotor ... Lui, il ne vous a pas oublié. D'autant plus qu'il y a toujours quelqu'un qui vous demande à la radio si tout va bien, alors que toutes les pièces non–assujetties (incluant le microphone) jouent à la cachette.

J'oubliais presque de vous mentionner que lorsque vous porterez un masque à oxygène, vous ne serez pas vus sous votre plus beau jour. L'ensemble ressemble plutôt à un croisement entre ALF de la série télévisée et un éléphant ayant la trompe attachée à un régulateur (effectivement inusité pour un éléphant).

De retour sur terre en contournant quelques nuages volages rampant le sol à 8000 pieds et c'est terminé. Là, j'ai compri. Plus besoin d'explication.

**Les Velivoles**
L'atmosphère est spéciale à Baie St–Paul. Tout se fait dans l'ordre de façon spontanée. Les opérations vont rondement du matin au soir et chacun y met du sien. Rare sont ceux qui quittent avant la fin de la journée. Après tout, cette opération est menée pour les pilotes, par les pilotes qui ont des intérêts communs; et nous sommes au moins quarante. Pas question de perte de temps ici; si ce n'est que quelques remarques désobligeantes sur certaines automobiles de remorquage importées (et blanches).

**La conclusion**
Et définitive, nous possédons à St–Raymond un magnifique site qui nous permet de pratiquer le vol de distance. Nous avons de plus accès au seul site d'onde et de pente dans l'est du Québec. Qu'est–ce que l'on veut de plus, un chausson aux pommes avec ça?

Les coûts du camp d'onde sont marginaux puisque les passagers sont maintenant passés à $40 le vol et que c'est eux qui financent en bonne partie les opérations. Il ne reste que l'effort de se déplacer. En ce qui me regarde, un seul vol d'onde vaut la peine de se déplacer toutes les fins de semaine puisque, dans tous les cas, nous pouvons voler quand même ou faire de l'instruction en l'absence de l'onde.

Cette année, je suis monté trois fois dans l'onde (voir les barogrammes), dont un maximum à 16,700 pieds. J'ai volé dans ADR côte à côte avec IMP dans l'onde à 8500 pieds, comme suspendus dans le même espace par un fil.

Après une saison d'instruction à St–Raymond sur 2–33 (le nouvel appareil de John Deere), tout le travail de Baie St–Paul — c'est des vacances même si les efforts fournis sont plus grands.

Je vous souhaites donc toute la sérénade de déblatération habituelle sur l'hiver, le ski, les fêtes. Mais surtout, si vous ne pouvez voler cet hiver, lisez sur le vol à voile, l'histoire de garder l'esprit présent. •

# TELLTALE WIND

❝ BLOOD CHURNING WIND AND RAW ENGINE CLAMOUR THUNDER INTO THE CABIN. I AM SEIZED BY SUDDEN, RELENTLESS TREMBLING. GLENN'S STONE COUNTENANCE COMES TO LIFE, "WE HAVE NOTHING TO FEAR BUT FEAR ITSELF." WITH THAT HE SALUTES, CLIMBS OUT ON THE WING AND IS GONE. ❞

**Brad Jon Ruda**
from Soaring Pilot

"Brad?"
"Yeah."
"It's Tony."
"Hi Tony."
"Listen, I've got some friends interested in skydiving — there's a class every weekend in Wisconsin."

Something deep and long asleep now stirred within my soul. "A skydiving class?" It climbed slowly up my vertebrae with cautious, mind–chilling steps. And by the time it gripped the back of my neck, I was tumbling through all the blueness, rushing right through that nothingness at one hundred miles per hour.

"Are you in?"
"You bet."
"I'll pick you up Sunday at daybreak."

The golden banner of dawn appears brilliantly over the lake. Shades of summer pink glimmer across the soft waters. Deep purple clouds low on the horizon are crowned with a band of yellow. And as the orange sphere slowly ascends, an amber ceiling of high, scattered cirrus is revealed. The glow eases westward with the rise of the morning sun.

Alibis squared away, mutual mutterings of fitful sleep well expressed, I squeezed into the back of the Jeep and unfolded amongst the Sunday papers.

By the arrival of jump day, our enthusiasts had dropped from twelve jolly go–get–ems to three: Tony Martin, a redheaded adventurer; Glenn Arthur Davis, a man of capricious instinct; and me, the curious. To help bolster our courage, we spoke of skydiving as flippantly as we would speak of roller skating.

Why would someone who has trouble crossing busy streets want to jump out of an airplane? As a soaring pilot, I consider flying a safe activity involving little risk. However, there is always the "what if" factor, and under certain circumstances, we are required to wear parachutes. My first lesson in aerobatics required that I strap into one. I found myself ready for loops and inverted flight; but I was leery of the fact that I may have to unfasten my safety belt, open and release the canopy, and dive into space while searching for that elusive D–ring.

If I wear a parachute, I reasoned, I should find out what to expect from one; not just the mechanics, but the methodical steps what will lead me through the angelic ballet–assuring that my return to earth will be a pleasant one. Skydiving, it seemed, might also give me a clue as to whether I would be able to maintain self–control during an airborne emergency.

There is something inherently different between skydiving and soaring. You can see a wing. You know it has camber and incidence, washout angles and chord lines. You know there are formulas and diagrams determining lift, loading limitations, and aspect ratios. The wing is there — you see it, you touch it, you rap on it gently, and there is no change. But the parachute, like the butterfly, must go through remarkable changes before it will fly.

Who packs this mysteriously tucked away material on which I am about to bet my life?...

"Parachute folders must be quite wise", surmised Tony. "More shrewd than Sherlock Holmes. More prudent in geometry than Euclid himself. Indubitably, they are people of the utmost integrity."

"And they are all employed by the government in Washington", I added. "They work regulated hours in underground, sterile laboratories. They wear white jackets and white gloves, speak only in whispers (so as not to send wrinkles through the fabric), and tip–toe around with protractors and stethoscopes."

Some of the class members were late in arriving, so our jumping instructor, an old military type loaded with wry humor, decided it fit to show a video clip from the movie *Fandango*. Here we see a first time jumper careening towards the earth, trailing a load of dirty laundry instead of his main parachute. A terribly funny bit unless you really happen to be going skydiving for the first time.

I began taking notes on wind lines and descent rates, riser steering, and cutaway procedures. At one point the instructor paused, removed his hat, and offered to collect anyone's good luck charm, claiming, "In a high speed emergency, luck won't get you down safely, reflex will." It dawned on me then with the full gravity of mother earth what I was about to do ... solo without an aircraft!

After a lengthy, but necessary lecture, we practised. We practised all afternoon counting out loud and hanging from mock–up planes. We practised the arch–and–reach, the look–over–your–shoulder and pull. We rolled on mats and swung from rafters in harnesses. We pulled D–ring after D–ring for hours upon hours while our imaginations concocted the most absurd and frightening of all parachute emergencies — the high speed, upside down, accelerated cutaway twist.

After all the methodical steps to a bailout had been conditioned to reflexes, after all the equipment was checked and rechecked, I strapped on a parachute. I felt as if I was about to look Death in the eye and see who would blink first...

Left and right, people were strapping on helmets and parachutes. Up they went and out they tumbled. Under great rainbows they floated. Natural – graceful – alive – some grunting on landings – some laughing with delight. Up they went and down they soared with giant grins and whoops of exultation.

Being the last to go, Glenn and I stood quietly sulking in our fears. It was obvious to us that our jump–mates had changed upon returning to the ground. Each had come here in search of something and none were disappointed. Some may not have known exactly why they had come. Perhaps they grew tired of routine. Perhaps they had grown a little too wary of risk and remained inside their homes too long ... afraid of exploring the edges of life.

Tony landed, tumbled, and rolled up his chute in one sweeping motion. Running to us with breath from the heavens he hollered, "It's just like sex!"

This did not comfort Glenn or me one bit. We stood checking our radios and visiting the

**concluded on page 20**

# LEARNING THE ROPES

**Tillmann Steckner**
London Soaring

IN THE LAST FOUR YEARS I have prepared most of the towropes at my home gliderport. I also made up all the towropes and "shorties" (Schweizer and Tost ring rope links) for Ridge Soaring Inc. in Pennsylvania in October 1990. During a soaring competition, held there at the end of the same month, I was encouraged by some of the pilots to report on a modification designed by me to increase the service life of towrope endings. Before I describe this modification, we should first look at the most common types of towrope material used in North America, as well as discuss some points relevant to their application.

| Diameter | Tensile strength | Working load |
|---|---|---|
| *triple–twisted polypropylene* | | |
| 1/4" (6 mm) | 1130 lb (513 kg) | 113 lb (51 kg) |
| 5/16" (8 mm) | 1710 lb (776 kg) | 171 lb (78 kg) |
| *hollow–braided polypropylene* | | |
| 1/4" (6 mm) | 1263 lb (573 kg) | 165 lb (75 kg) |
| 5/16" (8 mm) | 1755 lb (796 kg) | 240 lb (109 kg) |

Very recently my attention was drawn to the fact that at least one glider club in Canada (the Cu Nim Gliding Club in Calgary) prefers to use rope made of polyethylene, rather than polypropylene. The tensile strength of polyethylene is significantly less than that of polypropylene, and under repeated bending it fatigues more quickly. This, at first sight, would seem to disqualify polyethylene for our purpose, except I have it on good authority that Cu Nim gets more aerotows out of their ropes than any other club I have heard of. I shall deal with this question later on.

Which type of rope stock is chosen depends on the gross weight of the glider, the method of weak link protection used, personal preference, and last, but not least, on the skill of the persons entrusted with the preparation of the towropes. Whatever the choice, it ought to take into account the properties of the synthetic material at hand. When dealing with polypropylene rope, it is difficult to define precisely what constitutes failure. As is evident during the initial tug of the takeoff roll, polypropylene rope is fairly elastic. The degree to which the fibres of this material can contract again, once the load is taken off, very much depends on the magnitude of the latter. This property makes polypropylene much less predictable than the high tensile steel wire used for motor winches and pianos. For example, when a string in a piano is brought up to pitch, it is close to the breaking point, and yet it will, in spite of constant pounding by the hammers, last for years. On the other hand, if a rope made of synthetic fibres is placed under an unrelieved heavy load it will stretch without letup, however slowly, until finally it fails altogether. Under these conditions the molecules of the plastic will literally start to flow as if we were dealing with a piece of chewing gum being pulled apart. This even happens when the load is well below the tensile strength listed by the manufacturer. These values given in above chart merely indicate at what point the first fibre strands begin to rupture when the load is increased over a short period of time (less than 2 minutes). Therefore, the only practical significance of these specifications to the glider pilot is that they give some indication as to what momentary peak loads the towrope may be expected to withstand. Such a situation would typically arise when a towrope, after being allowed to go slack, is suddenly pulled tight. Under these conditions we can fortunately count on the elasticity of the rope and the friction between the individual fibres to act as a very efficient shock absorber. (This may explain why I have so far not heard of any towropes made of polyester, even though it is stronger than polypropylene. As it has very little "stretch", the shock loads are bound to be much higher. Conversely, nylon is so elastic that when released from strain, it will snap back like a bungee cord.)

Referring now to the last column of the same chart, we note that the continuous working load, to which the rope may be subjected without suffering permanent structural damage, is only a tenth to a seventh of its tensile strength! However, there are grounds to believe that the rope manufacturers prefer to under–rate their product in this regard for reasons of liability. It should also be kept in mind that the strength of a given polypropylene rope is not constant, as fatigue and exposure to ultraviolet light weaken the fibres. Regarding the latter point, it is therefore prudent to gather the towropes as soon as flying operations cease and to store them where they are not exposed to the sun. The foregoing considerations would also indicate that the splicing of two pieces of towrope should be confined to the use of new material, such as when extending a leftover piece of rope stock. A towrope, once broken, is likely fatigued along its entire length (after all, it had to break somewhere!), thus making its continued use a risky proposition.

Since the breaking point of a towrope should lie somewhere between 80% and 200% of the glider's gross weight, the 1/4" rope material is strong enough for all sailplanes, including water ballast, except those with a wing span well in excess of 15 metres. (I know of at least two glider clubs which routinely use 1/4" towropes even for their Twin Grobs). Although the SAC Flight Training & Safety Committee states unequivocally to never omit the weak link, the fact remains that many soaring clubs fly without one. In this respect a 1/4" towrope gives at least some protection. The only problem with this is that there is no control over where the break occurs in the event of a critical overload. If the break occurs close to the towplane, the rope dangling from the glider could easily snag a fence, a tree, or some other object during the landing; more seriously, It could also foul one of the glider's control surfaces. Where 5/16" towropes are used without a weak link, the pilot would be well advised to prepare a personal shorty from 1/4" rope stock and have it fitted with the required tow ring.

I would recommend the hollow–braided rope for mainly two reasons. First, It can easily be spliced within a minute even by an unskilled person. (The time given applies to a single splice and does not include the modification proposed in this article.) Second, the hollow-braided rope does not unravel when it hits the ground on the final approach of the towplane. In the case of towropes made from 1/4" stock, the hollow–braided type has the additional advantage of being about 12% stronger than the triple–twisted type. This also gives a little more leeway in fixing the breaking point of the weak link which, for obvious reasons, should not lie too close to the rated tensile strength of the towrope. The only disadvantage of the braided rope — albeit an important one — is that it costs roughly twice as much as the twisted rope.

This brings me to the pros and cons of polyethylene. Although I have no personal experience with it, reports from Cu Nim suggest that this material may well be the way to go. Apparently polyethylene has proven itself

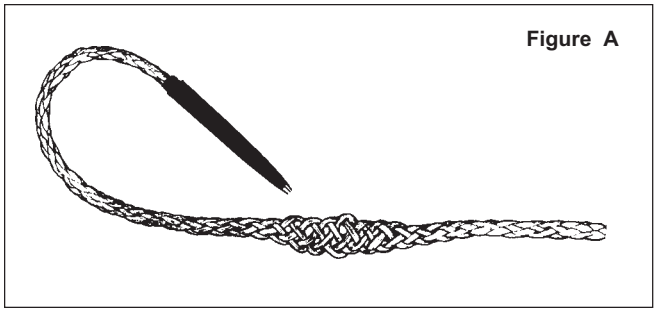


**Figure A**

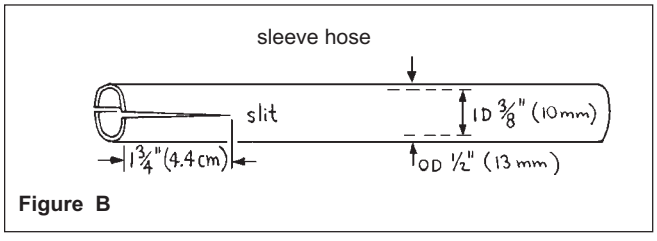



**Figure B**

to be better than polypropylene in its ability to resist abrasion (at least on grass fields) that it outweighs the disadvantages referred to earlier. The point is that, whatever polyethylene lacks in strength (roughly 20% less than polypropylene), it can easily be compensated for by simply using 5/16" rope stock instead of the smaller size. If we adopt the Cu Nim approach, we could rather neatly solve several problems all at once: make the main rope as durable as possible by using the more abrasion resistant 5/16" polyethylene and attach to it a plain shorty weak link made up from 1/4" hollow-braided stock. The shorty, equipped either with a Tost ring or a Schweizer ring, serves not only as a weak link, but it also protects the main rope by taking most of the beating during the final approach of the towplane. The shorty is replaced at little cost after the first signs of incipient failure. The system greatly reduces the need for a sizeable number of spare towropes normally kept on hand. Since the 5/16" polyethylene towropes used in combination with the shorties are claimed to last at least a whole season of weekend flying, whereas the service life of conventional [1/4"] towropes prepared from polypropylene is usually measured in weeks, the advantages, in terms of both cost and effort, look indeed impressive. Whether or not polyethylene towropes would also benefit significantly from the Tygon shielding described below, I am unable to report at this point. My guess is that the answer would largely depend on the type of runway encountered, that is grass, which has its own lubricity, or the dry, hot, and very abrasive surfaces of asphalt and concrete.

As I hold the hollow-braided rope to be the ideal choice, I shall begin to describe the modification by using it as the primary example. I should perhaps add at this point that I am well aware that some glider clubs use a combination of adhesive cotton tape and metal eyelets in order to reinforce the towrope endings. I have tried this approach myself, but I have some reservations about it. Because the entire endings, short of the loops themselves, are heavily taped, they are difficult to inspect. The exposed ring loops cannot prevent the entry of dirt and moisture. Furthermore, I am somewhat leery of having sharp metal edges so close to the fibres of the rope, especially in the event that the eyelet should work itself loose.

### Preparing and splicing braided towropes

As can be seen from Figure A, splicing hollow–braided ropes is extremely simple. The same basic procedure applies to both, the straight splicing of two pieces of rope and the forming of a loop for the tow ring. The threading needle required for the operation is called a “fid”. Fids for different rope sizes can be obtained from the manufacturer or his representative. However, where the rope diameter is 1/4" the tapered cartridge casing of a two-piece ball pen will do just as well as shown in Figure A below. (In the case of 5/16" stock, simply cut the end of the rope at a sharp angle and use some masking tape to form a point, thereby fashioning the rope itself into an improvised fid.) To prevent the end of the rope from slipping out of the rear opening of the pen casing, the rope should be built up with two or three wrappings of masking tape. Regardless whether it is a straight splice of the forming of a tow ring loop, the rope overlap should be about the length of one’s arm.

In order to allow the fid to enter the hollow core of the braided rope, it is necessary to first compress the rope at this point to open up the braid. In the case of a straight splice, such as when joining two pieces of rope, simply lay the two pieces of rope side by side so that there is an overlap of about 30" (76 cm). Now splice the left rope into the right rope starting at the midpoint of the overlap. After having completed the first half of the splice, splice the remaining tail end of the right rope into the left rope. (The sequence of left and right was chosen arbitrarily and can be reversed.) With either type of splice — ie. preparing a loop or joining two pieces of rope — allow the fid to exit through the side of the braid after it has completely disappeared in it. Also pull out all the remaining rope attached to the fid. You are now ready to re–enter the rope held in front of you with the fid. Do so at the nearest strand crossing in line with the path of the splice as indicated in Figure A. Repeat this cycle until there is no more rope left to hide. At this point let the fid exit once more and remove it from the rope. I prefer to discard the masking tape wrapped around the end of the rope by simply trimming the latter with a pair of sidecutters (diagonal pliers) at a sharp angle. This will prevent the end of the splice from forming a step, and thereby creating a stress point. Now stretch the splice by holding the rope with one hand and firmly stroking it with the other. This will cause the tail end of the core rope to disappear without a trace.

Having completed the splice, closely inspect it. You will probably end up with 4 to 5 entry points over the length of the splice. The sideward exits and re–entries of the core rope do not only serve to advance the fid more easily, but they also enhance the holding strength of the splice by increasing friction between the outer braid and the core rope lying within.

### Modification of the towrope ends using braided rope

The materials required, which are available from most hardware and sporting goods stores, are:

- clear Tygon hose (also called PVC hose) 1/2" (13 mm) OD, 3/8" (10 mm) ID; 2 pieces 12" (30.5 cm) and 2 pieces 6" (15 cm).

- clear Tygon hose 3/8” (10 mm) OD, 1/4" (6 mm) ID; 2 pieces 2" (5 cm) long.

- 3/4" (19 mm) wide adhesive cotton tape (white hockey–stick tape will do).

**Procedure**

1 Slip one of the two short, small diameter hoses (henceforth called the “backstop seal”) onto the rope by about 6 feet (1.8 m).

2 Slit the two 12" pieces of hose (henceforth referred to as the “sleeve hose”) at one end as illustrated in Figure B. Be sure the slit results in two even halves.

3 Slip one of the two sleeve hoses, with the slits facing you, onto the rope until it touches the backstop seal already in place.

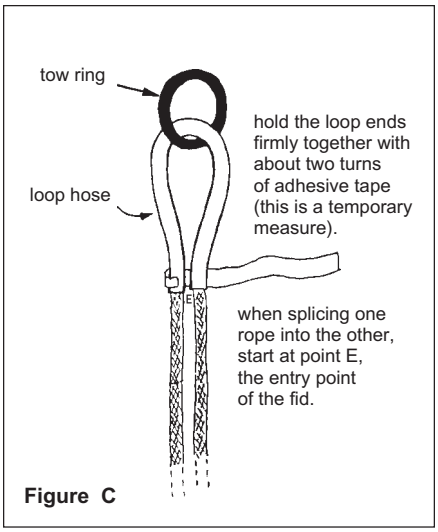


**Figure C**

4 Slip one of the two 6" hoses (henceforth referred to as the “loop hose”) onto the rope until its midpoint is about 30" (76 cm) away from the near end of the rope.

5 Place the tow hook ring in the middle of the loop hose and firmly fold the latter to form the loop shown in Figure C. Temporarily tape the hose endings tightly together. About two wrappings of masking tape are sufficient.

6 Splice the short end of the rope into the long end as described earlier. Start the splice as close as possible to the ends of the loop hose (see entry point marked E in Figure C).

7 After completing above splice, pull the sleeve hose right up against the loop hose. Remove the masking tape applied in step 5.

8 Lubricate the outside of the sleeve hose with a moist sponge or rag. (Do not use soap as it will remain slippery!) Start to insert one of the split hose halves into each of the loop hose ends.

9 Now force the split hose halves all the way into the loop hose. This is very important if no dirt or water is to enter later on (Figure D). While water by itself has no detrimental effect on either the polypropylene or the Tygon, it attracts dust and turns the transparent shielding opaque or milky.

**continued on page 15**

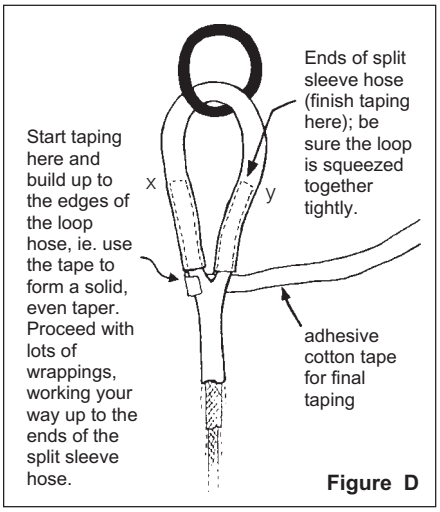


**Figure D**

# A PROGRAM FOR CALCULATING COURSE DISTANCES

Not many FAI badges are won sitting in front of a computer. However, the program listed here might help pilots planning distance tasks, and who have access to a computer, to identify suitable turnpoints, and it can help OOs deal with ensuing claims! Other, similar programs exist, so I don't claim originality. The predecessor to this one was given to me by Dugald Stewart of SOSA. I recently rediscovered it on a dog–eared piece of paper at the bottom of my box of gliding odds–and–ends. I now offer it, complete with "improvements", to readers of free flight. The program is listed in MicroSoft BASIC (available on the operating system disks of pretty nearly all desktop computers — apologies to Macintosh users). Even if you are not familiar with BASIC programming, if you type it in faithfully, it will run. I will send a copy to anyone who provides me with a diskette and a SASE (address below).

Once "LOADED" and "RUN", the program begins by asking for the number of legs the course consists of, and whether it is closed or not — in other words whether you intend to return to the starting point or not. Most people should be able to convince themselves of the following points, the logic of which is in lines 260 to 330 and 470:

- the number of legs cannot be less than 1.
- if the number of legs is exactly 1, the course is unavoidably open.
- if the number of legs is greater than 1, the course may be open or closed. If open, the number of turnpoints (counting the goal) is one more than the number of legs. If closed, the number of turnpoints is equal to the number of legs, and the starting point is also the end point of the last leg.

The program then asks for the names and coordinates (in degrees, minutes, seconds) for the corresponding number of turnpoints. These are stored as entered in TURNPT(N), TPLAT(N), and TPLONG(N) respectively. The coordinates are converted in lines 420 and 460 to radians for calculation. When all the details for the turnpoints have been entered, the length of each leg and the total distance are calculated in lines 500 to 550. The formula follows Appendix D of "FAI Badge and Record Procedures" from SAC, with two differences. First, since BASIC has no function to find an angle given a cosine, the inverse tangent (ATN) is used together with some elementary trigonometry — if there is such a thing. Second, the new "official" FAI earth radius of 6371.000 km is used, a value slightly smaller than that implied in the Appendix D value for "k". The program prints output to the screen. When I get a result I want to keep, I press "Print Scrn" for a paper copy.

After this, all you have to do is fly to your turnpoints and photograph them — and convince your OO. Good (and safe) flying. •

**Ian Grant**, 41 Gillespie Crescent
Ottawa, ON K1V 0C1

For better readability, this program listing may be copied at 130% on legal paper. Tony

```
100 '                    ***  TURNPOINT  ***
110 '
120 '     A PROGRAM TO CALCULATE GREAT CIRCLE COURSE DISTANCES
130 '
140 '        ADAPTED BY I.M. GRANT, 15 NOVEMBER 1990
150 '
160 ' REFERENCE: FAI BADGE & RECORDS PROCEDURES, 5TH EDITION, APPENDIX D
170 '
180 ' NOTE: FORMULA FOR CALCULATING LEG DISTANCES USES ATN() FUNCTION AND
        TRIG IDENTITY IN THE ABSENCE OF AN ARCCOS FUNCTIoN IN BASIC
190 ' ****************************************************************
200 '
210  DEFDBL A,C,E
220  DEFSTR T
225  SUMDIST = 0
230  EARTHRAD = 6371
240 '
250  CLS
260  INPUT"Number of legs"; NLEGS
270    IF NLEGS < 1 THEN:
          BEEP : PRINT "NUMBER OF LEGS MUST BE > 1": GOTO 260
280    IF NLEGS = 1 THEN CLOSED$ = "N" : GOTO 330
290    IF NLEGS > 9 THEN :
          BEEP : PRINT "NUMBER OF LEGS MUST BE <= 9": GOTO 260
300 '
310  INPUT"Closed course (Y/N)", CLOSED$
320    IF CLOSED$ <> "Y" AND <> "N" THEN 310
330    IF CLOSED$ = "N" TNEN NDTS = NLEGS + 1 ELSE NPTS = NLEGS
340 '
350  FOR N = 1 TO NPTS
360    CLS
370    PRINT: PRINT "Enter  Name  of  Turnpoint    #";N
380    INPUT"                 ";TURNPT(N)
390    PRINT: PRINT "Enter Latitude for TurnpoLnt #";N
400       GOSUD 750
410       TPLAT(N) = STR$(DEG) + STR$(MIN) + STRS(SEC) + " N"
420       LAT(N)   = ((SEC/60 + MIN)/60 + DEG)*3.1415926#/180
430    PRINT : PRINT "Enter Longitude for Turnpoint #";N
440       GOSUB 750
450       TPLONG(N) = STR$(DEG) + STR$(MIN) + STR$(SEC) + " W"
460       LONG(N)   = ((SEC/60 + MIN)/60 + DEG)*3.l415926#/l80
470    IF CLOSEDS = "Y" AND N = NPTS THEN- LAT(N+l) = LAT(l) :
          LONG(N + 1) = LONG(1): TURNPT(N+l) = TURNPT(l)
480  NEXT N
490 '
500  FOR N = 1 TO NLEGS
510    COSA  = COS(LAT(N)) * COS(LAT(N+l)) * COS(LONG(N+1) - LONG (N))
             + SIN(LAT(N)) * SIN(LAT(N+l))
520    A       = ABS(ATN(SQR(l/COSA^2-1)))'              NB: A in radians
530    DIST(N) = A * EARTHRAD
S40    SUMDIST = SUMDIST + DIST(N)
550  NEXT N
560 '
570  CLS
580  PRINT TAB(30) "cOURSE":PRINT
590  FOR N = 1 TO NPTS
600    PRINT TAB(5)"TURNPOINT "; N; ":" TAB(20) TURNPT(N);
       TAB(40) TPLAT(N); TAB(55) TPLONG(N)
610  NEXT N
620  PRINT
630 '
640  FOR N = 1 TO NLEGS
650    PRINT TAB(5)"LEG"; N; ":"; TAB(20) TURNPT(N); " -> "; TURNPT(N+1);
660    PRINT TAB(55); : PRINT USING"####.#";DIST(N); : PRINT" KM"
670  NEXT N
680 '
690  PRINT
700  PRINT TAB(5) "TOTAL DISTANCE"; TAB(55) :
     PRINT USING"####.#"; SUMDIST; :PRINT" KM"
710 '
720  END
730 '    *** INPUT SUBROUTINE ***
740 '
750  INPUT"       Degrees:  ";DEG
760  INPUT"       Minutes:  ";MIN
770  INPUT"       Seconds:  ";SEC
780  RETURN
```

# SAC affairs

## MEDICAL COMMITTEE

The Department of Transport, which does the licensing for the gliding movement, is under increasing financial restraints, in that they are understaffed and underequipped, and this has caused significant delays in licence revalidation in some cases. When your friendly civil aviation medical examiner revalidates your license, it is revalidated for up to 180 days, during which time the DoT should have revalidated your licence. In some cases the licence validation has taken longer than the 180 days to be implemented. However, because of changes in staffing and equipment, the Department hopes that in the new year licence validation certificates should be received within six weeks of your medical examination being done. The financial constraints imposed have brought good news. The good news being that we have now been enjoying the privileges of Category IV licensing for almost one year. This has reduced significantly the workload on the Department in issuing licence validation certificates. The better news is of course that licences may now be renewed in a six week period.

Catergory III licensing of course is still required for instructors, and other pilots who are not honestly able to make a Category IV declaration, so once again I would like to remind you that this is not an open thing for all glider pilots to enjoy. It mainly applies to those who can answer the questionnaire in all honesty stating basically that they have no known medical reasons which would preclude them from flying under a Category IV rating and therefore not having a Category III examination performed.

The largest single cause of licences not being revalidated is because of cardiovascular risks, and apart from licensing problems with glider pilots it is worth knowing the following facts for your own personal benefit. The risk factors associated with cardiovascular disease are basically aligned in two categories: correctable and non–correctable.

**Non correctable**

Family history If you are unfortunate enough to have a bad family history of cardiovascular disease, then you are really likely to run into significant cardiovascular disease as you grow older, and in fact a bad family history as a risk factor outweighs all the other risk factors combined.

Age and sex Unfortunately as we get older we perform rather like motor vehicles in that we don't perform as well, and the older we get the more our vascular risks increase. As a double whammy for all you male pilots out there, being a male certainly increases the risk significantly because males are more at risk of cardiovascular disease than females.

**Correctable risk factors**

Smoking Smoking is regarded as a heavy risk for cardiovascular disease because it has many ways in which it can affect the cardiovascular system, and for somebody with a family history of cardiovascular disease to continue smoking is almost a death wish.

Elevation of blood fats The dreaded cholesterol levels come into play once more and an elevated cholesterol or an elevated LDL, which is the low density lipoprotein, otherwise known as the "bad" cholesterol, are both risk factors.

Hypertension This condition is well known to be a gross aggravating factor in cardio-vascular disease, but fortunately it is treatable.

Diabetes also presents a very significant risk for vascular disease.

Stress Stress also tends to raise the risk of vascular disease, and it is worth examining our own lifestyles to see ways in which we can reduce stress as much as possible. Often stress can be a finally precipitating cause of cardiovascular events.

Obesity This particular factor tends to adversely affect any health risk and in particular cardiovascular disease. It also increases the risk of hypertension and aggravates diabetes. So paying attention to your weight will help to reduce your risk of vascular disease.

Finally, lack of exercise is a significant risk.

All of these factors are mentioned in case new pilots out there are borderline, and have concerns. You may be able to pay attention to some of these factors so that at your next visit to the Civil Aviation Medical Examiner, you may be able to correct them.

Cardiovascular drugs: hypertension is a common problem in pilots presenting for licences, and because of its associated risk with coronary artery disease and heart failure and abnormal rhythms, it is regarded very seriously. However the Department has issued the following list of medications which it says are acceptable for pilots to use and still actively hold a license. The list is as follows: Acebutolol, Amiloride (in combination with Hydrochlorothiazide), Atenolol, Captopril, Chlorthalidone, Diltiazem, Enalapril, Hydrochlorothiazide, Hydralazine (in combination with a beta blocker), Indapamide, Methylchlorothiazide, Metoprolol, Nadolol, Nifedipine, Oxprenolol, Pindolol, Propranolol, Timolol, Triamterene, and Verapamil.

I thought it would be worth writing this list down because many pilots out there are taking some of these drugs, and it is intended that this list would provide some sort of guide to you so that should you be on a blood pressure lowering agent not on this list (and therefore disqualify you from flying under these circumstances), you may consult with your family doctor to see if he could put you on one of the drugs in this list so that it would not interfere with your license revalidation.

Well, that is all that is reasonably new in this field, so my next communication with you will be at the Medical Committee's annual report.

**Dr. Peter Perry**, chairman

## INSURANCE COMMITTEE RESIGNS

The Insurance committee has sent its resignation to the President effective December 31, 1990 and we feel the general SAC membership should be made aware of our reasons for this action.

We have tried over the years to get the best possible deal from insurers that is suitable for clubs, competition pilots and just–for–fun private owners alike. We have worked with various Board of Directors on the premise that the Board sets general policy for the plan, and the Insurance committee operates the plan within these policies. This has worked well up to about a year ago. Recent actions by the SAC Board of Directors have convinced us that it does not see what we consider major problems in the same light as we do.

The Board has ignored most of the committee's recommendations. Board members, and others, have been permitted to interfere in the committee's day–to–day operation, causing confusion and frustration. For instance, the Treasurer insisted that the insurance cards be distributed through the SAC office and not directly (and for free) by the insurers; someone, presumably with the consent of the Board and without consulting the committee, is getting quotes for SAC on a five–year supply of insurance cards even though the insurers have issued these cards for free; Directors have granted payment extensions without consulting the committee, etc. etc.

However, we had learned to live with these relatively minor annoyances. Our resignation was finally caused by the inaction of the Board on what we consider three major points, presented to the Board at its November meeting.

**1** We feel the $30 per aircraft administration fee charged by SAC is too high and have recommended for the past three years that it be reduced. It is our opinion that the fee should cover SAC's actual expenses of administering the plan. It should not become a general money raising scheme unless the insured clubs and private owners are fully informed of the real cost and by majority vote signal that they wish to make a contribution to the SAC general fund.

The President assured the SAC membership in a *free flight* issue last year that a full accounting of the real costs would be published after the 1990 premiums had been collected. Nothing happened, and when we asked for this cost breakdown we were given an "estimate". It shows committee travel expense of $1263. We are the only committee assessed travel expenses, which in a normal year would be less than half that amount. Usually telephone conferences would suffice and be considerably cheaper. We were assessed one–third of the SAC phone bill to the tune of $2298. Assuming an average of $6 per long distance call, and knowing that the committee had not asked for reimbursement of the calls made by its members, this would mean about 380 long distance calls from the SAC office, almost two per working day EVERY working day of the year! Preposterous! One–third of all SAC staff salaries were charged to the insurance plan for a total of $10,642. This amounts to over 570 person–hours of

actual work time (one person working 7 hours per day for one–third of 247) 82 work days, and one additional person working 3.5 hours per day for 82 work days. If anyone seriously believes that collecting about 350 premiums from 43 clubs takes all this time on a computerized system, have we got a bridge in Brooklyn for him! We were assessed 1/3 of SAC's mailing costs to the tune of $1258. This is enough to send 10 first class letters per year to every private owner and send 15 double–postage letters to every club in Canada, and have money left over. How many letters did you get?

And finally we were charged $1257 for computer equipment. We know something about computers and have computers in our businesses. Assuming computers have a 5 year life and software a 3 year life, then a figure of $1257 per year is too high for all of SAC, never mind the insurance plan portion of it.

And now for the clincher. SAC's revenue from the insurance plan for 1990 was $10,920 in policy fees and $6000 in interest earnings (we have a chance to invest the premium money for a while, thanks to the committee's negotiating skill). And it just so happens that the "expenses" come to $16,718. Some estimate! Is this the detailed analysis promised by the President? Incidentally, outside administrators have offered to do the entire administration for a fee of $5000.

The Board decided not to accept the committee's recommendation, and to maintain the policy fee at $30 for 1991.

**2** For some time certain insurance companies have tried to "skim the cream" off our plan by making special low premium offers to select private owners. This tactic has resulted in the virtual destruction of the SSA group plan, and extremely high premiums for US clubs, commercial operators and most private owners. The committee has always maintained that in a free country anyone can buy insurance wherever they wish. However, the members of a group plan also have a right to protect their plan against anti–selection, and not permit members to switch in and out arbitrarily. It would mean high–time private owners could dump SAC and save a few bucks one year, until someone has an accident and the rates skyrocket or their insurance gets cancelled. They could then rejoin the SAC group plan the next year, getting the best of both worlds at the expense of those who supported the plan consistently. The committee had therefore followed a policy of a one year waiting period before a voluntary departee could rejoin the SAC plan.

A case in point is Cu Nim in Calgary. Most of their private owners opted out of SAC this year for individual coverage inferior to the SAC plan (we carefully compared policy conditions, insurers record in Canada, deductible etc.) but approximately $90 per airplane cheaper than SAC. This caused the SAC plan a loss of about $15,000 in premium revenue. At the same time Cu Nim as a club stayed in the SAC plan because the other company does not want club business. They had two claims this year for approximately $30,000, to be absorbed by the SAC plan. All of us in the SAC plan will be paying for this exercise in "solidarity" in the coming year.

The committee requested that the Board confirm the one year waiting period or substitute some other reasonable penalty, such as an extra $150 fee on rejoining, to prevent the spreading of this kind of anti–selection, which could lead to the collapse of the SAC plan.

The Board decided not to accept our recommendation, because they do not seem to consider the situation as serious.

**3** The committee sees the accident reports and concluded that far too many accidents are caused by pilot error. But "pilot error" is the unfortunate end result of a combination of other factors, ie. attitude, training, supervision, etc. SAC had four fatalities this year, and approximately $275,000 in claims. We recommended that the SAC Board take additional steps and/or allocate additional funds to curb the excessive losses through intensive investigation of the causes, strengthening of safety procedures and training, better checkout procedures, more safety seminars etc. Without casting any reflections on the Flight Training & Safety committee and their hard work, in our opinion safety and training operations at the club level require an all–out effort of leadership and support by the Board to achieve an immediate improvement, or we will be without insurance and therefore out of business in the not too distant future.

The Board decided that the matter is best left in the hands of the committees concerned, and does not require specific further action by the Board.

We have reluctantly come to the conclusion that the difference of opinion between the Board and the committee is too great to be ignored. We want SAC members to be aware of our thinking and our reasons so that anyone interested can discuss this matter at the coming AGM. The new committee and the Board will then have a better idea of the wishes of members with regard to the SAC insurance plan. In the interest of continuity we will, of course, share the benefit of our experience with the new committee if they so desire, and do our best to assure a smooth transition.

**J. Bryce Stout**
Chairman

**Albin O. Schreiter**
member

SAC President,
Chris Eaves replies

I was very disappointed when I received this letter, disappointed because Bryce and Al have done so much over the years to make the SAC insurance program what it is today. Someone will always come along with a so–called "better deal" — maybe better for some on the short term — but not for the group as a whole in the long term. As I said in *free flight* before, the SAC insurance scheme is one of many things that we do well, and it benefits all of our members.

I'm also disappointed that the Insurance committee members don't think they have the Board of Directors' full confidence and cooperation. While we may not agree on everything, I thought we were getting most of the administrative problems solved. Concerning the three recommendations that Bryce presented to the Board in Quebec City, I present the following:

**1** A rough breakdown of income and expenses of the insurance scheme was compiled which indicates that with an allotment of 1/3 of the office resources to insurance (which may be arguably high but within reason), with a $30 administration fee we break even. Even if we did do better than break even, it wouldn't be by much, which isn't a sin considering it is to every member's benefit. There is no conspiracy to create a profit for other purposes.

**2** Concerning members who have left the SAC insurance plan, no resolution was passed, but the subject was discussed by the Board. The Board feels that our insurance should be made available to all members who want it, stray sheep are always welcome back. It is up to the Insurance committee and the Board to show the members the benefits of supporting a group insurance scheme like we have. I hope the committee's warning of the pitfalls of other insurance deals is taken as seriously by the members as it is taken by the Board.

**3** Safety can never be a "new" priority with the Board since it is an ongoing priority. The Flight Training & Safety committee held a meeting in Winnipeg the weekend after our last Board meeting resulting in some good new ideas.

Again, I'm disappointed that a volunteer feels compelled to resign, but Al and Bryce, your input and involvement is and will always be welcome.

## SPORTING COMMITTEE

Since the very successful Nationals at Brandon the Sporting committee has been very busy on three fronts: selecting the World Contest team, reviewing these same selection procedures, and reviewing the competition Rules and Regulations. The seeding list for this year's team selection was prepared by George Dunbar shortly after the Nationals and is listed on page 21. The top twelve pilots plus Jörg Stieber and Dave Webb (who were on the team last year) formed the voting group. The team voting has been completed and the 1990 ranking is as follows:

| | | | |
|---|---|---|---|
| 1 | Peter Masak | 8 | Ian Spence |
| 2 | Heri Pölzl | 9 | Paul Thompson |
| 3 | Kevin Bennett | 10 | David Frank |
| 4 | Dave Webb | 11 | Andy Gough |
| 5 | Ed Hollestelle | 12 | Colin Bantin |
| 6 | Walter Weir | 13 | Stewart Baillie |
| 7 | Jörg Stieber | 14 | Wilf Krueger |

(Note: Wilf Krueger withdrew from voting.) The top 4 or 6 pilots will be representing Canada at the 1991 World Contest.

The selection process this year has brought to light a serious weakness in the system. There is no objective way of dealing with pilots who were not on the list but feel that they should be included in the voting. The only avenue available is to appeal through the SAC Board of Directors. If this process is unsuccessful it can lead to misunderstandings and hard feelings all round. The solutions are either to make the appeal process more accommodating or to dispense with the voting and have a purely formularized process. The pilots and SAC Directors have indi-

## LEARNING... ROPES from page 11

10 Tape the sleeve hose and the loop hose with adhesive cotton tape. Apply lots of covering, starting just below the loop hose endings as shown in Figure D.

11 Moisten the spliced towrope section extending from the lower end of the sleeve hose with the sponge.

12 First by hand, pull the short backstop seal as far as possible towards the end of the sleeve hose. Unless you have very strong hands, you will likely get stuck after a short distance. We shall take care of this next.

13 Wrap the towrope once around one foot in such a way that the tow ring reaches up to your waist, then step on the rope to anchor it firmly to the floor.

14 Using a pair of combination pliers as a "pusher", force the backstop seal right up against the lower end of the sleeve hose as demonstrated in Figure E.It will require considerable force. (If this were not the case, the backstop seal would not serve its purpose, which is to seal the Tygon shielding against the entry of dirt and water, and to prevent the loop hose joint to come apart.) Use only the rounded jaw of the pliers and be sure that you do not in any way injure the strands of the rope! When you get to the point shown in Figure E, the rope will begin to bulge. Remove this bulge by manually pulling the two hoses in opposite directions. After the rope is straightened, force the backstop seal into the sleeve hose by about 3/4" (2 cm). In doing so, you will notice that the sleeve hose is getting slightly compressed. That's quite okay as this prevents the sleeve hose from slipping out of the loop hose when the towrope is placed into service.

15 Repeat steps 1 to 4 at the other end of the towrope. In cases where the towrope is never reversed and always remains attached to the towplane, both the sleeve hose and the backstop seal may be omitted at this end. However, this requires that the loop hose is firmly taped, including the first 2.5" (6 cm) of the rope exiting from the latter. When using 5/16" hollow-braided rope stock in place of the 1/4" material given above, the backstop seal is omitted at both ends of the towrope.

The next issue of *free flight* will include information on the few changes necessary to use the above procedure with triple–twisted rope.

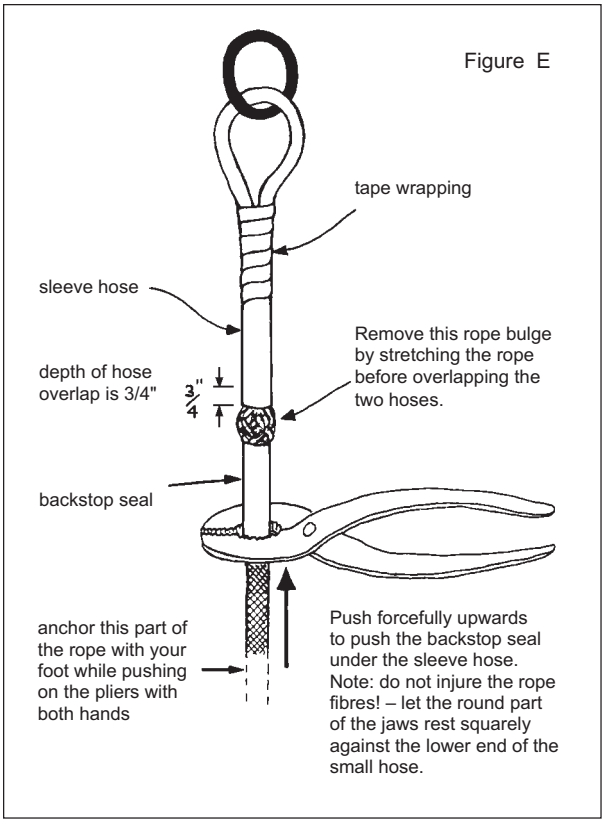


Figure E

**General Comment**

Although the modification described in this article was accepted as an improvement both at the "Ridge" (where the CFI wanted all new towropes to be converted to the new design), as well as at my home gliderport in Canada, I have encountered one highly regarded glider pilot who expressed some reservations about the modification. His initial objections were based on two points:

1 The loop hose makes it impossible to have the rope form a complete coil around the tow ring. The single fold necessitated by the modification makes the towrope more vulnerable to failure.

2 The Tygon hose will turn opaque and close inspection becomes impossible.

On the first point, I submit that a bare rope coiled around the tow ring is most unlikely to have any greater strength than a singly folded rope protected by the Tygon shielding. Whatever initial advantage the conventional loop design may be deemed to have is completely lost after the unprotected rope begins to abrade and fray. This usually starts only after a few tows. Furthermore, the 1/16" (1.6 mm) wall thickness of the Tygon hose increases the bending radius of the tow ring "wrap" by about 50%. (Standard tow rings are fabricated from stock of approximately 1/4" (6 mm) in diameter). The Tygon also acts as a very effective shock absorber. As to the second point, if the Tygon–shielding is sealed properly, it will remain clear even after extensive use. (It can be used twice over, if need be). Where the areas below the tape are suspect, it is quite easy to remove the tape from the Tygon hose for close inspection. When I showed this particular pilot a modified towrope whose loop endings were cut open after at least two weeks of daily pounding at the "Ridge", he was astonished to discover that the exposed rope literally looked like new and that the Tygon hoses had remained clear enough to easily see through them. Nevertheless, in response to the reservations originally expressed by him, I proceeded to make up one special towrope on which the loop hose is reinforced with a short piece of 3/8" (10 mm) Tygon hose. This insert, which is about 2 3/4" (7 cm) in length, is located inside the loop hose and lies between the forked ends of the sleeve hose marked 'x' and 'y' in Figure D. To install the insert in the loop hose, it is placed on a short piece of 1/4" (6 mm) rope and a knot is made at both ends of the latter so that there is about 8" (20 cm) of rope between them. The loop hose and the insert with the knotted rope are then submerged in water to lubricate them. By tugging the ends of the rope one can now easily install and centre the insert in the loop hose. The insert not only provides additional cushioning and reinforcement, but also increases the radius of the rope wrapping around the tow ring by 100%!

I should perhaps add at this point that I always replace the highly stressed loop hose when making up a new towrope. It is really not necessary, but then what is the cost advantage of saving a 6" piece of hose? The sleeve hose is usually used twice.

Before closing this article, a few words on the storing of towropes during a competition. Mark Conner of the Caesar Creek Soaring Club of Waynesville, OH, told me that at his club the towropes are stored in a large plastic garbage barrel. They simply coil the ropes into the barrel, one on top of the other. The towplane end of each rope is secured in a short vertical slot cut into the upper rim of the barrel. The other end is left lying loose in the bottom. Mark claims that this method of dispensing towropes is so reliable that they can be hitched to the retrieval vehicle or the towplane without any trouble at all. Each rope uncoils itself as fast as a rattlesnake. Neat and ingenious! •

## Sporting Committee report

cated that they prefer a formularized process. Therefore I am formulating a new team selection procedure based strictly on the performances of the pilots in Nationals and perhaps other high ranking contests over the past three years. The Sporting committee members are collecting ideas for the formulas so if you have any suggestions let them know.

The '91 World Contest has moved to Uvalde, Texas because of a conflict with the operations of the water bombers from Minden. During an emergency it's not practical to have the water bombers waiting for 50 sailplanes to finish before they land. (The Canadian Nationals has been moved up to 24 June.)

The competition Rules and Regulations will have been reviewed by the time of the SAC AGM. There are no major issues this time, just refinements on last year's rules. One point to consider is whether we should continue to run a parallel scoring with handicaps and award an overall "best pilot" trophy. This was initiated because of the sponsorship we had from Bacardi which we no longer have. If you have any thoughts let your committee member or me know.

**Colin Bantin** Chairman

# Club news

## BLUENOSE EXERCISES RESTRAINT

Everyone carefully does up their straps. It is probably the only item in the pre–flight checklist which never gets forgotten; but how much restraint does that amount to? In our club aircraft, not a great deal. We recently replaced all straps and buckles, and apart from being a bit stiff and hard to shorten, they do their job as they should. What comes between the straps and the seat is where the problem lies — or rather sits. We have a plastic washtub full of old bits of foam rubber, and some loose boat cushions; these come close to the recommended density, which the foam most definitely does not. In fact some of our smaller pilots float around all over the place and this has a number of serious implications.

The winch does a good job of emphasizing the shortcomings of our personal restraint system. There is 385 horsepower available to our drivers and, at times they will exercise the option; the result is a rapid departure for glider and pilot. Sometimes if the pilot is small and "foamed in place", so to speak, his or her acceleration is a few milliseconds later than that of the surrounding aircraft. The result? No contact with the rudder pedals! Now how does the winch launched pilot signal for "LESS SPEED"? Mainly with rudder, of course. The answer in this case is to lower the nose a little (giving less speed) and hang on gently, until a safe height is reached. The winch driver catches on, or the weak-link breaks, in that order of preference.

We have commissioned one of our members to equip all the club gliders with the recommended high density filling and we do now have a set for one of our K7s, which fits the largest of our fliers, and packing cushions to fill up the gaps behind smaller behinds. This is not as easy as it may seem, since our K7s are slightly different. It is vital that each part is held in place as the pilot gets aboard and straps in; the primary pads will be held in place with large patches of Velcro on wide straps sewn on where they match the seat structure. The intermediate cushions are added, and are stuck to the primaries to keep them up where they are needed while the pilot "belts up", as the English have it. This winter, other sets will be made to suit the other K7 and the two K8s also. The sets will be colour coded to keep the fit correct, and all should then be well.

What next? If the same small person is also a small light person, there is the matter of ballast! In our late lamented Club Astir (which lost an argument with the local foliage and has recently risen like new from the ashes) the ballast weights are held in place with two whacking great (8 mm) bolts and nuts, mounted under the seat against the bottom skin of the glider. In a sudden arrival, no way the lead will fly. In spite of this good example which came with the package, we have weights which sit under the person — that is until the glider comes to a sudden stop like the sudden start, except usually more so. Then, the previously harmless item becomes a forward moving projectile with results you would probably prefer not to consider.

Okay. Job number two this winter — off to Canadian Tire for some of their seatbelt material, and two sets of buckles. Now we can sew the nylon webbing all round the weight cushion, and secure the wayward items as well as the bottom above, to the structure of the glider.

Now what, you may say. How about the batteries? You all dealt with that one long ago, ain't that right?

**Dick Vine**
member, Flight Training & Safety Committee

## NEW BC CLUB IN WORKS

Living in Kelowna, I am the most easterly VSA member regularly flying out of Hope. Since fellow Kelownian Hans Kruiswyk and I met at the Fairmont Soaring Camp last fall, we inevitably began to consider restarting soaring activity in the Interior. My motivation has been fuelled by endless 4 hour commutes (recently reduced to 2-1/2 hours via the Coquihalla highway) and a number of trips where beautiful Interior soaring conditions were abandoned only to glide around in murky coastal clag for the weekend. Our interest has resulted in inspection of maps, fields, and gliders, chats with oldtimers, long distance calls and many evenings of discussion.

An organizational meeting was held on 25 September with all of the "serious" local gliding enthusiasts we knew, and the following conclusions arose from the meeting:

- A nucleus of about twenty are willing to contribute the start–up funds for a club.

- To reduce high start–up costs, it is essential that we lease or borrow a towplane and hopefully a glider until we can afford to purchase them.

- Reviving the old North Okanagan Soaring Club would be an easy way to incorporate.

Merritt was chosen as the site because it is a very central location, within 75 minutes of Kelowna (via the new Coquihalla access), Kamloops, and Hope. It is out of the coastal weather patterns and has a nice municipal airport. Initial contact with the town administration has been positive. Soaring conditions should be good to excellent, with a number of valleys converging at the town (to provide ridge lift) and sparsely treed ranchland generating good thermals to the north. Cross–country flights to Cache Creek, Kamloops, Kelowna, Penticton, Princeton and Hope should be feasible. (Perhaps all in one great "circle tour" for the ambitious.)

The biggest obstacle to overcome is the acquisition of a towplane. A number of alternatives are available, the current plan is that four or five people will buy a Citabria privately ( a Pawnee may also be available).

We expect to have a high tech fleet of modern gliders comprised of a 1–26 and a 2–33 or Blanik. We have confirmed the 1–26 being available for club use, with negotiations still pending on the trainer.

It is our hope that VSA pilots will join us frequently next summer for cross–country and thermal flying and perhaps training. We would like to work out a reciprocal membership agreement between the two clubs to provide access to each others towing facilities and glider fleet. Formation of the Okanagan club will contribute to an exciting new age of soaring exploration in British Columbia.

**Dave Burgess,** from Vancouver Soaring Scene, and **Hank Kruiswyk**

## HIGH WINDS ROCK HANGAR

Two days before the scheduled Hope close–down, high winds rocked the VSA hangar and threatened to damage the two Grobs within.

Winds from the south gusting to 52 knots prompted the Hope weather office observer to contact the VSA to advise of potential damage to the gliders. George Brueckert responded quickly to the call and proceeded directly to the field. The southerly winds had caused the horizontal support bar on the south end of the hangar to flex so much that the vertical support bars between the bar and the ground fell free. George used rope and stakes to provide additional support for the hangar and to secure the Grobs inside.

The next day, similar winds were reported and this time Peter Timm assembled a crew to respond. Peter, his helper, Stan Pytel and Frank Pilz all arrived at Hope to find a 10 x 30 ft strip of the hangar cover torn free and flapping in the wind. They derigged the Grobs and load them into their trailers. The hangar cover, weakened by exposure to ultraviolet light, was due for replacing this year. Peter is currently investigating an alternative fabric which is treated with UV inhibitors to avoid similar material degradation in the future.

Thanks to everyone involved for responding so quickly to this urgent situation.

from Vancouver Soaring Scene

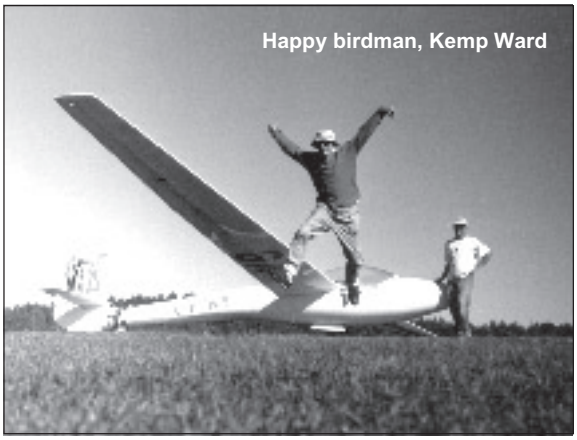
## APPALACHIAN NEWS

What a year! Our club had been almost in limbo for some 5 years. Brave, concerned members kept the faith — it became almost a cult... We decided early last year to rebuild the Bergfalke III. Our engineer Aimé Bédard tested the fabric and recommended that the wings be recovered (after 25 years). We rented an abandoned night club, the size of a hangar, and stored our equipment. We repaired and painted everything in sight.

The working conditions were incredible, lots of light, heat and comfort. All we had to pay

was the heating. Luck stayed with us. Yvan Chassé was on a sabbatical. Yvan is skilful in anything. Furthermore the shop was a few feet away from another member, Michel Prénovost, another jack–of–all–trades. With Robert Gaucher, our CFI, the trio could rebuild anything (please no contracts).

Our president Kemp Ward was the unlucky one. He lives some 30 miles from the shop and had to put lots of mileage on his 20 year old Volvo. Most of us lived just a few kilometres away. We repaired the Bergfalke, the Ka6, worked on the 2–22, the Pioneer, and the Libelle.


Happy birdman, Kemp Ward

Were we in shape for the season? You better believe it! Kemp would not leave us alone. Meetings, pep talks, recommendations, safety, finances, reunions one after the other and then flying ... Here are the results:

• Four new solos ... Nathalie, Douglas, David, and Lilliane — a power pilot with 250 hours, an aeromechanic, works at the airport — joined the other towpilots, soloed in the Bergfalke in 3 hours, then the Ka6.

• David gave us an equipped tent trailer (collapsible roof) as a control tower on the field. We met the staff of the FSS under the direction of Harry Lush and agreed on a "Mode d'opération". It worked like a charm.

• We slaved on an "Initiation to Soaring" contract with the Université de Sherbrooke (15.34% of our revenues) as our club was inscribed on the curriculum of sport activities at the "Centre Sportif de l'Université de Sherbrooke". This program was successful to the point of exhaustion. We initiated some 30 students to the sport.

• Gilles heard that a 1-26 was for sale in St–Jean–sur–Richelieu, scrambled in his Ercoupe, picked up Kemp in Bromont, had dinner in St–Jean with Aimé Bédard, concluded the deal with Air Industries and flew home. Next year, one more glider in the pack.

No accidents, no incidents ... just wonderful moments. Visits to Champlain and Mont Tremblant ended the season. The last flight was on November 3rd. Here are our numbers:

| | | | |
|---|---|---|---|
| 1990 | 445 flights | 1989 | 320 |
| 1990 | 241 hours | 1989 | 286 |
| 1990 | avg flight 32 min | 1989 | 54 min |
| 1990 | longest flt 3:12 h | 1989 | 6:20 h |
| 1990 | solos 4 | 1989 | none |

Best moment: two girls in command, towplane by Lilliane, Ka6 by Nathalie (22 years old, our youngest). Finally, while flying late October and November, we shared the sky with thousands of ducks and geese on their way to the south. Lucky ones! We folded our wings on November the 10th during a rainstorm which turned to heavy snow. By Sunday, 20 residents of the Township were without electricity due to broken trees. What a way to end a season. The photograph is of our president, flying with joy. He was last seen heading south with a flock of snow geese.

**Gilles Boulanger**

## BONNE CHANCE, BONNECHERE!

It was the Labour Day weekend and I was visiting my daughter, who has had the good sense to move from Toronto to North Bay. I said that Janet and I would be delighted to visit her country seat on the shores of Lake Nosbonsing and mingle with the locals. "Not only that," I said, "we can visit the Bonnechere club and do a little flying. One has to bear in mind the important things in life.

I had already called Bob Maxwell and received instructions for finding the club: "It's off Highway 17 about 3 miles east of Deep River; you can't miss it." We nearly did, spotting the sign as we went sailing past what looked like an impenetrable wall of vegetation. On our second attempt we found the entrance road, which wound back through the trees before depositing us at the eastern end of the runway.

A 2–22 was in place at the takeoff point and Bob and a student were doing a walk around; the Theilmanns, Iver and Pam, were inspecting the club Blanik and a very nicely maintained Skylark, respectively; a towrope was being laid out and checked, and the towpilot was on final after a check flight in the Cub. So it was a small, select band which welcomed us warmly to their club.

Off went the 2–22 and Iver showed us around. I would strongly recommend a trip to Bonnechere to other spoiled fliers used to operating in the wide open spaces of Southern Ontario. There is one runway which has been hacked out of the forest and is 5000 feet long. It needs to be, if there is a problem before you clear tree top height you must land straight ahead, and tree top height is high!

The Cub returned and towed off the Blanik. "We'll take it when he gets down," quoth Iver — which he did about 50 minutes later. Meanwhile Pam galloped off in the Skylark and was soon circling to the west and climbing; obviously there was lift around.

Back came the Blanik. A walk around and I took the front seat and Iver the rear. I looked down the runway. What had seemed narrow before looked very narrow now. "Oh well," I thought, "aim down the middle." The towpilot put that idea to rest by revving the engine on the "all out" and vanishing in a cloud of dust. He was still attached, because the rope pulled taut, and we sped off down the runway.

"Good grief!" from the front seat. "It's all right," the quiet voice of confidence from the rear, "here we go." I felt the stick move a little under my hand and there we went, and out of the dust emerged the towplane — just where it should be. Nothing imparts the impression of speed as much as zooming along an avenue lined with trees which seem to get closer as you go. We eventually cleared the tree tops and the towpilot turned over them to the right and then left to parallel the runway — the idea being that if a problem, like a rope break, arose, you could turn left and get over the runway for a downwind landing with minimum loss of height.

We released in lift at around 2500 feet and I could now take a good look at the scenery. It was beautiful. Trees everywhere, masses of them, and the Ottawa River winding along, and the hills on the Quebec side with the lakes perched up among them. Chalk River with its nuclear plant was to the southeast, and beyond that the big drop zone at CFB Petawawa. The weather was glorious; a little too hazy to spot the radio telescope which Iver assured me was "on the horizon somewhere", but you can't have everything at once and we had lift.

We wagged our wings at Pam in the Skylark on the way down and were joined in what seemed an incredibly short time by Bob in the Skylark on the way up, with whom we shared a nice, comfortable thermal for a while until Iver quietly suggested that, as we had been up for a good hour, we might go back home and let someone else fly the bird.

I must admit to having lost all sense of time while soaring over such impressive country and I took the Blanik down feeling a little guilty at having to be reminded.

It is an interesting circuit and approach over the trees at Bonnechere. I kept fairly high, turned final closer to the end of the runway than I would at a more open field and used lots of spoiler for a steep approach. Obviously I hadn't made a complete fool of myself, as Iver offered the Blanik, suggesting that I fly with Janet. While being sensible of the compliment, I thought I needed another trip or two with a club member before I felt sufficiently familiar with the field to go solo or take someone else, so Janet went with Iver.

No avgas is stored at Bonnechere and the towplane is flown to Pembroke, about 20 km, for refuelling, so after launching the Blanik the towpilot very kindly took me along. "I'm afraid we can't go to the shortest way," he said apologetically, "as we are not allowed to overfly the Chalk River plant or CFB Petawawa." If I felt any disappointment, I am sure I didn't show it as we flew the scenic route to Pembroke and back.

All too quickly the afternoon sped by and it was time to pack the hangar and depart. We had spent a great day with our new–found friends — good soaring weather, beautiful country to fly over, and more to the point, good company. Thank you Bonnechere. May you fly forever, and when I am around your way I shall drop in and say "Hello" again.

**Norman Perfect**,
Base Borden Soaring

## CERTIFICATES SELL WELL

Winnipeg flying activities may be over at Starbuck but the various committees within the club continue to provide valuable support during the winter months. A group formed to discuss the pros and cons of winch launching and towplane replacement had met in the late fall and set guidelines to follow. They will be making recommendations in the new year to the new executive which is now in place.

Our new president is Jim Cook. Jim has been with the club for several years and brings with him many more years experience as a chartered accountant. He owns a Bergfalke II, C–FUVO, which he flies at every opportunity and has also been working on a partially completed Tern which was started by another member several years ago.

Another group that has been active is the Publicity and Promotion department. A very successful promotion in the form of "Introductory Ride Gift Certificate" sales prior to Christmas saw over 70 orders being placed with a great deal of interest being shown in ground school. A single ad (duplicated on right) was placed in the newspaper three weeks before Christmas and the response was overwhelming. Mailed out with the Gift Certificate was a club brochure and cover letter that explained just what the purchaser was getting. A similar campaign is now planned for Father's Day. This could become an annual event. Although the cost was fairly high ($200 for the ad and $200 for Certificate printing, etc.), the only way that we can survive as a club is to get out there and be highly visible to the public.

**Mike Maskell**
Winnipeg Gliding Club

**THE ULTIMATE CHRISTMAS GIFT**

(an aerial photo of a glider)

**$25.00 PER PERSON**

To fly, one of man's greatest dreams. Realize this dream with the Winnipeg Gliding Club's Introductory Flight Gift Certificate offer. You give the gift certificate for Christmas and your friends make their own flight appointment anytime during our soaring season (May through October). Bring a camera! The sky's the limit. We will take their spirits soaring.

Order yours now by sending a cheque or money order for $25.00 payable to the **Winnipeg Gliding Club, c/o 489 Lodge Avenue, Winnipeg, MB R3J 0S5**

Hurry, Certificates are limited.

For more information phone **837-8128** anytime.

(club logo)

## OLDTIMER VISITS "BACK HOME"

On 15 November 1990 I was on the plane heading to Yugoslavia, my native land which I haven't seen since 1983. Although that year I had a chance to visit my family and friends, I never had either time or chance to visit my former aeroclub, airfield, and the stomping grounds of my youth. This time I was determined to do that — first, foremost, and without excuses.

On Saturday, 16 November, my brother Dzemal and I drove to the airport Butmir, just south of Sarajevo. The old hangar is still there loaded with gliders: The Weihe, YU 4066, hangs on the wall disassembled. I had many fine hours aboard her. A fine ship she was, whether thermals or ridge lift — even in the "Yugo" (a wind blowing from the south, loaded with moisture from the Adriatic Sea) and its gusts and turbulence, and sometimes outright violence. Another Weihe was gone, so was the two seater Kranich, and the Kurir, PO 2, and Fieseler Storch towplanes ...

The new fleet consisted of a couple of Blaniks, Pilatus B4, and two Cirrus, towed by two Super Cub 150s. The club also employed a couple of Utva 75s for power flying and an Utva 66 for skydivers.

I cautiously approached a club member and inquired about the people I used to know, and learned that a few were still flying, such as Osman Tasevac and Mirce. Others were flying with Yugoslav Airlines: my former instructor Vejsil Saracevic and a member of my class of 1964, Zeljko Stolba – both flying DC–10s now. Walking toward the launch point, members started to push the equipment and talked about soaring in Canada. When I inquired if I could get a checkride and possibly fly solo I was quickly assured that "Oldtimers" like me are more than welcome.

A little later I was invited to fly with the CFI Gordan Vinkovic in a Blanik, YU 8352. A Super Cub towed us to 300 metres in very calm weather conditions — inversion. On tow at 115 km/h, after release 80–85 over dear old ground. So much has changed. The new airport for jet traffic is adjacent to the old airport and there is a ceiling unless one is specifically allowed higher. Urban jungle is just upwind where grain fields and luscious meadows once were. Gordan and I did a few turns and at about 180 metre were ready for left downwind... (Soon) we were on short final, and with a bit of help from the wheel brake we stopped by the crowd. Vinko jumped out of the front seat and I quickly transferred into it from the back.

The solo trip was a short affair, right before the sunset in very stable air. After landing the Oldtimer was not allowed to help with pushing gliders.

The day after, Sunday 17 November, one of the members took my brother for a ride in Utva 75 YU–DHI. As I hung around and waited for him, Danilo asked me to hop in for a ride. Having been treated so well yesterday I didn't want to abuse my welcome by using up someone else's time or turn, but he insisted. After a briefing in the plane we took off. The Utva 75 is very similar to a Cherokee 140. In the Yugo wind that started blowing, it rocked laterally quite a bit. Since spinning is prohibited on this type, we practised stalls and something of a wingover, ending briefly in a spiral. Another touch and go and after a full stop I was about to shut off the engine when Danilo said, "Okay, you fly now!"

I was pleasantly surprised since I didn't expect to fly it solo, so I did a short flight. The soaring crowd probably isn't that interested in the nuts and bolts of power flying, so I won't go into details.

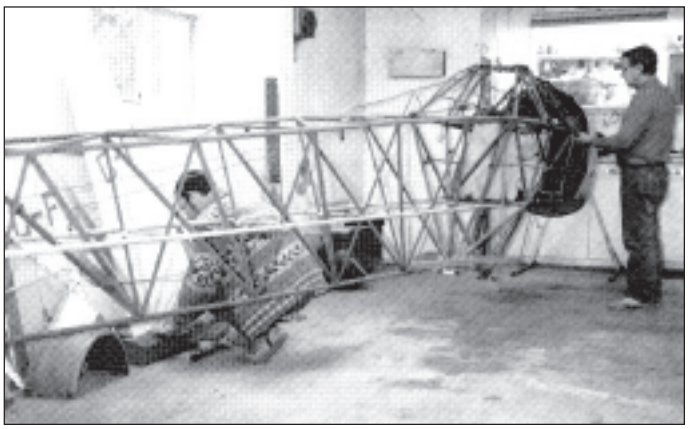
In closing I would like to add that my treatment by the people from my former club, both by a few remaining "old" members and mad new ones was nothing but first class, which made my stay in Yugoslavia even better. When I offered to settle the cost of my flights, I was told, "It's on the house for the Oldtimer."

My sincere thanks go to Aero club Sarajevo and its members.

**Ivan Duric**, Vancouver Soaring Association

## ALBERNI VALLEY LOOKING UP

The photo shown below was taken early this year while we were recovering and painting the fuselage of our 2–33. While it took us two months instead of the projected two weeks, it was an interesting and instructive process. The material used was HS90X which proved to be easy to work with and provided a professional finish. The year was successful in other ways. Our membership rose to ten, and with the advent of three private gliders, the hours flown were the best ever.



The outlook for 1991 is even more promising. A new airport should be in use and the 4000 foot runway should put our winch launches within reach of the Beaufort Range. If all construction and repair jobs projected over this winter are completed there is the possibility of eight aircraft flying here next summer, a number which positively boggles our mind!

Best wishes, **Doug Moore**

# Hangar flying

## MORE SELF–REGULATION FOR RECREATIONAL AVIATION

...based on an address to the Annual Director's Meeting of the Recreational Aircraft Association by a ranking Transport Canada official, the message is clear that aviation organizations are going to be required to manage more and more of their affairs as time goes on. The reasons are simple. Like it or not, Transport must take a position which gives priority to commercial aviation. This leaves amateur building, antique and classical aircraft, in other words all of those aircraft dear to our hearts, somewhere out in left field. Of significant importance to us is the manner in which regulatory and enforcement procedures for recreational aviation will be allowed to develop as time goes on.

Addressing this matter specifically, the speaker made it clear that potentially our future is in our own hands, and he emphasized the importance of the role we must play. In practical terms, any reasonable submission from "industry" related to the future of recreational aviation will be given consideration by Transport. The untapped potential to be a part of the self–regulatory development in Canada is staggering indeed. No other country in the world has the same level of opportunity, with the exception of England which has had a form of self–regulation in private aviation for many years. Perhaps now it is our turn. It is up to us...

**Jack Greenlaw**, president
Recreational Aircraft Association of Canada

SAC may have now and in the future even more of a chance (with a parallel responsibility) to govern soaring and sailplanes in Canada. It's too bad, however, that the principle of "the least government being the best government" is probably now being offered to general aviation by the bureaucracy only as a result of its own budget restrictions. Tony

## MAJOR BREAKTHROUGH IN DRAG REDUCTION?

Recent flight tests conducted by Ron Tabery and Peter Masak on an ASW–20 have confirmed a dramatic reduction in profile drag, controlled from the cockpit via an electronic device which acts to eliminate the laminar separation bubble from the wing. The device reduces the profile drag of the Wortmann airfoil by an average of 18% at both low and high speed regimes. The physics of the laminar separation bubble and its elimination have only recently been understood by researchers at the NASA Lewis Research Center in Cleveland, Ohio. The phenomenon of the laminar separation bubble is mostly a problem only for low speed aircraft which operate at Reynold's numbers below one million.

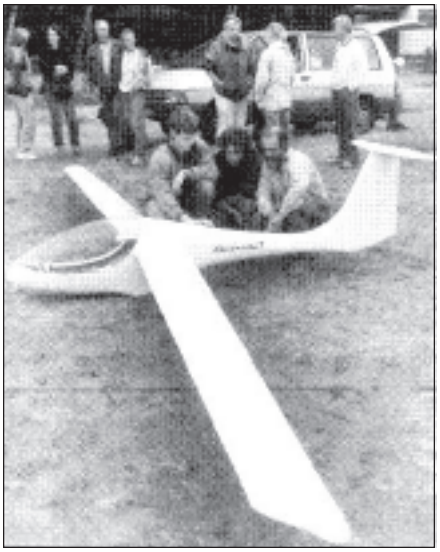
The full range of improvement with this technology has not been fully exploited, however wind tunnel tests also demonstrate that maximum lift of the airfoil can also be increased, along with a dramatic reduction in drag.

This technology breakthrough is expected to result in sailplanes of substantially higher performance than currently available. Tests are now being done to determine whether the technology can be adapted to a Nimbus III in order to demonstrate it at the World Championships to be held in Uvalde, Texas in 1991.

## "MINAIR" — THE WORLD CLASS GLIDER?

She flies — and therefore Professor Günter Rochelt, Hochschule für Bildende Künste, Lerchenfeld and his assistants of the Technische Universität Hamburg–Harburg know more about their model than other participants in the FAI competition. "The construction team submitted their plans for the World class glider only at the last moment", says Philip von Schröter. The reason for this competition is to construct a glider which is light, safe and economical — say DM 25,000 ($20,500). The winning model is supposed to be built under license worldwide.

"They wanted only a drawing", says von Schröter. However, Prof. Rochelt who conceived the idea, and his assistants Jens Wilhelm and Dirk Mämpel, not only produced the blueprints within three months, but also a 1/2 scale radio controlled model. "Minair" is the name of the quiet glider with a 6 metre wing span. 1500 hours of labour, and about DM 4000 paid by Rochelt himself for fibreglass material, were needed for this model. The 14 kilogram sailplane model has made twelve test flights without any problems.



Röhrbein

For von Schröter and Wilhelm, working on the Minair was beneficial in every aspect. They submitted the plans for the Minair to the FAI and say, "The possibility of working with modern materials does not arise every day." Later, these two members of the Akaflieg Hamburg want to issue a handbook "How do I build a sailplane". (The Akaflieg Hamburg was resurrected last June.)

Both Akaflieg members believe that they have a good chance in the competition despite the 80 competing participants from all over the world. "Together with the plans and a small table model, we also submitted documentation with photographs and a video of the test flight", says von Schröter. But even if the jury in Paris doesn't decide for "Minair", Günter Rochelt will built this glider in any case, projecting a two year construction time. If they are the winners, their work will be sponsored by the Fédération, and "Minair" could be built worldwide under license for 20 years without changes — perhaps up to 1000 models per year.

submitted by **Jochen Selig**, Hamburg

## 1991 LILIENTHAL COMPETITION

The International Gliding Commission has set this competition to honour the memory of Otto Lilienthal, who undertook his successful flight experiments 100 years ago and thus inaugurated the age of aeronautics and astronautics. In addition, the performance capabilities of today's motorless air sports should be demonstrated in order to promote public recognition of these sports.

Paragliding, hang gliding, and gliding flights may start from any airfield in the world and ends 14 August 1991. Participating pilots must have a valid FAI sporting licence. Documentation is to be completed on the standard FAI record forms (held by the SAC Records Chairman).

Gliding flights are to be made with single place gliders or two place gliders with only one pilot on board for the following three record types:

- The greatest distance over courses defined in the Sporting Code, Section 3, paras 4.3.2.1 to 4.3.2.4.
- The best speed over a triangular course of at least 300 kilometres (para 4.3.2.5).
- The greatest altitude (para 4.3.2.7).

Flight documentation must arrive not later than 28 days after the flight to: Deutscher Aero Club e.V., Referat Segelflug, Box 71 02 43, D–6000 Frankfurt 71, Germany.

The winners of each record type will be awarded a Lilienthal Memorial Trophy, and those finishing second to sixth will be awarded certificates. The prize giving will take place during the General Conference of the FAI in Berlin in October 1991. The organizers hope to be able to provide expenses to the winners to attend.

## SCHREDER CLUB

If you are the owner/builder/pilot of an HP series sailplane or an RS–15, and have the desire to share your experiences with others, you can join an informal Schreder Pilots Association. Send a stamped, self addressed envelope to J. Duncan Cooper, 1509 Beachview Drive, Virginia Beach VA 23464 USA. •

## TELLTALE WIND from page 9

outdoor latrine; wiping our goggles and visiting the outdoor latrine.

An elderly gentleman with a grey beard came because it was his birthday. A moment after he landed he was standing before us, wishing us luck. I couldn't keep from asking, "What was it you found?" He sighed, turned his gaze once more to the blueing sky, and in a soft, gruff voice uttered, "You'll like it up yonder."

I remember how the clouds looked that dusty day in August. White and puffy way high up, and strung together with dirty bottoms. The wheat swaying in the Wisconsin breeze, in the I–can't–believe–I'm–actually–going–to–jump afternoon...

The Cessna 150's wings shimmer with sunlight as it slips down final. The aircraft disappears behind golden crops and sends up a cloud of dust as it settles. Like the seagull, this craft is designed for flight. A great blast of propeller on rudder and out of the dust she taxies: capable, proven, efficient.

As I crouch low in the cockpit, back to back with the pilot, I consider the difference between the two of us. Although I have never met the pilot, I know we share a common bond: the love of flight. Though what separates us at this particular moment, it seems, is the pack on my back and my intent to use it. A pilot has faith in the aircraft. He knows that once it reaches a certain speed (provided all other requirements for flight are met), it will leave the ground. The aircraft, like the horse, carries us to where we want to be. The stick or yoke is its reins. The rudder pedals are stirrups. The skydiver has no airplane, no horse, no saddle; he finds himself in flight, somewhere between the stirrup and the ground.

As the engine starts and we begin to bounce and sway over the dirt and gravel, I consider the high level of trust which I place in the aircraft. I realize that in order to jump, I must transfer that trust to the parachute. The wheat, like summertime, slopes by in a sentimental yellow blur. The horizon broadens, the green earth grows larger and farther as we gain altitude.

I scoot into position now slowly, carefully, inch–by–inch. The pack on my back feels like a million pounds of lead. I look to the pilot for reassurance, but he offers none. Just flies, eyes to the horizon. So I turn my gaze to the lakes, the rivers, the distant earth. Down below, people must be fishing, laughing, sleeping in the sun. For a moment I wonder why I have never taken up fishing; but that moment vanishes as I spot my landing target and state that I am ready.

"GIVE ME A CUT!" shouts the jumpmaster. The Lycoming engine slows to a lazy cant. The door opens and my heart rolls into an inverted spin. I place one foot and then another on the gear strut. Cold blue terror rips right through me. I hang from the wing strut, eyes focused on the dirty white underside of the wing, boot laces blowing in the slipstream. Just what am I letting go of? I peel one finger off the strut at a time ... noticing ... the ... dents ... they ... seem ... to ... be making ...

"ONE THOUSAND!" Ever wonder what it would feel like to go tumbling through that blueness, blue all around, cold deep consuming and hey this ain't so bad blue? I'm not falling but floating rather, floating on the ocean of sky. Somewhere the aircraft and all my apprehensions. Somewhere the earth rushing to meet me.

"TWO THOUSAND!" And here I am in the middle of the abyss not afraid at all ... Thinking about Perspective and how easily it will change. In flight we do not move about the world, the world moves about us. Thinking about freedom and what it is to fly.

"THREE THOUSAND!" That distant rhythmic voice confidently keeps counting in a soothing hypnotizing manner. How many days have I been counting? In how many dreams have I been afraid of falling? Look all around ... all around me is Now; in flight there is no waiting.

"FOUR THOUSAND!" Though only four seconds have elapsed since the familiar world has vanished it feels like six months, and by the time I begin to feel a little homesick, my chute opens. A great canopy of irridescence appears above my head, and the green summer world is back again.

I should be relieved or even a little happy, but between my boots and the ground lies two thousand feet of acrophobia. A wave of fear washes over me. It is the kind of fear that comes when you ride a Ferris wheel high above the reeling land and your carriage suddenly stops and begins to sway at the top. Instinctively I grab for the shrouds and close my eyes. Aeolus is laughing, "Who is man, that thinks he can conquer the sky?"

Nothing looks familiar, I am lost and headed for the trees. Fortunately my radio comes to life, "Jumper in the air your chute looks good, the field is directly behind you ... when you're ready, release the brakes."

I hang in the air admiring the symmetry of the risers branching up into the brilliant canopy overhead. I reach up, pull the toggles down to my waist, and pause before letting them up again. The parachute assumes the path of a slow flying glider with a poor glide ratio. I turn downwind now and ride with the wind towards the field. I pull the left toggle down and then turn right. The horizon first rises and fades to right and then returns, falling to the left ... Dutch Rolls. I am smiling.

Whispering all around: gentle, familiar voices of the sky. "Let go of thy fears Brad Jon, for you have let go of thy earth as have we. In flight we are together. What is flight but being in the sky; and what is the sky but forever? Forever brings to Now all who have ever flown and all who ever will. Cast away thy redoubtable ways, open is the timeless door for those who fly."

Each of us has the need and the capacity to fly. We must awake and stretch our wings against the still backdrop of the newborn day. Whether our wings are made of carbon and Kevlar, or sinew and silk, the essence of flight remains the same. •

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Wilf Krueger
Dave Webb
Hal Werneburg
Ulli Werneburg

**• CONTEST LETTERS**
Robert Binette
1034 St–Denis
Montreal, PQ H2X 3J2

**• FAI AWARDS**
Larry Springford
45 Goderich Street
Kincardine, ON N2Z 2L2

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

**STATISTICIAN**
Randy Saueracker
Box 2620
Medley, AB T0A 2M0

**TECHNICAL**
Herbert Lach
330 Banting Street
St–Bruno, PQ J3V 1Y3

**TROPHIES & CLAIMS**
Harold Eley
4136 Argyle Street
Regina, SK S4S 3L7

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

# FAI badges

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

The following Badges and Badge legs were recorded in the Canadian Soaring Register during the period 1 Nov to 31 Dec 1990.

**SILVER BADGE**

| | | |
|---|---|---|
| 809 | Jean–Louis Labarre | Quebec |
| 810 | Uwe Kleinhempel | Vancouver |
| 811 | Walter Tremmel | Air Sailing |
| 812 | Tony Toole | Bluenose |
| 813 | Monty Gray | SOSA |

**DIAMOND DISTANCE**

| | | | | | |
|---|---|---|---|---|---|
| | Dave Baker | Vancouver | 506.0 km | ASW–20CL | Ephrata, WA |

**DIAMOND ALTITUDE**

| | | | | | |
|---|---|---|---|---|---|
| | Sylvain Larue | Cold Lake | 6710 m | Dart 17R | Cowley, AB |
| | David Wallace | Edmonton | 5060 m | Grob 103A | Minden, NV |
| | Vaughan Allan | Cu Nim | 5450 m | Mini Nimbus | Cowley, AB |

**GOLD ALTITUDE**

| | | | | | |
|---|---|---|---|---|---|
| | Sylvain Larue | Cold Lake | 6710 m | Dart 17R | Cowley, AB |
| | Uwe Kleinhempel | Vancouver | 3190 m | Grob 102 | Hope, BC |
| | David Wallace | Edmonton | 5060 m | Grob 103A | Minden, NV |
| | Vaughan Allan | Cu Nim | 5450 m | Mini Nimbus | Cowley, AB |
| | Nick Pfeiffer | Vancouver | 3020 m | Blanik L13 | Hope, BC |

**SILVER DISTANCE**

| | | | | | |
|---|---|---|---|---|---|
| | Jean–Louis Labarre | Quebec | 72.0 km | Pilatus B4 | St–Raymond, PQ |
| | Uwe Kleinhempel | Vancouver | 68.0 km | Blanik L13 | Hope, BC |
| | Walter Tremmel | Air Sailing | 61.5 km | Ka6E | Belwood, ON |
| | Tony Toole | Bluenose | 53.0 km | Open Cirrus | Stanley, NS |
| | Monty Gray | SOSA | 50.5 km | 1–26E | Rockton, ON |

**SILVER ALTITUDE**

| | | | | | |
|---|---|---|---|---|---|
| | Claude Bisson | Quebec | 1200 m | Pilatus B4 | St–Raymond, PQ |
| | Sylvain Larue | Cold Lake | 6710 m | Dart 17R | Cowley, AB |
| | Uwe Kleinhempel | Vancouver | 1820 m | Blanik L13 | Hope, BC |
| | Karl Robinson | Bluenose | 1495 m | K8 | Stanley, NS |
| | Kenneth Buchholz | Vancouver | 2010 m | Blanik L13 | Hope, BC |
| | David Wallace | Edmonton | 5060 m | Grob 103A | Minden, NV |
| | James Cook | Winnipeg | 1080 m | Bergfalke | Starbuck, MB |
| | Tony Toole | Bluenose | 1340 m | Open Cirrus | Stanley, NS |
| | Carl Juergensen | Air Sailing | 1120 m | ASW–20B | Belwood, ON |
| | Nick Pfeiffer | Vancouver | 3020 m | Blanik L13 | Hope, BC |

**SILVER DURATION**

| | | | | | |
|---|---|---|---|---|---|
| | William O'Brien | Quebec | 5:00 h | Pilatus B4 | St–Raymond, PQ |
| | Claude Bisson | Quebec | 5:11 h | Pilatus B4 | St–Raymond, PQ |
| | Uwe Kleinhempel | Vancouver | 5:09 h | Blanik L13 | Hope, BC |
| | Karl Robinson | Bluenose | 5:16 h | K8 | Stanley, NS |
| | Claude Lupien | Outardes | 5:50 h | K8B | St–Esprit, PQ |
| | Kenneth Buchholz | Vancouver | 5:10 h | Blanik L13 | Hope, BC |
| | Frank Herzog | Winnipeg | 6:03 h | L Spatz | Starbuck, MB |
| | Tony Toole | Bluenose | 5:19 h | Open Cirrus | Stanley, NS |
| | Carl Juergensen | Air Sailing | 5:11 h | ASW–20B | Belwood, ON |

**C BADGE**

| | | | | | |
|---|---|---|---|---|---|
| 2253 | Daniel Julien | Quebec | 1:22 h | 1–26 | St–Raymond, PQ |
| 2254 | Jean Papillon | Quebec | 1:11 h | 1–26 | St–Raymond, PQ |
| 2255 | Dierdre Ann Duffy | Edmonton | 1:34 h | 1–23 | Chipman, AB |
| 2257 | Uwe Kleinhempel | Vancouver | 5:09 h | Blanik L13 | Hope, BC |
| 2258 | Karl Robinson | Bluenose | 5:16 h | K8 | Stanley, NS |
| 2259 | Claude Lupien | Outardes | 5:50 h | K8B | St–Esprit, PQ |
| 2260 | Kenneth Buchholz | Vancouver | 5:10 h | Blanik L13 | Hope, BC |
| 2261 | Robert Leger | COSA | 1:07 h | Blanik L13 | Chemong, ON |
| 2263 | Susan Snell | Winnipeg | 1:16 h | L–Spatz | Starbuck, MB |
| 2264 | Frank Herzog | Winnipeg | 6:03 h | L–Spatz | Starbuck, MB |
| 2265 | James Cook | Winnipeg | 1:44 h | Bergfalke | Starbuck, MB |
| 2266 | Tony Toole | Bluenose | 5:19 h | Open Cirrus | Stanley, NS |
| 2267 | Carl Juergensen | Air Sailing | 5:11 h | ASW–20B | Belwood, ON |

## HOW LONG IS 15 METRES?

15 metre sailplanes have been measured at several [US] contests and it has been found that some gliders are as much as seven inches more than 15 metres! Those with long wings argue the rule intends for the gliders to be 15 metres in flight, so the wings will be bent up which makes the wings shorter. Hal Lattimore says we should place two poles 15 metres apart and let these pilots fly through.

If I can sideslip a Nimbus III through those poles do I qualify as a 15 metre ship? Seems like somebody needs to make some decisions.

**Tom Knauff**, from *Soaring Pilot*

photo unavailable

# FAI Records

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

Three record claims have been received recently from Charlie Yeates, who was again busy flying cross country with his wife on an Australian winter vacation:

**300 km Speed to goal and return** – Multiplace, citizen, 75 km/h, 1 Jan 91, Charles Yeates (Kris Yeates), G–103 Twin Astir VH–IKA. Flown from Waikerie to Karawinna and return. Exceeds previous citizen's record of 65 km/h set by Walter Chmela (H Rominger) set in 1976.

**Triangle distance** – Multiplace, citizen, 613 km, 2 Jan 91, Charles Yeates (K Yeates), G–103 Twin Astir VH–IKA. Flown from Waikerie (the remote start and finish point) to Burra to Karoonda to Lake Cullueraine. Flight exceeds his own record of 510.6 km set in 1989.

**500 km Triangle speed** – Multiplace, citizen, 90.4 km/h, 2 Jan 91, Charles Yeates (K Yeates), G–103 Twin Astir VH–IKA. Flown from Waikerie (the remote start and finish point) to Burra to Karoonda to Lake Cullueraine. This flight will exceed record of 88.8 km/h set by John Firth (D Webber) in 1986 only if actual speed was at least 90.8 km/h.

## 1990 CANADIAN TEAM SEEDING LIST

| | | | | | |
|---|---|---|---|---|---|
| 1 | Hollestelle, Ed | 89.35 | 15 | Carpenter, Jim | 52.92 |
| 2 | Spence, Ian | 87.14 | 16 | Gairns, Bob | 46.17 |
| 3 | Krueger, Wilfried | 84.58 | 17 | Burwash, Buzz | 40.74 |
| 4 | Weir, Walter | 83.57 | 18 | Oke, Jim | 39.51 |
| 5 | Bennett, Kevin | 83.15 | 19 | Burton, Tony | 31.84 |
| 6 | Frank, David | 80.53 | 20 | Stieber, Jörg | 28.41 |
| 7 | Thompson, Paul | 79.56 | 21 | Zabrodski, Rick | 28.19 |
| 8 | Pölzl, Heri | 78.89 | 22 | Werneburg, Ulli | 27.41 |
| 9 | Gough, Andy | 73.52 | 23 | Stewart, Dugald | 26.96 |
| 10 | Bantin, Colin | 71.83 | 24 | Featherstone, John | 25.71 |
| 11 | Baillie, Stewart | 69.09 | 25 | Wilson, Chris | 22.01 |
| 12 | Masak, Peter | 67.36 | 26 | Green, George | 21.73 |
| 13 | Webb, Dave | 64.02 | 27 | Pepin, André | 21.50 |
| 14 | Bonnière, Nick | 57.04 | | | |

Calculated on performance in 2 of last 3 Canadian Nationals. Perfect score is 100. Scores below 20 not shown but are available from Colin Bantin.