

free flight libre



2011
Autumn



UNE TRAGÉDIE a secoué la communauté Canadienne de vol à voile le 3 septembre dernier. La GRC a déclaré que deux planeurs sont entrés en collision en vol lorsqu'ils étaient établis en thermique tout près d'Invermere. Les deux pilotes ont perdu la vie dans l'accident. Vous trouverez plus loin dans ces pages, un hommage à Ray Perino et Keith Watson. Le club d'Invermere a mentionné au comité de formation et de sécurité de l'ACVV (SAC FTSC) que les traces des enregistreurs de données des GPS ont révélé que les deux planeurs étaient en vol rectiligne directions opposés juste avant la collision. L'analyse par le BST et le FTSC des données de vols fournis par les enregistreurs de vol de chaque planeur en cause aidera à comprendre ce qui se serait passé.

Maintenant que le Power FLARM est disponible au Canada, le FTSC encourage les pilotes de l'utiliser et ce surtout pour ceux qui volent en groupe. Il est essentiel lors des compétitions ou dans les régions de trafic intense. Avec la récente disponibilité de cette nouvelle technologie au Canada, les risques de collision futurs pourraient être grandement diminués, comme ce fut le cas en Europe. Selon des pilotes qui utilisent le FLARM, une alerte de proximité est donnée lorsque deux planeurs sont à proximité, comme c'est le cas en thermique. L'algorithme anticollision serait suffisamment précis pour discerner une collision potentielle en thermique d'une proximité avec un autre planeur, et ce à une phase du vol où le pilote a moins de temps pour réagir et éviter une collision. Au moment d'écrire ces lignes, le distributeur Canadien du Power FLARM nous mentionne que le Power FLARM est maintenant certifié par le FCC aux États-Unis et que des unités sont maintenant disponibles au Canada et États-Unis. La certification Canadienne est en cours et devrait être complétée en octobre.

Sur un tout autre ordre d'idée, nous vous avons fait parvenir avec votre reçu d'impôt 2011 un formulaire de don aux fonds de l'ACVV-SAC. Nous sommes désolés que des fautes impardonnables de français sur ce formulaire se soit rendus jusqu'à vous. Pour avoir plus de détails sur les différents fonds de l'ACVV-SAC, consultez <www.sac.ca> dans la section : Documents Vault : Info / General Forms, le fichier "SAC Trust Deeds". Si vous avez choisi de donner à un de ces fonds, vous devez le faire avant la fin de 2011 afin d'avoir un reçu pour l'année d'imposition en cours.

Je vous souhaite une belle fin de saison 2011 sécuritaire !

A TRAGEDY on 3 September has shaken our soaring community. RCMP reports originally stated that two planes were gliding in the same thermal lift south of Invermere and at one point contacted wings. Both pilots died in the accident. You will find a tribute to Ray Perino and Keith Watson in this issue. The Invermere club reported to the SAC Flight Training & Safety committee (FTSC) that the flight recorders showed the gliders were in level flight approaching from opposite directions just before the collision. The Transportation Safety Board and the FTSC analysis of the data recorded by each glider involved may provide more details to help understand what might have happened.

Now that the Power FLARM is available in North America, FTSC encourages pilots who fly in high traffic areas such as contests, near mountains, or on ridges to consider installing a unit. Hopefully, the risk of future collisions can be mitigated as has occurred with FLARM use in Europe. Pilots familiar with the use of the equipment believe that it would have been effective in this situation to warn the pilots of a potential collision. In addition, a warning alert would also be given when a collision potential exists in a thermal. The FLARM collision algorithm is accurate enough to analyze thermaling threats; however, there is less time for pilot reaction in this situation. At the time we wrote these lines, the Canadian distributor of Power FLARM said that it has been certified by the FCC in the USA and units are now available in Canada. The Canadian certification should be complete in October.

We sent you a donation form for the SAC Trust Funds with your 2011 SAC membership tax receipt. If you want more details go to <www.sac.ca> and under Documents Vault: Info / General Forms, look for the pdf file "SAC Trust Deeds". If you choose to contribute to the various SAC funds, you must do so before year end to get a 2011 tax receipt.

Have a nice and safe end of 2011 flying season!

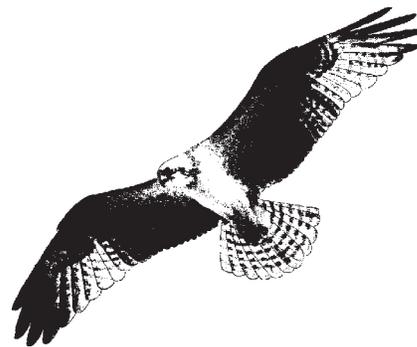
free flight

vol libre

2011/4 – Autumn

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

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A fish-eye lens view of the grid at SOSA during the Nationals.

photo: Maria Szemplinska

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Competition “rubber” rules?

Kerry Kirby



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 representing Canada in the Fédération Aéronautique Internationale (FAI), the world sport aviation governing body composed of the national aero clubs. The ACC delegates to SAC the supervision of FAI-related soaring activities such as competition sanctions, processing FAI badge and record claims, and the selection of Canadian team pilots for world soaring championships.

free flight is the official journal of SAC, published quarterly.

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. An e-mail in any common word processing format is welcome (preferably as a text file). All material is subject to editing to the space requirements and the quality standards of the magazine.

Photos: send unmodified hi-resolution .jpg or .tif files. Photo prints are acceptable and are returned on request.

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 communicate with their Zone Director.

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IN THE WINTER OF 2010 the Sporting Committee rewrote the seeding rules for national competition. Under the revised rules, classes are to be divided by handicap. Lower performance gliders must fly Club class and higher performance must fly Racing class; pilot ability or experience is not in the formula. Pilots flying middle ground gliders may choose the class in which they compete. The following text is the Statement of Purpose for the Canadian National Championships found in the preamble of the 2011 Nationals rules.

- Determine the Canadian Champion.
- Establish the seeding list for participation in World Gliding Championships.
- Encourage the participation of young and novice pilots.
- Promote competitive soaring to the Canadian soaring community at large, particularly the host club.
- Encourage the participation of club members in club equipment.
- Promote goodwill, friendship and fair competition among soaring pilots from all parts of the country.
- Safety is paramount!

This Statement of Purpose shall serve to give direction for the future evolution of these rules and guide jury decisions in cases where the rules are not sufficiently clear. At no time shall this Statement of Purpose be interpreted as allowing preferential treatment for individual categories of pilots (ie. Novice, Club, etc.)...

The first two points in the Statement of Purpose are worth noting. The penultimate sentence goes on to make it very clear that the Statement of Purpose shall not be interpreted to allow preferential treatment for individual categories of pilots (ie. Novice, Club, etc.). The Statement of Purpose and the rules that follow are very good and go to great lengths to create and ensure a fair competition with set goals.

At the mandatory pilot's meeting of the recent Nationals, the chairman of the Sporting Committee announced that, with twenty-seven gliders in the Club class, the range of performance was too great to set tasks and that his recommendation was to split the class in two: Club Class "1" with the higher performance gliders, and Club Class "2" with the lower performance gliders.

Since the new rules say that the Club class is going to be seeded, would there then be two winning seeded pilots from the Club class? The answer was to the effect that Club Class 2 gliders might not be eligible for World Class selection. As a result, eight of the forty pilots registered for the contest would be potentially ineligible for World team seeding consideration. This amounts to scoring the contest before the first flight had been flown. This split was proposed even though the contest rules state, in a footnote, that past experience shows that classes of less than ten participants can lead to "undesired scoring effects".

By my count, three former Canadian world competition pilots said that it was not right to change the rules at this late hour and that the classes should be as originally set out. I and others suggested that the tasks be modified to allow larger rings that would accommodate all gliders in the Club class. In April of this year, I flew in the US Region 5 contest in Perry, South Carolina in which a range of gliders that included a Libelle, PW-5, Standard Cirrus, LS-4, Ventus C and DG-600 successfully competed in one Sports Class.

At one point in the discussion, a member of the Sporting Committee suggested that pilots in Club Class 2 had the option to fly in the higher Club Class 1 and receive team seeding points. However, Club Class 1 would probably be allowed to carry water and would be tasked at longer distances corresponding to the higher performance of the gliders. It was also rightly mentioned that a lower performance glider flying in Class 1 would be less likely to make it home at the end of the day since the tasks would be longer than appropriate for the lower performance gliders.

⇒ p30

Deadline for contributions:

10 March, June
September, December

letters

ASSOCIATION CANADIENNE DE VOL À VOILE

est une organisation à but non lucratif formée d'enthousiastes et vouée à l'essor de cette activité sous toutes ses formes, sur le plan national et international. L'association est membre de l'Aéro-Club du Canada (ACC), qui représente le Canada au sein de la Fédération Aéronautique Internationale (FAI), laquelle est responsable des sports aériens à l'échelle mondiale et formée des aéroclubs nationaux. L'ACC a confié à l'ACVV la supervision des activités vélivoles aux normes de la FAI, telles les tentatives de record, la sanction des compétitions, la délivrance des insignes, et la sélection des membres de l'équipe nationale aux compétitions mondiales.

free flight est le journal officiel de l'ACVV publié trimestriellement.

Les articles publiés dans *free flight* proviennent d'individus ou de groupes de vélivoles bienveillants. Leur contenu n'engage que leurs auteurs. Aucune rémunération n'est versée pour ces articles. Tous sont invités à participer à la réalisation du magazine, soit par des reportages, des échanges d'idées, des nouvelles des clubs, des photos pertinentes, etc. L'idéal est de soumettre ces articles par courrier électronique, bien que d'autres moyens soient acceptés. Ils seront publiés selon l'espace disponible, leur intérêt et leur respect des normes de qualité du magazine.

Des photos, des fichiers .jpg ou .tif haute définition et niveaux de gris peuvent servir d'illustrations. Les photos vous seront retournées sur demande.

free flight sert aussi de forum et on y publiera les lettres des lecteurs selon l'espace disponible. Leur contenu ne saurait engager la responsabilité du magazine, ni celle de l'association. Toute personne qui désire faire des représentations sur un sujet précis auprès de l'ACVV devra s'adresser au directeur régional.

Les articles de *free flight* peuvent être reproduits librement, mais le nom du magazine et celui de l'auteur doivent être mentionnés.

Pour un changement d'adresse ou s'abonner à la revue, communiquez par sac@sac.ca. Le tarif d'abonnement est de 30\$ pour 1 an et 55\$ pour 2 ans. Pour l'extérieur du Canada, le tarif est de 35\$US pour 1 an et 60\$US pour 2 ans. La revue est disponible gratuitement, en format "pdf" au www.sac.ca.

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Now this is a great piece of advice for us seniors

The following letter was sent to Badge chairman Walter Weir, but deserves a spot front and centre here on the Letters page. It can be difficult for the long time soaring pilot to break the news to himself that it's time to hang it up, either before the club has the perhaps awkward but necessary prospect of broaching the subject, or before an unfortunate accident forces it. Walter Mueller has had a wonderful run in this sport – kudos to him for the letter. You will find a troubling story in this issue that relates to this subject. editor

Grande Prairie, 25 August 2011

Dear Walter,

This is the last badge claim from me as I have decided to retire from active flying. I'm a little disappointed that I could not complete the Diamond badge [*with the Diamond climb*], but on the other hand I am thankful for all the good soaring flights I had since I really started soaring cross-country at age eighty after others had quit.

In two months I will be 91 years old and, although no one mentioned it to me, my take-offs and landings are not as good anymore as I used to make them. Though I still have a valid medical I have decided to quit flying before someone else has to tell me. I also feel a responsibility towards my family and to all my soaring friends not to carry on until I become a liability.

So, on Friday the 19th of August 2011 I did my last flight in a sailplane, just local flying within 30–40 kilometres of the Chipman airfield for a 3:45 hour flight. My circuit was watched by the new owner of BMX, Conrad Lamoureux, who the next day did a very good take-off and landing the way I used to do. And last but by no means least, I thank you for the many hours of volunteer work you do to process all the badge claims, including mine.

Thank you, have many happy and safe soaring flights.

Walter Mueller

Dear Editor,

Congratulations regarding the formal announcement at the recent FAI General Conference in Belgrade on your receiving the prestigious Pirat Gehriger Diploma for your various contributions to aviation. I, of course, was disappointed that I lost to you in the balloting, but then I came to realize that since you are so much older than I, you have had many, many more opportunities to do those worthy things. In addition, since you are a retired person, you must have lots of time in which to do those things, unlike me who works long, long hours to make ends meet, take care of my poor old mother, and to contribute hard-earned dollars so that you may collect your old age pension.

I try to find the time to do award-worthy things, but all of my spare hours are taken with charitable work among the homeless and such. I heard about your award as I was helping feed and bathe a hopeless drunk (a retired towpilot) in a group home. They do not have cable TV at the home, so they instead watch the internet. They love the SAC website, especially the photo album "Members at Large", showcasing people in our sport:

*Created on 12/01/08. This album contains 0 items.
This album has been viewed 1259 times since 12/01/08.*

You may wonder who has viewed this album 1259 times as it contains 0 items. Well, it's them group home folks. Again, congratulations.

the Bald Eagle

the Nationals

Dugald Stewart, CD



Maria Szemplinska

THE GRASS IS CUT AND NEW WINDSOCKS MOUNTED. I was asked to direct the contest flying by the manager of the Canadian Nationals, Dave Springford. Needless to say I accepted, making this the fourth or fifth such gathering that I have superintended. The airfield had been prepared by a crew including Terry Beltaos, Herri ten Cate, Alan Grant, John Brennan, Dugald Stewart, Ray Wood, George Heah, Jorge Ardila and Hans Juergensen. Beyond the manager and CD, other posts were filled by Doug Scott as chief towpilot, Jörg Stieber as weatherman, Walter Weir and Dan Daly as scorers, Jorge Ardila as grid boss, and Diane Malony as office manager. Sacrifices were made: Jörg had to collect the weather early enough to make the task committee meeting, and Dan gave up his flying. He could have left the glider at home.

Each contest has its share of peculiarities, and the mandatory meeting brought an important one to light. Thirty of the thirty eight competitors had no crew! The meeting left me with additional help, a task committee composed of Jörg, Chris Gough and Jerzy Szemplinski. A jury consisting of Ulli Werneburg, Dave Webb, and Doug Scott was created but never needed to meet.

Three classes were flying, including eleven competitors in FAI class consisting of three LAK 17's, two ASG 29's, two LS-8's, an LS 10, Antares 18S, Nimbus 2, and DG 800. The "Club 1" class had a population of eighteen, ranging from an Egret through to a herd of SZD 55's. SOSA's two LS4's fit in here. "Club 2" class was filled out by nine that included Libelles, Jantars, and a Dart, Lark, SF27 and PW-5. Details of seventy-three turnpoints were distributed, as well as eight "safety" airports.

The practice days did not work out well. On the first, 27 June, most landed out (including a DG 505 that landed out twice on the same flight!) and on the second day no launches were made. Ultimately, to get seven flying days, three had to be tried a second time, meaning the com-

petitors gridded ten times. On 5 July seventeen Club 1 landed back at the launch point. During the competition two competitors had some damage, Leo Deschamps in the Nimbus 2 and Emmanuel Cadieux in the ASW-20B.

On 4 July aero-retrieves were restored after chronic towplane maintenance issues were finally resolved. At one point SOSA was down to one operational towplane and loaners from Great Lakes and York Soaring were used to launch the fleet. A minimum gate opening height of 3000 feet (3800 msl) was maintained throughout. The originally-briefed radio frequency shift at 2000 feet was changed to gate opening height on 6 July to reduce confusion and workload. Some reminders were repeated – the necessity to report a start was mentioned on three days. This was a safety item, serving as notice of the gliders the contest had to account for on task. Anyone could be a missing aircraft.

The contest proper made 282 launches and had 89 land-outs. For Day 1, we assembled for launch and waited for three hours before cancelling what would have been a task range of 104 through 219 kilometres. Other scrubs included 2 July, the first Day 3, and 6 July, the first Day 6.

The practice of signing off the left wing tape on a Critical Assembly Check had been introduced but no launches were denied nor 50 penalty points awarded in consequence of a breach. After complaints about start gate announcements (radio interference from Brantford Airport was extreme at times), by 3 July pilots had to be reminded that the three stage warning of gate opening was notice well in excess of what the rules required – it continued nevertheless. Task change roll calls went smoothly, in the air for FAI and Club 2 on 3 July and on the ground for Club 1 on 3 July and FAI on 4 July.

The cooperation of the competitors made this a contest to be fondly remembered. ❖

2011 CANADIAN NATIONAL SOARING CHAMPIONSHIPS		30 June		1 July		3 July		4 July		7 July		8 July		total pts								
		pos	kph	km	pts	pos	kph	km	pts	pos	kph	km	pts	pos	kph	km	pts					
CLUB CLASS 1				2 hour MAT		2.5 hour MAT		3 hour TAT		2 hour TAT		3 hour TAT										
1	Chris Gough	11	55.1	121.7	580	1	48.3	145.1	629	1	60.8	181.8	t767	1	75.8	150.6	t627	2	80.4	240.7	t989	3592
2	Anthony Kawzowicz	8	55.3	148.3	581	2	-	128.6	440	2	59.8	192.1	755	5	73	151.9	604	9	68.1	204.3	t839	3219
3	Paul Fish	5	57.0	145.7	600	4	-	110.6	378	4	53.8	175.6	679	10	66.6	132.1	t551	4	73.5	225.3	905	3113
4	John Brennan	7	55.5	128.2	583	11	-	90.0	308	3	55.2	165.5	t697	6	70.6	139.7	t585	14	64.0	190.3	t788	2961
5	Bill Cole	2	58.3	126.8	t613	15	-	75.4	258	6	41.0	185.9	564	3	74.6	154.6	618	12	65.9	195.5	t811	2852
6	Sergei Morozov	15	-	64.5	t189	3	-	111.3	381	5	53.0	192.7	669	2	74.8	152.0	619	1	80.5	242.2	991	2849
7	Luke Szczepaniak	1	65.1	133.8	685	6	-	94.0	321	16	-	77.8	d224	4	73.1	165.0	605	3	76.9	252.3	946	2781
8	David Cole	6	56.5	140.9	594	5	-	98.2	336	9	-	143.4	412	11	64.3	135.9	532	7	69.1	209.3	850	2724
9	Alf Marcelissen	3	58.1	120.6	611	8	-	91.8	314	10	-	124.3	357	12	63.0	139.4	521	10	68.0	203.9	t837	2640
10	Marian Nowak	4	57.8	122.0	608	10	-	90.3	309	15	-	78.9	d227	8	68.9	138.7	570	6	71.5	215.1	880	2594
11	Roger Hildesheim	13	47.7	102.8	502	12	-	87.2	298	14	-	97.1	279	9	68.7	136.0	t569	8	68.8	206.4	t847	2495
12	Dan Cook	8	55.3	133.5	581	16	-	73.8	b252	11	-	107.7	310	16	44.7	127.3	370	11	67.2	202.7	827	2340
13	John Mulder	8	55.3	142.6	581	13	-	91.8	314	17	-	56.6	d163	15	45.3	131.5	375	5	73.5	220.3	t904	2337
14	Martin Brassard	12	48.9	97.2	515	13	-	88.9	a282	12	-	101.0	290	13	54.2	113.6	449	13	64.4	193.1	t792	2328
15	Krzysztof Wierciach	14	40.0	107.3	420	14	-	75.9	b259	8	-	158.7	456	7	70.4	161.1	583	16	-	127.3	322	2040
16	Emmanuel Cadieux	17	-	39.7	d116	6	-	94.0	321	7	42.3	163.8	534	17	-	146.8	341	17	-	dnc	0	1312
17	Yves Bastien	18	-	0.0	0	17	-	65.3	b223	18	-	25.5	d73	18	40.2	121.2	333	15	-	145.2	367	996
18	Hans Juergensen	16	-	41.3	d121	18	-	-	s0	13	-	97.6	281	14	56.4	132.7	a409	17	-	0.0	c0	811
CLUB CLASS 2		3 hour MAT		1.5 hour MAT		3 hour MAT		2.5 hour TAT		2 hour TAT		3 hour TAT										
1	Pierre Gavillet	4	-	61.2	d210	5	53.2	90.0	459	1	43.1	141.2	663	1	72.9	145.6	t645	1	66.8	204.1	814	3430
2	Jim Fryett	1	40.4	152.8	683	1	59.3	91.7	512	5	-	75.3	d274	4	46.9	136.2	a463	6	51.6	119.7	456	2979
3	Hennie ten Cate	2	-	88.3	303	4	53.6	90.4	463	7	-	53.4	d194	3	43.5	107.5	t503	4	57.0	123.1	505	2550
4	Selena Boyle	3	-	63.3	d217	1	59.3	95.3	512	3	-	78.5	d289	2	51.6	128.9	t597	3	58.6	116.2	t519	2309
5	Ray Wood	6	-	43.2	d148	6	-	67.5	d239	6	-	68.5	d249	6	-	59.9	d199	2	59.2	121.9	537	2161
6	Marton Zach	7	-	0.0	c0	3	54.6	87.8	471	2	-	83.6	304	5	-	61.1	d203	5	52.2	103.6	t462	1636
7	Jay Allardyce	5	-	45.2	d155	8	-	0.0	c0	4	-	75.5	d275	7	-	31.7	d105	7	-	111.3	320	1081
8	Tim Radder	7	-	0.0	c0	7	-	4.6	d16	8	-	39.1	d142	8	-	16.3	d54	8	-	20.2	d58	270
FAI CLASS		3.5 hour MAT		2.0 hour MAT		3 hour MAT		3 hour TAT		2 hour TAT		3 hour TAT										
1	Jerzy Szemplinski	1	60.2	223.1	892	3	69.8	150.0	710	2	48.7	169.0	733	3	86.4	174.2	696	3	86.4	174.2	696	4744
2	Derek Mackie	4	54.6	229.0	809	6	65.4	152.2	665	4	47.1	174.6	710	5	60.3	181.3	654	5	81.7	175.5	657	4398
3	Nick Bonniere	5	54.3	226.5	804	5	65.6	158.1	667	6	59.6	176.2	646	6	59.6	176.2	646	9	72.0	220.1	811	4335
4	Andrzej Kobus	3	56.3	223.0	834	9	58.5	118.8	595	3	48.2	169.6	727	7	54.2	159.3	588	8	68.1	134.8	t548	4249
5	Jörg Stieber	2	59.3	229.0	878	4	68.1	151.1	693	6	-	105.6	344	4	62.3	191.7	676	2	86.6	178.6	697	4212
6	Dave Springfield	8	-	63.5	d169	1	72.0	158.1	732	1	56.4	182.5	850	3	62.7	204.2	680	4	85.1	169.9	t685	4073
7	Ed Hollestelle	7	44.9	155.6	t665	2	70.2	152.9	714	9	-	98.4	321	1	71.5	177.5	t775	9	65.8	131.1	t530	3947
G	Sean Fidler	6	45.0	157.8	667	6	65.4	151.1	665	8	-	150.5	356	6	78.6	163.3	633	7	79.7	280.5	897	3539
8	Willem Langeaen	10	-	34.0	d91	8	60.5	120.3	t615	11	-	90.9	296	8	53.8	134.1	t584	7	76.9	158.3	619	3030
9	Leo Deschamps	9	-	35.7	d95	10	-	124.7	369	10	-	92.1	300	10	-	96.0	227	10	-	dnc	0	991
10	Jim Carpenter	11	-	0.0	c0	11	-	32.0	d95	7	-	104.1	339	11	-	dnc	0	10	-	dnc	0	434

Penalty codes: t = flight time less than min d = distance less than min 80 km c = no flight log s = start error f = finish error dnc = did not compete a = other

A tale of three landouts

Jay Allardyce, Winnipeg



When SOSA announced that they were to host the 2011 Canadian Nationals, my gliding friends immediately began to pester me to participate. SOSA is like a second home to me, having spent three great summers flying there. I hadn't been back to SOSA since 2008 due to my looming graduation from university. I knew that going to SOSA for the Nationals would be a great opportunity to reconnect with my friends and also an opportunity to do some great flying as well so I made every effort to make my participation a reality.

I had participated in several contests in the past including the SOSA Mudbowl, Ontario Provincials, and two Canadian Nationals. My contest experience isn't extensive, but I have flown quite a bit of cross-country in the last few years which has included numerous flights over 300 km, a few 400 km flights and one 500. However, my cross-country experience hasn't been without its share of landouts, and I have visited my fair share of farmers over the years. I lost count since my tenth back in 2007.

My landout experience came in handy during the 2011 Canadian Nationals. Over the course of six contest days, I managed to land out on five occasions. The only reason I didn't make it six was because I elected not to take a relight on one of the contest days after landing back at the field. Adding to my total was one landout on a flight the day prior to the first practice day and a landout on the first practice day when I landed with six others at York Soaring, making my total seven! Seven landouts are bound to yield a few good stories and I certainly was not disappointed.

26 June – the day prior to Practice Day 1

I arrived on the 25th after the tiring 2,200 km journey from Manitoba. The morning of the 26th looked promising as I woke for breakfast. I rigged the glider and managed to get in line for a tow despite the busy club operation. I launched into a decent sky but struggled to stay aloft initially as the clouds overdeveloped and the lift cycled. After finally managing to climb up to cloudbase, I decided to head west. My run west was fairly easy until I arrived low at Woodstock. The usual thermals over the Toyota plant weren't there and I found myself switching gears into survival mode. I worked bits of weak lift but I wasn't climbing very fast. The sky was starting to cycle again and these bits of weak lift soon disappeared. At 1000 feet, I decided to land. The bean field was fairly long and I easily landed with lots of room to spare. Disappointed with my ability to stay aloft, I called SOSA and gave Dave Springford my coordinates.

I was met in the field by a man with a long beard (resembling one of the members of the band ZZ Top) who was

curious what had brought me to the field next to his house. I explained to him how gliders stayed in the air and why I ended up in the field next to his house. He took me back to his back yard where his wife, son, and a friend of theirs were burning old furniture. I was a bit perplexed by this, considering it was 2 pm in the afternoon and 26°C out. After introductions and few questions about gliding and how I ended up in the field next to their house, they fetched me an ice cold Laker Lager.

The beer was refreshing and welcome after my tiring flight. As the afternoon wore on, the conversations seemed to get more and more entertaining. This probably had something to do with the fact that my hosts had consumed about five or six beers each by then.

Eventually, my intrepid crew did arrive. Roger Hildesheim was kind enough to offer to come pick me up and did an excellent job entertaining my hosts while I took care of the glider. Eventually, the owner of the field dropped by. He was a very nice man who was originally from Holland, and he was quite interested in the glider. He lent us a hand taking it apart. After getting the glider all tucked away, we were back in the car for the 50 minute trip back to SOSA.

3 July – Contest Day 3

This day is near and dear to the hearts of all competitors at the 2011 Canadian Nationals. This day will forever be known as, "the day when a quarter of the gliders landed at Tillsonburg." The total landout count for the day was 27 out of a possible 37 competitors. Those who didn't land out at Tillsonburg landed fairly close to it. I landed out about 17 km away.

Having made it to the town of Norwich, about 10 km from Tillsonburg, I was quite low and needed a climb to keep going. Being blue, my expectation was that there would likely be a thermal over this town. I found some weak lift over the town; however, any altitude that I did gain in the weak lift was pretty much nullified by the significant drift. After struggling for about half an hour, I was 7 km downwind of Norwich and at about 1000 feet. The time came to pick a field and I hoped to god that a massive thermal would render an outlanding unnecessary but it wasn't meant to be. Today's field was a beautiful bean field with a dirt path through the centre. I elected to land next to the dirt path to make it easier on my crew and the farmer's crop. After I touched down and made sure that the dirt path was clear of any obstructions, I kicked in a bit of left rudder to put my main wheel on the path.

After figuring out where I was, I called the retrieve office to give them my location. As I was speaking on the phone, I noticed another glider struggling low about two miles away. Eventually the glider disappeared below the trees. After attempting to contact the farmer (no one was home at the house next to the field), I decided to take a bit of a walk to try and find the other glider that landed out not too far from me. After walking for 15 minutes, I could see a glider wing sticking out of a field in front of me – it was Ray Wood.

Ray introduced me to the farmer and I helped them pull the PW-5 out of the field. The farmer offered us some delicious lemonade and we sat and chatted while we waited for Ray's crew. Eventually, Ray's wife Pat arrived with the trailer and we derigged in short order. Ray and Pat gave me a ride back to my field and offered to wait with me for my crew.

As we were waiting, I got a call from Martin, the club member who had offered to come pick me up. My car had a flat tire and he needed help changing it. Pat and Ray then helped me "retrieve" my retrieve car. They knew the back roads in the area, which helped to locate my car. Martin told us he was just outside the town of Vanessa and that we couldn't miss him. He was nowhere to be found. A few phone calls later and with some expert navigating by the Woods, we finally found him just outside the town of Scotland, five kilometres further north. Removing the tire was a feat also. After getting the bolts out, the tire refused to budge. It appeared as if the rim was seized to the hub. Ray and his wife had stuck around, and it was Ray's ingenuity that saved the day. A wood fence post and a few bashes with the hitch from my tow-out gear finally liberated the tire. After changing the tire, I was tired, sweating from head to toe, and just wanted to go home, but we still had a glider to retrieve.

The rest of the retrieve went fairly well and I treated my crew to a dinner at Harvey's for all the anxiety and stress I had put them through. I'm aware that the usual standard is a steak dinner, but they seemed more than content with their burgers and fries. Many thanks to Martin and Sheryl for offering to retrieve me on this day.

4 July – Contest Day 4

I was determined to make today different. With another blue day forecast, I decided to try to stick with others in my class to maximize the probability of finding lift and getting home. I started the task at the same altitude as several gliders in my class and the glide to the first turn area was going great until I lost sight of all of them. As with my first three contest days, I found myself alone in the blue and in need of a climb to keep me going. Crossing the Grand River, I spotted Ohsweken in the distance. I thought with absolutely certainty that I would find a climb over this town. After numerous attempts at scraps of lift, I soon found myself at 1000 feet again.

On crossing the Grand River east of Brantford, you are flying over Grand River First Nation land and Ohsweken is home to many of the reserve's residents. You may recall the unrest in Caledonia back in 2006. The issue was a dispute over a parcel of land in Caledonia, during which time the protesters assumed control of this land for several months. The memory of this dispute made me a bit uneasy, but my first priority was making sure if I did have to land out, it would be safe.

After picking a field, and attempting one last turn to keep myself aloft, I lowered the gear and landed uneventfully. Getting out of the glider, I noticed the cars travelling down the road next to the field were starting to slow down to take a look. Would a band of angry native people show up in several minutes to confiscate my glider and whisk me off their land?

I walked to one of the houses near the field, knocked on the door, and explained my predicament to the young lady who answered. She gave me directions to relay to my crew and I offered to show her and her brother the glider in exchange for her kindness. They were friendly and helped me pull the glider into the yard of her uncle's house, also next to the field. I was concerned that he might be angry but she assured me that he wouldn't mind. I asked her again just to be certain – I really didn't want any trouble.

No angry mob showed up. As I was relaxing under the wing waiting for a retrieve, a truck entered the driveway, promptly left, then returned with another truck in trail. At this point, I began to expect the worst and was trying not to draw attention to myself. Soon the driveway was packed with vehicles but no one came over to greet me. Eventually, I worked up the courage to approach the house and I was greeted by about ten native men hanging out on the porch. Within seconds, I had a beer in my hand and was explaining to them how gliders stay aloft. One of the men remarked, "well if you needed hot air, why didn't you just keep talking?" I told him he had a good point. It was a positive experience. I went in expecting the worst but was pleasantly surprised by the hospitality and friendliness of the community. The offering of beer was certainly unexpected and definitely helped get relations off on the right foot.

Eventually, my crew rang to tell me they were close, so I headed up to the road to meet them. Sonia Hildesheim and Terry Beltaos, my crew for the day, had a bit of difficulty locating me. Apparently the addresses of the reserve aren't in the GPS database and they ended up about 10 km away from my actual position. When they arrived, we quickly got everything in the box as the local men watched in amazement.

In conclusion, the flying wasn't as great as I was hoping it was going to be, but the experiences were. Despite landing out most days, I learned more than I could have ever learned about cross-country flying (especially on blue days) and have taken key lessons away from the experience. It was great to be a part of the largest Nationals in several years.

Many thanks to SOSA for hosting and to all the contest staff who made it what it was. I would like to thank everyone who was kind enough to retrieve me from various fields during the contest. Since I was crewless, I relied on the kindness of others and was not disappointed. I would also like to thank Bryan Weber from the Winnipeg Gliding Club who was kind enough to loan me his Lark for the competition. I look forward to my next Canadian Nationals (but with fewer landouts!).

Here's the Bald Eagle's homage to Stompin' Tom Connors song about tobacco fields.
For Tom's original lyrics, go to: <[youtube.com/watch?v=6yGVx86TQss&feature=related](https://www.youtube.com/watch?v=6yGVx86TQss&feature=related)>

Tillsonburg

Hey, man, you ever flown by Tillsonburg?

Tillsonburg? My crew still cries when they hear that word.

*Well, a front came through Ontario
I was waitin' for a puff of a cloud to show
A fella flew by in an LS-8
He thought, I'll find some lift o'er the tobacco fields of*

*Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.*

*At first I saw the lift was barely okay
But if I circled real good it'd make my day
The flight that day had been so poor
I was gettin' so tired, couldn't take much more.*

*Tillsonburg, Tillsonburg,
Oh, Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.*

*I was feelin' in the morning anything but fine
I won't be staying out with the TSC next time
The CD said in one of his morning rants
You'll want to work the lift off tobacco plants*

*In Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.*

*We circled o'er a field that was long and wide
I in my old glider and five other guys.
I looked in vain for lift to set me free
A few hundred feet and I'd be ready to flee*

*From Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.*

*There I was at the bottom of the gaggle,
Praying to the Glider Gods and didn't even haggle.
Find that lift 'cause you won't get away
By circlin' in and out of that sink all day*

*In Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.*

*We broke our backs while retrieving out there
Tobacco plants wrapped 'round the big main gear
And leaves were stuck to the fuselage like glue
From the nicotine tar on the evening dew*

*In Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.*

*Now the nearest highway was some two miles from
The place we was waitin' for the crew to come.
When I heard them talk of losin' their goodwill
I ran down the highway and over the hill*

*From Tillsonburg, Tillsonburg
My crew still cries when they hear that word.*

*Now there is one thing you can always say
If I ever go flyin' on another day
Anywhere's south of the Canadian Shield
Oh, I won't fly over those tobacco fields*

*Of Tillsonburg, Tillsonburg,
My crew still cries when they hear that word.
My crew still cries when they hear that word.*

The Bald Eagle attended his first National Soaring Competition in 1997, where his talent for parking cars was first noticed by Competition Director Larry Springford. Since then the B.E. has applied that skill at seven more Nationals, nine Provincials, and several local contests. He retired from cross-country having been dubbed "Sir Landsalot", and has since developed a vicarious interest in the landout stories of others. July 3 saw 30 out of 37 contestants land out, seven at Tillsonburg Airport, and the rest in nearby fields.

There's talk of staging the next contest at Tillsonburg so that everyone will have a chance of getting home.

The most notorious mass landout at a Nationals was on the last day of the 1986 Nats at York when 25 of 37 gliders landed at

Stratford Airport with others close by. The day went dead to the west from the encroaching thick cirrus of a warm front, and a squadron of sailplanes made a long, long max L/D glide after climbing to cloudbase under the last cu between Kitchener and New Hamburg.

It also created a mass protest when scores were awarded based on how far up the runway you landed and whether you managed to take a photo of the hangar turnpoint or not beforehand. The scorer penalized a dozen pilots 25 points for declaring they had reached Stratford Airport when they had not photographed the hangar before landing.

The jury decided to give everyone the same distance of 123.7 km, and the contest rules were changed after that. editor ❖

Observations of a retrieval rookie

Cathy McNabb

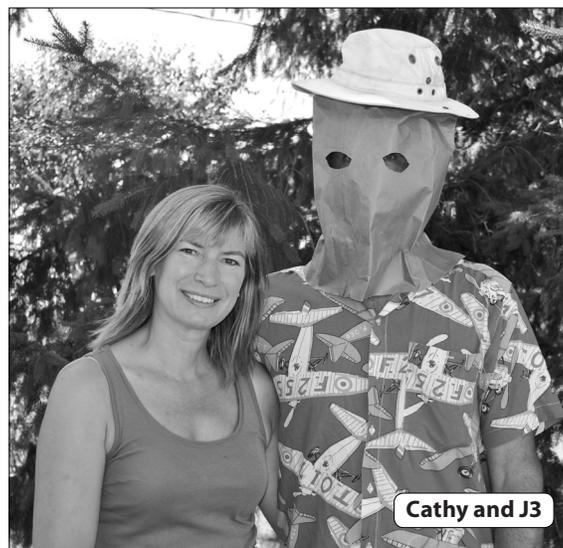
WHEN MY HUSBAND, J3, asked me if I would crew for him for the Nationals in July, I naively said “sure”. J3 has been soaring for 35 years, and even though it has been over ten years since he has had the opportunity to really do much flying, I had faith that I would not have to go fetch him from some distant destination, and that this whole “crew” thing was just something else required in order to qualify for the contest – kind of like a parachute or a flight recorder. Overall, he made it sound pretty straightforward; I was assured that all I really needed in the way of training was a drive or two around the block with the trailer, a GPS and a cell phone, and I would be good to go.

Unfortunately, the contest snuck up on us and the driver training ended up being done enroute to the first retrieve, which was on the Canada Day holiday weekend. No doubt J3 thought this was an extremely efficient use of time. I, however, was white-knuckled and cursing – especially driving through downtown Cambridge in long weekend traffic. All of a sudden the naïvety was gone, the concept of what I had gotten in for was sinking in, and I knew I needed guidance from a professional – not a sweet-talking glider pilot husband! Fortunately the landout was a mere nine kilometres from SOSA (not a stellar day for J3) so we were back at the airfield for happy hour and I was able to corner one of the experienced wives and get the real scoop on this crewing business.

After some intense questioning, note taking, eavesdropping on other conversations, tips picked up in the ladies room, and my own first day experience, I was able to gather the following practical information by the end of Retrieve Number 1:

- You need a good map, not just a GPS.
- If you are not sure of where you are going, pull over and double check your good map, as you *do not* want to turn that trailer around.
- Ideally you want to have someone lined up to go with you to navigate in order to minimize the pulling over, and the potential of having to turn around.
- Flip-flops are not appropriate footwear for pushing a glider 800 metres through a bean field.
- White is not a sensible colour for retrieve wear.
- Some farmers are cranky.

The next day, my first stop as a newly-enlightened crew member was the gas station, where I perused the map display and found one that appeared to have every back road and dodgy alleyway defined. My cell phone was charged, I had proper sandals and dust coloured clothing on, J3 told me he had secured the services of a navigator, and I figured I really was good to go this time.



When the phone inevitably rang late that afternoon, J3 reported that he was in a hayfield outside of Drumbo. A little further away, but no problem. Until I discovered there were not enough seats in the van to legally transport driver, navigator, and the stranded pilot home.

I gulped, told the navigator I would be fine on my own, and turned back to the van – and that really long trailer! However, another pilot saw the panic in my eyes as I was climbing into the vehicle so he stopped me, grabbed the volunteer navigator again, escorted him to the van, and told me not to worry so much about being legal. Thank goodness for that, since the first turn the GPS suggested we make (affectionately referred to as Bitchin’ Betty by J3 and me) was a dirt track through a farmer’s field. So I abandoned technology and went old-school with map and navigator calling the shots, eventually finding J3 in a lovely hayfield with a five year old groupie at his side marvelling at the glider and hanging onto his every word.

Lessons learned after Retrieve Number 2:

- Keep enough seats in your retrieve vehicle!
- SOSA is not on the Southwestern Ontario map – it is on the South-Central Ontario map.
- There are a lot of detours in the summer.
- It is appropriate to bring beer along on the retrieve in order to placate a potentially cranky farmer, reward a friendly one, or keep the navigator happy.
- Juice boxes on board for young groupies would be a nice touch.

After these two trips, this retrieval stuff was starting to get a little old. Even though I now had a box full → p13

To the top of the mountain

Mike Morgulis, Toronto Soaring

THIS STORY STARTED A FEW YEARS AGO on an abandoned airfield. Air Sailing has just closed their hangar doors for the last time, the planes were sold off, and we all went our separate ways. In the distance, a dog barked. Winter passed, there were no plans for spring, and despite generous offers from York to join their club, I remained on the ground. In fact, in 2009, the only plane in which I flew had an air hostess. I let everything lapse; I told myself that I would not be a glider pilot anymore.

In a scene straight from *“Goodfellas”*, I was invited to meet with Kerry Kirby, Dean Toplis, and a couple of other glider pilots for a winter beer in early 2010. I sat down amidst some other familiar faces from Great Lakes, and some other guys whom I'd seen around various fields. Jokes flew around the table, beers arrived, talk of PDA and GPS filled the air, land-out stories abounded. It was nice. Without warning, the guys sitting immediately adjacent to me pushed their chairs into mine, trapping me instantly. A hush fell across the group. From across the table, Bill Cole leaned over and asked, “So, Mike, will you be joining us at Toronto Soaring this season?”

My mind raced. My face flushed; I broke out into a sweat which I hoped nobody else could see. I could hear my pulse in my eardrums. My eyes scanned the room for the closest exit. An ambulance rushed past the window. My mind was screaming NO!!, but my lips betrayed me and I heard me saying, “Yes, I think I'd like to do just that.” There was no gun pointed at my head, no goon standing behind me with a baseball bat or ice pick – I did it voluntarily. Before I knew it, I was up at the club in the dead of winter looking at the trailer for the Junior, an open affair in need of some rigging items and some TLC.

Come late spring, Dave Gossen took me up for my check flights, one from the back seat and one from the front, and one of those flights turned out to be my longest that season. The weather was as uncooperative last year as it was in 1992 when it either rained nearly every weekend, or was just about to. I just about packed it in but did get to an aviation show which put me mentally back in the air early in the year. A month or two later, I was flying again.

This year was by far one of the most enjoyable seasons for me, and the long drive to Toronto Soaring seemed to take less time. (It really didn't, but I learned to stop looking at my watch.) I enjoyed many flights past the one hour mark, my thermaling skills were successfully recovered from the near complete atrophy of the previous two years, and I set out on some short cross-country tasks. Thanks to the kind folks at York who relaunched me when the weather did not keep up to my ambitions on one flight, I was able to explore the sizable area around Toronto Soaring for the first time since joining, and return home.

Then on 4 August, I and my wife Thuy and two sons were airborne to Israel for a long-deserved vacation, our first big family adventure in many years and certainly the farthest we'd ever travelled by air before. I'd written a story about flying in Israel in 2002 after our honeymoon, so I won't repeat the history here, but I did fly there again in 2005 in the winter. By the way, their definition of winter has most Israelis wearing toques, down jackets, and gloves while I was content in a T-shirt and jeans. It was 16C. This time it was August, and it was the Israeli's turn to have the last laugh. Toronto was enjoying temperatures of 27. By comparison, the temperature inside the cockpit on the ground by Beer Sheva was over 45.

Not being an Israeli citizen, I had to fly with an Israeli instructor despite my licence and alleged credentials. Menachem thought that since I was an instructor also, I'd enjoy the back seat better. In truth, it *is* far easier to fly from the back in a Grob G103. Personally, I think he'd been trapped there long enough; I know the feeling.

The take-off was smooth, I recalling that it was one of the few asphalt airstrips I've flown from. Then the desert turbulence kicked in. My hands and feet were kept busy while my eyes tried to keep the towplane in sight. The only part of the Super Cub which was not moving was the red beacon behind the cockpit, so I kept my eyes trained on that as we climbed. Somewhere around 1500 feet agl the air became smoother and my lower teeth stopped grinding the upper ones. Our towpilot put us right beside a huge dust devil at 2000; in a heartbeat we shot up another thousand feet and rode it out to the top.

It was apparent that an inversion had settled over the area, Menachem and I took turns trying to climb above 4500 in our blue airmass, while simultaneously heading west to a visible cloud line in more unstable air. Eventually I hit gold over the Bedhouin town of Rahat, and got us over 5500 feet. We headed due west, towards the Mediterranean and the clouds. Menachem pointed out a few landmarks, some dirt landing strips “just in case”, and we hustled through some dramatic sink on the way towards more dust devils. In one thermal, our vario jumped to +5 knots and then, an instant later, -5 knots. When I re-centred the circle, lift averaged at 4 and upwards we went again.

The conditions looked good enough to head northwards to Jerusalem; however, the air traffic controller nixed that option for us. So we headed west to Netivot (10 km east of Gaza) and then southwards, flying over some *moshavim* (farming communities) and near the gigantic air base at Hatzetim. Hatzetim makes CFB Trenton look like Buttonville. We were on our way home to the field at Sde Taiman

when the controller asked us to hold as there were some skydivers on their way down from 10,000. Serendipity struck, a thermal was literally right in front of us, and we hustled upwards again. This time reaching 5500 was no chore and we were joined by the club's K8 and an LS-8.

Seeing as how we were in a holding pattern, we figured that we could hold anywhere, so we ventured east towards Lahav, nestled in the Judean hills. By now we'd slowly covered over 100 kilometres and been in the air for nearly three hours. My family was patiently waiting on the ground; I was only to have been up for an hour. Needless to say we headed home and I went through my SWAFTS checklist. This time I was rewarded with a tire chirp as the main wheel contacted the ground and we turned off runway 32 at the first available taxiway. I was exhausted but thrilled.

After showing me some lizards around the old Spitfire hard shelters, my boys were ready for the two hour drive back to Tel Aviv. And Thuy was happy that I'd had a good flight. I recall being very grateful for that winter beer back in Toronto and mentally thanked Kerry for the invitation.

A few days later we were at the foot of King Herod's former mountaintop fortress at Matzada. Thuy took the cable car to the top, but my sons Nathan and Ari accompanied me up the 'snake path' to the top. After one hour we successfully reached the summit, having consumed our three litres of

water. It was over 42C in the sun, so we sat in a shady stone chamber and caught our breath. A moment later, a young German backpacker and his buddies sat down beside us. The backpacker was saying how it was a tough 27 minute climb. I mumbled to myself something about getting old. He took notice of my Canadian cap, and my US Air Force Museum T-shirt and asked me if I was a pilot. I replied yes, a glider pilot. He asked me if I was a hang glider pilot (ugh, here we go explaining again!) so I replied in German, "nein, ich bin ein Segelflieger". His eyes opened wide – "Segelflugzeug?! Me too!"

My boys and wife rolled their eyes instantly as Andreas and I compared notes on many ships and we swapped short flying stories. He asked if there were gliding clubs in Israel so I happily let him know of my experience days earlier at Sde Taiman, as well as the other large club at Megiddo.

A few days later we were on Route 65 heading towards the Sea of Galilee and the Golan Heights. It was mid-day but everyone else in the car was asleep. I was the only one who saw two sailplanes zip across the highway on a 'contest finish' and circle back to land at the airfield beside the road near Megiddo Junction. About an hour later we were atop the Golan Heights at Mevo Hama, watching gigantic Griffon vultures soar effortlessly overhead. I thought to myself, "It is good to be in the air again." ❖

of maps in my newly created retrieve kit, I tactfully suggested to J3 that all of his off-field landing skills had come back to him just fine, along with his rigging and derigging skills, and that perhaps it might be an idea to stop practising landouts and start practising returning to SOSA.

This helpful suggestion seemed to work as he did a great job staying aloft and coming home for the next several days. Indeed, he even managed to make it home on the historic Tillsonburg landout day. However, as soon as he did return to SOSA that day we jumped in another pilot's vehicle (after checking the number of seats in it) and joined the convoy to Tillsonburg to retrieve that pilot. I was determined to pay it forward and build a little positive retrieve karma.

A Retrieve Fun Fact learned from that trip:

- You can get pizza and pop delivered to Tillsonburg Airport on a long weekend.

Lulled into a false sense of security, I was making my way to SOSA on the last Friday afternoon, wearing my retrieve uniform but fully expecting that I would soon be changing out of that and into my banquet uniform after watching J3 do a beautiful contest finish. In my imagination, we would enjoy a frosty beverage, listen to the "telling of tall tales" portion of the afternoon, and the only destination Betty would have to lead us to would be the final banquet.

And then the phone rang, with J3 sheepishly telling me that he was in yet another field. In Delhi – an hour and a half away! He had thoughtfully lined up a navigator ahead of time so we were all set except that the GPS was not inter-

ested in accepting the street address of the farmer's field (tell me Betty, what is your problem with 3456 RR #1, Concession 2, corner of 1st Line and second hayfield on the left...?) or even the postal code, so now we were down to programming coordinates. I don't even know what coordinates are (how are degrees and decimal places directions?). It was another panic-in-the-whites-of-my-eyes moment until a neighbouring pilot, who had done a beautiful contest finish and whose wife was enjoying a cold drink, took pity and put all those numbers into the GPS for me, and off we went.

The rest of that retrieve went without incident and we returned in time to catch the tail end of the banquet and supply some entertainment for the other participants. While listening to landout and retrieve stories from my mentors over those long-awaited cold drinks, I came to realize that my experiences were laughably tame. Real challenges like cell phone failure, having to navigate by the North Star, fenced-in fields with no exits... all of these things can and do happen. So while I have learned from these stories and added a compass, wire cutters, and some spare chain link to my retrieve kit, I also can't help but make one final observation:

- Gliders come with sustainer engines now – isn't this job obsolete yet?

Cathy is a professional foodie who believes cross-country flying is best done in business class. Many thanks to Anne Marie Hollestelle, George Haeh, John Brennan, Terry McElligott, and Willem Langelaan for all their assistance. ❖

The Ragged Edge

Ted Williams

THIS STORY IS THE GRAPHIC AND TRAGIC REALITY of a classic stall-spin accident. Perhaps it is well now and then to tell it the way it really is, with all the brutal details. The pilot's name has been disguised – I will call him Steve.

This accident was somewhat unusual in that it happened right in front of a knowledgeable competition pilot who recounted it to me. Here is what he said:

I'm starting to forget things ... trying to erase it from my memory. It was the last day we flew in September. We were taking the ships apart about 5:30 pm and standing around talking. All of a sudden my brother yelled, watch out! watch out! I looked up. The sailplane was about 100–200 feet high coming straight down – almost vertical – at a 70–80° angle.

Steve had been high on the approach but he could have got it down by the end of the field using full dive brakes; maybe he wanted to avoid having to pull it back from the other end of the field. He began to make a 360. The glider made a turn to the north, directly over us, and then started a right turn at about 200–300 feet – my brother saw it start rotating in the spin but by the time I looked up there was no rotation.

My impression was that it was going very fast almost straight down but there was no noise. It was dropping like a stone. It hit in the cornfield, almost to the road, about lined up with the ground control truck at the end of the airstrip. When it hit, it made more noise than I thought it would – it was a metallic whump – and then there was silence. I was about 200 metres away. It hit with that sound and then bounced. After thinking about it I'm not sure if it bounced or whether it was just the tail coming down; it hit so nose down it may have been the tail just falling back to nose level.

I started running, stopped, and thought of the first aid kit in the LS-3, and then I decided to forget it because it wouldn't do any good. The ship was level after the tail fell back. The fuselage near the tail was bent upward – one wing was bent – the nose was pushed 3–4 feet back into the cockpit. Steve was in the front seat, the passenger behind. The canopy had disintegrated, leaving just the frame; there were big chunks of plexiglass lying around.

The nose was pushed back to mid-cockpit. There was no room for half of Steve. The instrument panel had folded over him – pushed up and folded over him. Both of them were moving a little and trying to talk ... the guy in the back seat was in better shape.

At a time like that you are operating mechanically, trying to do the right things. Can we do anything? is what you're thinking. Steve was moving slightly, mumbling something and making some small noises ... he lifted his head, he looked bad, and was bleeding a little from the mouth and ears. I was beginning to get that old sinking sensation in the pit of my stomach.

The guy in the back seat wanted to climb out. I was holding the instrument panel off of Steve – everybody was running around shocked and didn't know what to do ... a bunch of people were standing 20–30 metres away looking at the wreck. I asked if anybody had gone out to the main road to get an ambulance – they had forgotten to do it.

The ambulance came pretty quickly. Steve never regained consciousness. They took him out. I walked away; five minutes later he died.

About 10–15 minutes later, some of the club members got mad at the guy for making a mistake. They were upset that a passenger was involved – maybe it was a defensive reaction – they were saying he never should have been flying such an advanced ship. But he had been checked out and was signed off.

• • • • •

There are lessons here for all of us. Steve had taken up a passenger, an airplane pilot, for a local hop and the accident occurred in the pattern as they were returning for a landing. The weather was good. The official accident report will undoubtedly write this off as another "failed to maintain flying speed" stall-spin accident but that of course does not go to the root cause.

The man who had this accident was a private glider pilot who had been flying for many years with the club at that location. He was a fine, gentle human being who was always pitching in to help and was quite popular with the other members of the club. I was very upset when I heard of this tragedy but in a way I could see how it might have happened. I am even more disturbed about

the comments of the club members who felt he never should have been flying that specific type of glider.

This whole issue is very difficult because it concerns pilots who have demonstrated sufficient proficiency to earn private licences but, given their true flying capabilities, are really in the “grey area”, especially when they upgrade to less forgiving ships that mark a substantial departure from the docile trainers in which they took their flight tests.

Although I left that club several years ago, I remember this particular pilot well because he was one of the old hands and I had occasionally flown with him as an instructor. Upon hearing of the accident my immediate reaction was that he had not been a very good pilot, even though he held a private licence and had been flying in the club for many years. If he'd been flying one of the more docile two-place gliders, he might have avoided a fatal accident even though there probably would have been some damage done.

Nobody will ever know exactly what happened but my speculation is that he got a little overconfident, gave the controls to the other pilot during the landing, and failed to take over soon enough once the other pilot began to botch the approach. After that, he didn't attempt to use full dive brakes because he probably had never made a maximum performance landing in that bird and, once he started turning at low altitude, the classic stall-spin situation presented itself.

One of the things you learn as an instructor is how long you can wait on a messed-up approach before taking over and salvaging it yourself. Steve didn't know about that because he'd never given formal instruction. The other factor is that the ship he was flying is a lot less forgiving than a primary trainer and when you try to wrap one around a tight corner in a marginal situation you are asking for trouble.

My recollection that Steve wasn't a very good pilot is based on flying with him and observing him during the years I was in that club. I think he was rather a nervous type and prone to getting excited in those little critical situations that happen now and then. In any case, he was a conservative guy and not the sort to stick his neck out intentionally.

The point that bears further examination is why some of the club members felt he shouldn't have been flying that type of glider. The reason he was flying it was that he passed a checkout and an instructor said he was okay to go alone. How thorough that checkout was – whether it entailed maximum performance maneuvers and a rigid test of whether Steve could really handle that big bird

under less than ideal conditions – is unknown to me. However, that club has always had a good instruction program and I have no reason to believe that Steve didn't receive a normal checkout.

But was a normal checkout sufficient for a marginal pilot like Steve? Since Steve was an “old hand” in the club and well-liked and trusted, the tendency would have been for the instructor to give him a few rides around the pattern and then let him go.

This gets into some even heavier stuff about what is the responsibility of an instructor when a marginal pilot tries to trade up to some hotter machine that he may not be able to handle under adverse conditions. If there is any significant doubt, shouldn't the instructor insist on a very comprehensive checkout? And even if he scrapes by such a checkout but the instructor has a gut feel that he may be dangerous in a tight spot shouldn't he take him aside and have a heart-to-heart with him about not upgrading to the hotter ship? Tough questions, particularly when he's one of the club regulars and he's got his mind set on moving up and maybe he's old enough to be your father. If you do all that and he fails to heed the warning, that's his business. But if you never warn him, and he augers in someday, your conscience will not be at peace.

Some corollary conclusions might also be drawn from this tragic event:

- Long seniority as a member of a glider club does not automatically equate to a high level of flying skill; as a matter of fact, it is sometimes the reverse. The natural deference that is often given to such members should not be permitted to influence judgements about their piloting abilities.
- Being a nice person has little or no bearing on flying skill and should not influence an instructor's decision on whether a pilot should be upgraded to hotter equipment.
- Broader circulation should be given to Wolfgang Langewiesche's book *Stick and Rudder* which perhaps contains the best description ever written on the anatomy of spins (although written for airplane drivers, this book's excellent analysis of control effects is also applicable to how gliders behave).

In Steve's case I am not trying to fault the instructor or instructors who judged him competent to fly that ship because I don't know the facts and I am only speculating about what may have happened. What I *am* saying, based on personal experience in several clubs, is that many have Steve as a member. In such cases, we have the responsibility to identify their limitations and not encourage them to move into more advanced equipment if we think they may get themselves into trouble. ❖

Proprioception

how your body knows its
dynamic position in space

Dr. Daniel Johnson
from SOARING

TOM CIRCLED LOW OVER THE MOUNTAIN RIDGE in a thermal that swept up a sunlit groove that ascended the mountain face, a geologic convenience that today faced sun and wind. He was delighted by the responsiveness and performance of his new, sleek white ship. After establishing a steep left turn, Tom looked straight up to check the Schweizer 1-26 circling above him. He thought, "Golly, that thing can turn tight circles". Suddenly, the ailerons went slack. The nose dropped despite back stick. Tom looked across the glare shield and saw trees. There was sudden, loud cracking and snapping, then silence. Tom's legs were caught under the panel, and hurt terribly. He dug for his cell phone, called his wife. "I'm in the trees. I broke the glider. A thermal gust caught me. I'm sorry! Call Mountain Rescue." He read the coordinates off his GPS. Thank God that still worked.

But – was it a rogue gust? A pilot not yet adept with a new ship? Carelessness? Later, his GPS log showed that in the last seconds before the crash, its trace became almost straight; the glider climbed and slowed, then descended rapidly. Why? Well, he was flying close to stall after all, he wanted to turn tightly in the small thermal. He was banked steeply for the same reason. This is what we do.

The key to understanding what happened physiologically is that the trace straightened, the glider climbed, and of course, slowed. It was, essentially, a straight-ahead stall. This is exactly what *should* happen, given the function and alignment of the semicircular canals.

The vestibular system always does what it's designed to do. When operated outside its design parameters, the consciousness enveloping it may receive a wrong analysis of the status of the glider in the 3D space-time continuum, which may cause the fingers unconsciously to twiddle the stick they hold in the wrong direction or by the wrong amount. For the folks who did not take Anatomy, the vestibular system comprises three organs: the cochlea (hearing), the otolith apparatus (acceleration) and the semicircular canals (rotation).

The semicircular canals are filled with stuff – endolymph – that flows like honey (not very fast, not very far). A *change* in rotation causes the endolymph not to flow enough at first, then to catch up. But the endolymph not-flowing while the head is turning is a *change* and this tells the conscious and subconscious mind about the new rotation. It takes about 15 seconds for this disturbance to settle out.

This means that when we enter a stable turn, we only need to be stable for about 15 seconds in order for the endolymph to be ready to detect another change. For Tom, this means that his semicircular canal endolymph was in a steady state before he was halfway around the first time.

Then he caused a change; *he looked straight up*. To look straight up from a left bank requires that we turn our head to the right and extend our neck. To the stable endolymph, this feels like the left bank has suddenly gotten much steeper, and the nose has dropped. In the absence of visual markers to correct this sensation (typically the horizon, to allow us to perceive that the glider is really not changing status), the well-trained pilot's subconscious automatically corrects the bank that now feels too steep, and raises the nose that tends to be dropping.

As you know from spin training, the break and rotation can happen very quickly. The semicircular canals now correctly sense the nose to be dropping; the subconscious reflex is back-stick. If Tom was 150 feet above the ridge, and is suddenly in a 600 ft/min stalled descent, he has less than 15 seconds to figure this out, make the correct control inputs, and wait-wait-wait for airflow to re-attach, so he can regain control authority – hopefully high enough above the trees to curve away from them. Might not be possible.

Now, my point is not that Tom was stupid or careless or badly trained. In fact, I think he was smart, expert, and careful. And I think that his vestibular system just happened to be working correctly, and sent the messages it was designed to send, subconsciously, to his muscles. Tom's normal physiology and his well-trained pilot's reflexes operated as expected, breaking his nice glider and his legs.

The point, for real life, is that we need to continually move our heads around while repeatedly fixing our vision on one outside point or another, to give our conscious and subconscious neural networks corroborative visual data with which to adjust the acceleration data from the vestibular system.

How does our dynamic sense of body position ("proprioception") work.

A French study of glider accidents (*Frank Caron, Technical Soaring, V13 #3 71-75, July 1999*) showed that misunderstanding the aircraft status relative to its environment accounted for 89% of the accidents, 91% of the injuries, and all the fatalities. There are three areas of sensation

that are integrated by the brain (cerebellum, mostly) in order to arrive at a psychomotor conscious and subconscious understanding of the dynamic 3D status of the glider: vision, vestibular sensation (rotation and acceleration), and “touch” (broadly speaking).

I use “touch” to summarize all the types of sensors in joints, ligaments, muscles, and skin that are integrated to complete the picture of our body’s and our airplane’s speed, orientation, and rate of change during flight.

The analysis and integration of this diverse information occurs subconsciously and reflexively. The result emerges in consciousness if we pay attention. This reflex, in its most powerful and basic form, is the *righting reflex* (proprioceptive reflex). This is what lets a cat land on its feet when dropped, and it’s what makes the pilot’s head tilt so that the eyes are about level with the horizon. Our body parts will move swiftly, involuntarily, at maximum speed, in ways that keep our eyes level. You can probably recall your body doing some pretty amazing things, all by itself, when your feet have slipped.

Just because this reflex is complex does not mean it’s failure-prone. The “failures” are mostly illusions of one type or another that occur due to incomplete information. Actual failure is due to disease or aging – itself a significant topic for older pilots (we assume that if you’re reading this, you’re still aging).

There are specialized nerve endings around our body to provide the data for proprioception: position sensors that detect the angle of joints; tensiometers in the ligaments and muscles; four different types of pressure sensors in our skin – information from this large variety of “touch” sensors is combined into the, “where am I?” (proprioception) and “what’s happening to my position?” (kinesthesia) whole sense of being, to which we respond with control movements.

Our central nervous system has to do stupendous number crunching, of signals (varying in frequency) from millions of diverse nerve endings, integrated into a potentially conscious summary of position and motion whose accuracy is verified by visual reference and skin pressure. Pressure sense involves five receptors:

- continuous pressure is detected by Rufini endings,
- the beginning and end of continuous pressure by Meissner corpuscles,
- light pressure by free nerve endings,
- heavy pressure by Pacinian corpuscles, and
- the Merkel disk, a slow receptor that responds to maintained deformation of the skin surface (use Google if you want to see images).

The muscle monitor is the *muscle spindle*, a specialized muscle cell whose sensitivity and responsiveness is dynamically adjusted by spinal cord reflexes. Four different

nerve fibres detect stretch and velocity of movement, alter spindle tone and sensitivity, and set an expected template of muscle activity, permitting deviations from the muscle’s planned movement. This is probably the most important detector of joint position.

The Golgi tendon organ, which functions as a tensiometer, is located in large numbers at the junction between muscle and tendon. Each Golgi organ monitors a small portion of the tendon and attached muscle fibres, permitting fine adjustment of muscle effort. Joints have four types of nerve receptors:

- One is located in the joint capsule and ligaments, is most active at the limits of joint movement, and responds to change of joint direction, to the size of movement, to pressure in the joint, and the velocity of movement.
- The second is active only at the limits of movement, increasing muscle contraction as movement begins.
- The third is in the joint ligaments, detects tension, and activates a protective reflex.
- The fourth is located throughout the joint and acts to initiate the reflex that stops joint movement.

Add to this basic complexity the fact that in the neck alone, there are seven vertebrae, most of which involve four joints, surrounded by complex musculature.

I list these things because we tend to think in terms of vision and the semicircular canals when we consider position and motion sense, and the attitude and speed of the glider we are piloting. But these are only the most important. The otolith organ, detecting accelerations in three dimensions, and the complex cutaneous, joint, muscle, and ligament sensation and the coordination of the muscle tone, movement, and position of our body, especially the joints and muscles of the neck, are very important in creating the overall impression of our present status and motion vector.

Putting all this information together requires a powerful and resilient analytical engine. This engine can be fooled: bad data (intoxication, fatigue, dehydration, nerve damage, hypoxia, hypothermia, depression, etc.) or missing data (especially partial vision) can create a wrong analysis.

As we age, everything works a little less well, plus disease or injury may add big incremental setbacks. We need to test our abilities, note what we do well or do not, and adapt or retrain as needed. As a physician, I’ve noticed that my aging patients always, at some point, begin to complain of subtle defects in balance and coordination that may become quite scary in those who are lucky enough to survive to physical senescence. This change must be a reason why some aging pilots quietly hang it up – without explaining, because to talk about losing the right stuff is just too humiliating.

Now, a variation on this tune. Our central nervous system, working in a healthy, highly trained individual, is processing extremely complex data at very high speed and is capable of amazing accuracy and insight. When we allow our body to become stressed in any important ⇒ p30

Resurrection

Gianni Grando, Port Alberni

RESURRECTION is my play on words and it may evoke a spiritual thought in some. It's likely both.

I purchased a Peterson *J-4 Javelin* in November 2009. I wasn't particularly looking for this aircraft, as a matter of fact, I had no idea what it was. I wasn't even seriously considering a glider purchase at the time. I had looked at the aircraft of a friend of mine, but it sold before I had an opportunity to make an offer. It was his suggestion that, if I was still interested in a purchase, I contact a fellow in Port Alberni, BC that may still have his glider for sale.

As it turned out, it was a Javelin, and the aircraft had a fascinating history. After studying the log books, I discovered that a friend and fellow pilot had owned this glider previously in partnership with two others, and I recognized the names of some of the pilots who flew it. I noted its unconventional flight control system, especially the top surface, forward-hinged spoiler plates (spoilerons) that replaced the ailerons. The glider now intrigued me; however, I wanted to do some research before I decided to purchase it.

The vast resources of the web yielded only two pages with little information. One was a brief description of the performance specs along with a small photo, the other a flight test evaluation. After more searching, I stumbled upon an RC sailplane website in the UK containing Richard Johnson's flight test report from the January 1992 *SOARING* magazine. I was even more intrigued now. One more search revealed that eight were manufactured in the mid-70s, then the arrival of fibreglass ended sales. Four appeared to be still registered in the USA. The one I was looking at now was the only one in Canada and it hadn't been flown since 2001.

I decided to buy this unique glider and resurrect it; it needed to be alive again. After getting a few small items squared away for the annual inspection, I was now going to become a test pilot. I had read the flight test report and had spoken to the previous owners about its flight characteristics, seeing as it had (as mentioned earlier) spoilerons, stabilators, and an all-moving vertical stabilizer – talk about pitch and directional control!

The flight handbook recommends checking the cg before takeoff. The nose skid will remain down on the runway when the cg is forward of its aft limit. A nose ballast weight can be added in the event the cg is too far aft. This is an excellent safety feature. With weight and balance checked and all the preflight checks complete, there was no turning back as I was hooked up to the towplane for my maiden flight. As slack was taken up the nose skid gently settled on the runway surface and with an "all out", the glider moved effortlessly to wings level, balancing nicely on the new main wheel, and then we were in the air and climbing. I

was wondering what was making the constant thumping sound as we climbed. The culprit was my rather large, initial inputs on the spoilerons, causing them to open and close rapidly. I had been warned to keep rudder inputs to a minimum and only tiny inputs were recommended should there be a need for directional control. This proved to be true. The remainder of the climb was uneventful with the best towing speed being 75 mi/hr.

Pulling the release, I was on my own and playing with my new toy. I proceeded to see how the ship behaves. A gentle stall yielded little or no drop of the nose but deeper stalls did. No spins as they were prohibited. I was eager to explore the roll rate as the spoilerons were known to be far less responsive than ailerons. The roll rate was definitely less than spectacular, but with a little extra speed they seemed to provide a reasonable response. The main plus for spoilerons was the absence of adverse yaw! Now, what about that all-flying rudder; is it needed? I decided to roll to the left with a measure of rudder input! Wow, that got me around, albeit with a skidding turn!

After a few more maneuvers, including slips with and without spoilerons, it was time to head for the circuit. I confirmed the wind direction and speed, and adjusted my final approach speed for 70 mi/hr. With pre-landing checks complete I turned base then soon turned final with spoilers fully open and a bit of slip for good measure to gain the descent path I wanted. The rest unfolded naturally and the Javelin smoothly touched down. I rolled out, applying the hydraulic brake actuated by the spoiler handle.

After coming to a stop, I sat quietly for a few seconds, savouring the moment. The resurrection was complete. It was almost as exciting as my first solo.

I have managed to put five hours in the Javelin with my longest flight being 1:56 and look forward to extending that. I have also created a Facebook page <<https://www.facebook.com/#!/groups/140130912666131/>> in the hope finding other owners of this rare glider. ❖



disabled soldiers soar

Virginia Thompson

EARLY THIS SPRING Linda Brand, the Programs Officer for the Canadian Aviation and Space Museum (CASM); Marc Ducharme, the museum Director of Operations; and Doug Laurie-Lean, president of the Gatineau Gliding Club, were invited by Greg Lagacé of DND's *Soldier On* program to submit a proposal for the integration of glider pilot training for soldiers with disabilities.

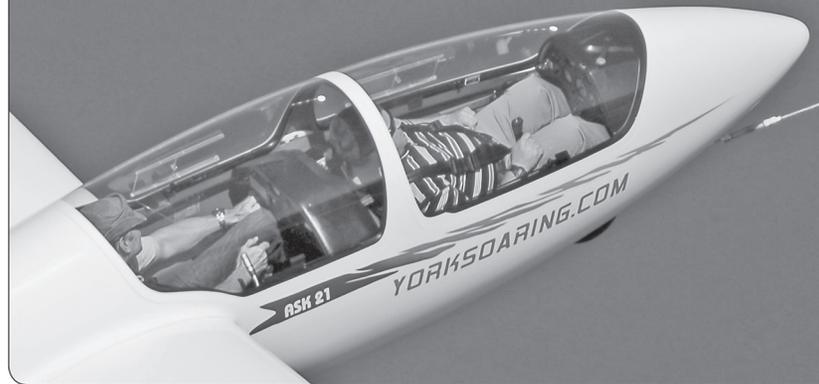
The proposal would develop an alliance between *Freedom's Wings Canada* and the *Soldier On* program. The objective is to provide a therapeutic glider pilot flight training program for soldiers with disabilities based on the current *Freedom's Wings Canada* glider flight program. It was proposed that under the auspices of the *Freedom's Wings* program, glider pilot training would become part of the therapeutic rehabilitation for Canadian Forces personnel with physical and other disabilities. This program would be a national exercise initially involving three Canadian gliding clubs, the CASM, and the *Soldier On* program.

The collaborating gliding clubs would initially be Edmonton Gliding Club to service CFB Edmonton, the Gatineau Gliding Club to service CFB Petawawa, and the Quebec Soaring Club to service CFB Valcartier. Starting in the spring of 2012 the first soldier from the *Freedom's Wings / Soldier On* alliance will launch at York Soaring to earn a glider pilot licence; a promotion delayed his training from this fall to the spring. As the program grows and more club gliders across Canada are equipped with adaptive hand controls, we expect to see many more candidates. The major funding initiative of *Freedom's Wings* will be purchasing hand controls for all nine gliding clubs who currently host *Freedom's Wings* chapters.

Freedom's Wings Canada is a non-profit organization, dedicated to providing both therapeutic 'Inspirational Flights' and flight training through the use of adaptive hand controls for people with physical disabilities, and is financed through donations to Youth Flight Canada Education Fund, a registered charitable organization. Visit us at <www.freedomswings.ca> and watch for our new website this fall.

Soldier On was co-founded in 2006 by Warrant Officer Andrew McLean, a Canadian Forces Search and Rescue Technician and ultramarathon runner, and Greg Lagacé, Paralympic Development Manager with the Canadian Paralympic Committee. The initiative grew and was transferred in 2007 to the Canadian Forces Personnel and Family Support Services. The program was complemented by the formation of the Soldier On fund in the fall of 2007. The mission of the Soldier On program and the complementary Soldier On fund is to deliver programs and services towards the functional independence of ill or injured Canadian Forces personnel or former personnel, and to facilitate opportunities for such CF personnel with disabilities to participate actively in health-promoting sport and other activities.

Freedom's Wings & Soldier On



MCpl Paul Valiquette, stationed at CFB Kingston, is on tow with paraplegic glider instructor Mike Clarke during the show at Rockcliffe. Paul will be the first to start licensing training in the spring at York Soaring. Photo: Bill Upton, courtesy of the CASM.

The launch of the program was to take place during the Canada Day celebrations at the CASM at the Rockcliffe airport, the Edmonton Soaring Club airfield, and at CVV Quebec. <www.youtube.com/watch?v=WO747OXruV0&feature=player_detailpage> is a video of the event at the museum. The event planned for Edmonton Soaring unfortunately had to be postponed due to a wet airfield that precluded flying operations. Quebec Soaring had a successful Canada Day event, flying two servicemen.

The following account of the day is provided by Doug Laurie-Lean:

The Canadian Aviation and Space Museum celebrated Canada Day by flying six young soldiers with disabilities in the GGC Puchacz and the York Soaring ASK-21 gliders at Rockcliffe Airport. We were the focal point of the flying demonstrations there as part of the day's celebrations.

The day started with a free breakfast by the Rockcliffe Flying Club in their new hangar, and then we went across the airfield to the parking lot of the aviation museum for the inauguration ceremonies. Brig. Gen. Russell gave the opening address to the assemblage, followed by Charles Petersen, founder of *Freedom's Wings Canada*, then some additional speeches during which the first two gliders were readied for take-off, to be aerotowed by the GGC Citabria piloted by Jarek Twardowski.

The first passenger was Sgt. Ken Wilson in the ASK-21, appropriately piloted by Mike Clarke, Canada's first licensed paraplegic glider pilot, himself an ex-serviceman from the Hussars at Petawawa. The tow release and first glider flight was timed for the end of the speeches. The following flights, alternating between the two gliders, followed in very efficient rapid succession. The last flight in the Puchacz landed minutes before the NOTAM closure of the airspace to clear the skies for the *Snowbirds* formation flight display over Parliament Hill and the Rockcliffe airport. Lunch was served by the CASM ⇒ p28

dream to reality

the Alberta Soaring Council winch

Phil Stade, Cu Nim



THE ASC WINCH IS NOW A REALITY! The process leading to this day started about 6 or 7 years ago with the first phase: talk. The second phase was much like the first but it included gathering information on various ways to achieve our goal of introducing clubs and pilots to the possibilities of winch launching. In 2005 we invited Bill Daniels, a great proponent of winching in North America, to address our SAC annual meeting in Vancouver. His presentation further inspired a lot of people to continue talking about winches.

The trip in 2008 to the SSA convention by Jean Claude, David McAsey and myself made it possible for us to see three of the available commercially constructed winches, and our focus then shifted to getting a grant to make acquiring the Hydro Winch a reality. A grant application was carefully prepared and sent off to the Community Initiatives Program of Alberta Culture and Community Spirit. To our delight a \$75,000 matching funds grant was approved and in November of 2008 the money was in the bank. Unfortunately the upsurge in the US dollar and the dramatic decline of our ASC investments at that time took the Hydro Winch option off the table. In the spring of 2010, after exploring numerous options, we negotiated with Roman Wrosz to purchase the dual drum Roman's Design Winch he had displayed at the SSA convention in 2008.

The deal was formalized last summer and we anticipated getting the winch in place for Summer Cowley – then Fall Cowley – then the First ASC Planning Meeting in November – then before the 2011 season started – then May. Roman called 9 June to let me know that the winch would be ready by 13 June and by nightfall a friend and I had decided to drive to San Diego to pick it up. Sunday was ASC winch instruction day at the airstrip in Jacumba. This gravel strip is about 500 feet from the American's version

of the Berlin Wall that marks their border with Mexico so a turn to the south after launch places the glider in Mexico. Roman showed me how to drive the winch on three or four launches and after seven or eight solo drives I was declared the ASC Roman Winch expert.

Although we had planned to get away by about 10 am on Monday it was after 10 pm before we were heading home on the road from Ramona to Escondido, California with the 7300 pound, tandem axle winch in tow. Roman said this short cut was a bit curvy (you've got to be kidding! – it was up, down and around for about 30 miles). It was quite an interesting beginning to our 2900 km return trip and made the unending construction around Salt Lake City look okay.

Tuesday afternoon we stopped at the Las Vegas Soaring Centre at Jean, Nevada to pick up the Spectra rope for the winch. We were very surprised to be handed 7,500 feet of this rope in a small, 20 pound box. It was hard to believe that this 3/16 inch, shoe lace size rope would be sufficient to launch 1,200 pound gliders. It has been launching our gliders and continues to amaze us. The Soaring Centre owners, Michael and Karen Henderson, wanted to buy a winch like ours. The 40+ degree temperature convinced them – their own old winch is open to the weather and the ASC one is heated for cold and air conditioned for just such days. It was quite a shock to arrive home two evenings later to the "Is it going to freeze tonight?" weather in our area.

The first launches took place at Innisfail on 22 June. The Central Alberta Gliding Club, the host club, has been winch launching for many years. Their teamwork and Jerry Mulder's expertise helped ensure that the winch clinic participants from the Edmonton Soaring Club and Cu Nim Gliding Club got off to a safe start. The winch stayed at CAGC for a week and then it was back to Cu Nim and to Cowley for the Summer Camp at the end of July.

Our goal now is to get a few instructors and pilots at Cu Nim, ESC, and CAGC to solo status so that each club can independently train their own members. One of the challenges of winch launching is to always be ready for the unexpected. The combination of new winch drivers and student winch pilots has ensured the unexpected will occur sooner rather than later. This is no time for complacency or partial attention to check lists and options. Of course that is excellent practice for our pilots and prepares them for their solo launches in the future.

The next move will be to the Cold Lake Air Force Base in early September where we will be able to launch on runways as long as 12,600 feet. That should give us release heights of over 5000!

⇒ p28

A good day at Uvalde

Dave Springford, SOSA

THE LAST CONTEST DAY was a classic Uvalde day with cloud streets running southeast to northwest and the threat of thunderstorms as the sea breeze front from the Gulf of Mexico moved into the task area in the late afternoon.

The 15 metre task for the day was an assigned area task that first took us south about 20 kilometres, then west before turning north into the Texas hill country, back to the east, and then a long leg to the southern edge of the task area and back home.

When I looked at the weather and the task, I decided that it would be best to turn short in the north turn area and then take advantage of the large 45 km area around the last turnpoint to the south. I based this decision on three factors. Local knowledge, Dr. Jack's forecast and a reality check of the sky.

In a previous contest at Uvalde, a MAT task with one mandatory turnpoint to the northeast was called. There were clouds in the north and it was blue to the south. I flew my entire task under clouds in the north. Those knowing better went to the blue in the south and whumped me that day. At the end of the day when I asked why they went to the blue

in the south instead of flying the clouds the simple answer was "it's always better to the south". I remembered this bit of local knowledge and applied it.

Dr. Jack's forecast was quite good to the south, suggesting 6-7 knot thermals and only 3-4 knots to the north. As we were gridding and getting ready to launch, the cu were popping to the south and the sky looked really fine. To the north it was blue, nothing was happening, just as the Good Doctor had suggested. By launch time a few cu were starting to build in the north and by start time the north was looking okay, but still not as good as to the south. This sealed in my mind the need to turn short in the northern area to get into the good conditions as quickly as possible.

I flew as deeply as possible into the first southern turn area, and then aimed for the south part of the second westerly area. This part of the second area was a little weaker than I had anticipated, so I turned earlier than planned and headed north. I picked up a few 4-5 knot thermals that kept me in the working band and moving forward and then nicked the northern turn area and headed east. The clouds seemed to be streeting nicely on this leg and I was able to move along stopping for only one 4.7 knot climb and covering the 70 km leg at 118 km/h at an average L/D of 185:1. Since this leg was not as fast as I thought it was going to be, I turned about the middle of the next turn area and then headed south.

My first climb on the 195 km leg south averaged 8 knots and I climbed from 3800 feet to 8200 feet, putting me in a great position to run the cloud streets. On this leg, I averaged 141 km/h with an average L/D of 143:1 and took only three thermals that averaged 8.5 kts. I could see the sea breeze front well to the southeast and determined that it would not be a factor on the run south and then back home. As I was heading south and checking my task time, I used 3 km per minute, or 180 km/h as my rough guess on time to turn for home. Having used this guesstimate earlier in the contest and arriving a couple of minutes early that day as I averaged 212 km/h on the final leg with the tailwind, I decided that I would fly all the way to the back of this turn area to ensure I would not be under time. With 50 minutes remaining in the task time, I was 193 km from the finish gate and so I turned for home following the streets.

⇒ p28



Seven Canadian pilots attended the 15m/18m "Uvalde Glide" pre-Worlds competition in Uvalde, TX to become familiar with the soaring conditions and topography of the region. Left to right top is Dave Springford, Willem Langelaan, Jörg Stieber, and Jerzy Szemplinski; bottom is Derek Mackie and Nick Bonnière. Missing is Brian Milner who competed in the Open Class Nationals also held on site. There were 21 pilots in the 15m competition with Dave placing 9th and Jörg 15th. There were 14 in 18m, with Jerzy placing 4th, Derek 7th, Nick 11th, and Willem 13th.

ALTITUDE and BRAIN MUSH

self-administered carbon monoxide poisoning

Dr. Daniel Johnson
from *SOARING*

We're at a beautiful 3 km high mountain site out west for a week of winch launching fun. We're a little intimidated when we discover that with us are some European pilots who have thousands of winch launches among them. Performance anxiety looms.

However, during the week our self-esteem begins to heal, for every so often one of these high-time guys flies awkwardly. There's a launch failure: the glider's going fast – but only about 2 m agl and level when the winch fails. The pilot could coast to a safe stop straight down the runway. However, he inexplicably climbs steeply after losing the cable and stalls at about 20 m. Wait! He has the nose down; he's going to handle it after all! The glider (whew!) rounds off in ground effect ... and then climbs again, has a secondary stall, and pancakes onto the asphalt. No harm, so no NTSB scrutiny, just the LEP (Local Embarrassment Panel).

In addition, sometimes these smart, highly seasoned pilots just don't look as sharp as we expected flying landing patterns. Speed sometimes looks scary-slow to the locals, the turn to final is often overshoot, and accuracy is off. Between launches, they huddle together talking, having a smoke, and debriefing. They seem ebullient. Happiness is a week in the mountains; happiness is hypoxia.

The launch master suggests they try oxygen. After his next flight, one steps out of the glider and exclaims, "When I put on the oxygen, the colours got a lot better!" This surprises the rest. They are willing to try the oxygen to experience the colour, but they are clear that otherwise they don't need it: "I feel fine." "Oxygen isn't required below 14,000!" "I've got a pulse-ox!" Why are these experienced guys having trouble? Why aren't they worried? Well, why should they be – they've got a pulse-ox!

The reasons are several. First, there are the standard procedural differences: unfamiliar site, novel aircraft, and different procedural nuances. Therefore, training is an issue. Second, there's the altitude effect on airspeed.

The airspeeds are all the usual ones, but TAS is invisibly higher, so when down low, the ground goes by faster, and highly trained reflexes automatically make things look and feel wrongly right.

Yet the most important reason is the "I feel fine" problem. Our brilliant minds and superb motor skills depend, for excellence, on the neurochemistry working just right. However, our bodies' impairment-detector is pretty much a near-death detector, and ignores and compensates for mild annoyances (to do otherwise would create continual unhelpful distractions). At least three things have sabotaged our elite pilots: jet lag, altitude effects, and carbon monoxide (it's not engine exhaust that's the problem).

Circadian asynchrony (jet lag) Our hormonal biorhythms are synchronized by sunset. To go forward on the clock over 3 hours each day or back by 1 hour causes next-day fatigue and measurable performance loss. Recovery from greater change takes at least 3 days. Melatonin, the synchronicity hormone, may speed this up but doesn't prevent it. Our friends have recently backed up 7 hours, and surely are out of sync neurochemically.

Altitude This decreases performance in two ways: hypoxia and altitude sickness (which amplifies effect of hypoxia). The problem with oxygen is that, even though it's our most important need, *our bodies have no oxygen detector*.

Shortness of breath is not caused by low oxygen but by: whatever increases the work of breathing (resistance to airflow, lung stiffness from asthma, fibrotic tissue, infection, or venous congestion), alters the blood acid-base balance, or alters the carbon dioxide content. Altitude sickness does not respect age or fitness. Just about any time a person feels "ill" after an ascent of 4000 to 6000 feet, altitude sickness is the first thing to think of.

We are far more sensitive to hypoxia than the FARs recognize. The regulations are concerned with *incapacitation*, and flying is usually such a straightforward task that pilots have often returned to brag again from flights without oxygen above 20,000 feet. However, none of them could have worked a calculus problem up there, or subtracted a compass heading (it wouldn't have seemed important anyway, which is itself a symptom of hypoxia).

Anyone who's donned oxygen while flying at night at 5000 feet msl will tell you how quickly the lights on the ground went to 'bright'. (They don't mention that the brain also went to 'bright'.) It's known that smokers function as if they are 3–5000 feet higher than the altitude on the altimeter.

Therefore, these guys had jet lag, possibly mild altitude sickness, mild hypoxia, and mild carbon monoxide toxicity going against them. Each of these things can cause subtle impairment of neurological function (wisdom, coordination, creativity). Combinations are more than additive. Moreover, there's evidence that smokers are less aware of their hypoxic symptoms than non-smokers.

Carbon monoxide CO in tobacco smoke does more than smokers realize:

- It ties up 3-10% of hemoglobin and permanently prevents it from transporting oxygen to the brain.
- It decreases the ability of hemoglobin to release oxygen into the tissues (shifts the Hgb-O₂ dissociation curve to the right).
- It interferes with metabolism in all tissues even at low concentrations (5-9%) by interfering with the heme-containing proteins that are centrally important in energy transport.
- It causes an oximeter to read falsely high. Carboxyhemoglobin (COHb) levels in non-smokers are less than 2%, while they may be as high as 10-20% in heavy smokers. COHb resembles oxyhemoglobin in the red range, and [thus] looks like oxyhemoglobin, causing the pulse oximeter to over-read. For every 1% of circulating carboxyhemoglobin, the pulse oximeter over-reads by 1%. Half of cigarette smokers have a carboxyhemoglobin concentration of 6%. The most important limitation of pulse oximeters is that they are inaccurate in patients who need them the most.

I'm not going to tell you to quit smoking. Your conscience, your kids, your spouse, and your doctor have already failed. However, I will say this: if the gliderport is more than 4000 feet msl above the altitude you inhabit, or you plan to climb more than about 6000 feet above your home elevation, please wear oxygen from the ground up. You'll look much more skillful to the spectators, and the colours will be prettier, too.

We'll write on the role that our thinking and physiology factors into accidents as long as our interest and yours persists. If you know of any incident in which something awkward or harmful happened that the pilot failed to perceive accurately, we'd be willing to consider using it for a column. If so, send information to <johnsondanl@yahoo.com>.

Safety points for consideration

1. Don't do unimportant things on tow. Over the season, instructors have observed this when flying with people. Examples include closing the vent when you are barely fifty feet off the ground. Another involves turning the vario on at a similar point in the flight. Our full attention needs to be focused 100% on flying the aircraft during that first few hundred feet of the tow. We don't need to be distracted or concerned about vents, varios, radios, etc. in the early part of the flight.

2. Has your club become less and less definitive about the "active runway". There are good reasons for this some times, including a preference not to land with the sun in one's eyes. Another exception that clubs continue to make are towplane landings counter to the active runway. Specific towpilots can be trusted to spot traffic and to be clear in their radio work, but every towpilot? How do ex-

ceptions get accommodated within a safe operating system? Are they worth it? In the case of towplane landings towards a glider operation, the economic and efficiency arguments are compelling, so a case can be made that it's "worth it".

As for other situations, glider pilots have had the experience, often several times per season, of reviewing options while returning to the field. Through good luck rather than good management it may be many years before one does a straight-in downwind landing, or join the circuit on the wrong base leg. But it has happened in the past, and almost certainly will happen again!

There are occasions when such actions are on one's list of options, if necessary. After all, 500 feet is four kilometres, so an opposite base leg seems an acceptable risk when it means avoidance of a short retrieve! (The off-field landing itself should be considered a very small incremental risk, if done as a planned "option" and chosen in good time.) Therefore, clubs may endorse operating procedures that accommodate those options – contingent of course on good situational awareness by the pilot causing the non-standard action, which also means working radios in all gliders and good radio work by everyone.

3. Radio work is a key factor in safe and efficient operations around the airport. Everyone should first practise giving too much information for a little while, then as others catch on, there will be much more situational awareness. The habit of providing useful information on a timely basis minimizes that dangerous black hole, the absence of knowledge of other aircraft. Then there

can be more flexibility in circuit operations and flying an opposite circuit will pose less of a threat to safety. Clubs need consistently good radios and good radio practice to achieve that goal.

Trust as a part of club culture

Trust affects the safety of operations. A culture of trust ensures questions can be asked by anyone about anything. Every member needs to know that they can trust the club, and each member in it, to handle incident reports with discretion. Every member needs to be able to trust the rest of the club before they will admit they need help in upgrading their skills. Without trust, discussion shuts down, sharing of incidents stops, and CYA becomes the member's MO. This will not result in a safe operation.

Things that build trust in a club:

- If you have a problem, talk to the person involved.
- If you see a problem developing between members, encourage them to deal with it by speaking with them, not about them.
- If you are involved in an incident, report it. In other words, act in a trusting manner.
- If you are trusted by another club member, be worthy of that trust. Don't go behind their back and talk with others about them.
- If someone expresses an opinion that is different from yours or acts in a way that you don't think they should, deal directly with the person involved. The *Golden Rule* applies.
- If someone approaches you about someone else, send them to that individual to deal with them directly.
- If you are approached by someone with a genuine concern, listen to what they say and learn what you can from the experience.

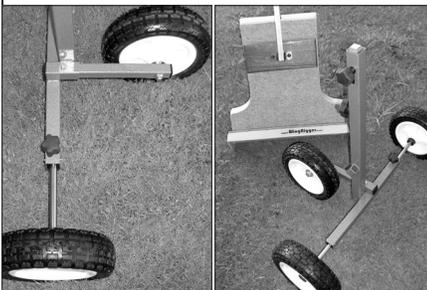
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The Perlan II project continues to develop

The Perlan Project is an attempt to fly a glider to 90,000 ft (28 km) in the weather phenomenon called the polar vortex. The project has completed Stage 1 and proven the concept with the current altitude record. *Windward Performance* in Bend, OR is now designing and constructing the Stage 2 glider.

The Perlan II glider will be able to fly in a region of the atmosphere that is sometimes called the "ignosphere" by meteorologists. This is because no airplane or satellite can sustain flight in this region and it is basically ignored by meteorologists.

(One of the problems the IGC is grappling with right now is how to get acceptable height data at that altitude.)

The Perlan Project expects to be able to take meteorological measurements that will expand understanding of the natural processes that occur in this layer of the atmosphere.

There are many technical challenges to flying a glider at this extreme altitude. The air is so thin that the glider must fly at a high true airspeed – more than half the speed of sound. At 90,000 feet the Perlan II aircraft will fly in a virtual vacuum of 3% atmospheric pressure. The aircraft is more spaceship than pressurized aircraft. Aerodynamic drag must be reduced to an absolute minimum so that the predicted updraughts will lift the glider. The glider must be safe in extreme atmospheric conditions, comfortable for the pilots and inexpensive to operate in remote locations of the earth.

Windward Performance is carrying out the complete aerodynamic and structural design of this unique aircraft within its own resources. If the glider is successful in reaching the predicted altitude, it will have completed a sustained flight higher than any other manned aircraft in wing-borne flight.

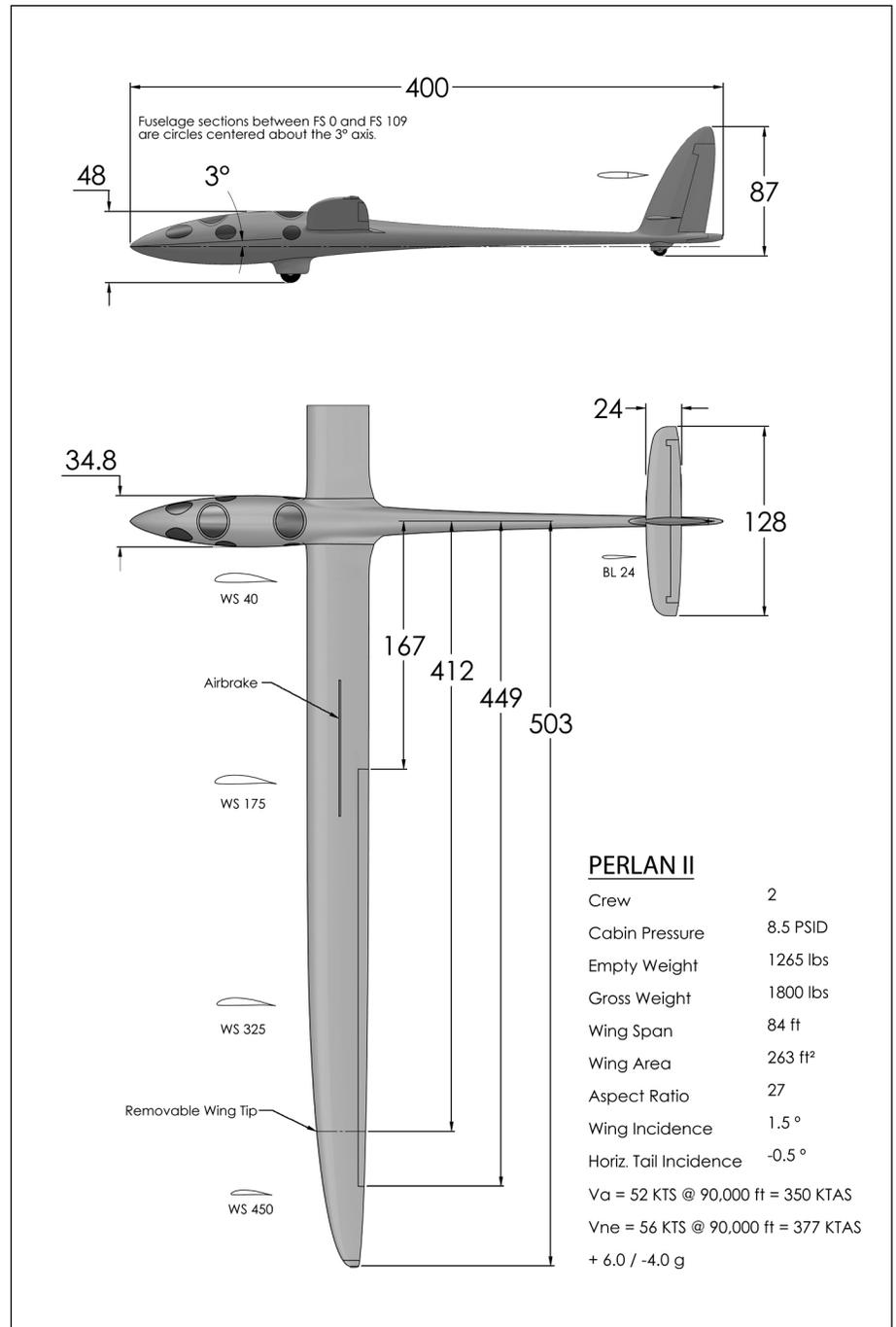
Einar Enevoldson will be flying the Perlan II. He was at Minden-Tahoe Airport last month to discuss the project – part of the testing is to be done at Minden next year.

Enevoldson, 78, was a NASA civilian research pilot, a USAF fighter pilot, and an exchange officer with the RAF. In 1988 he retired from NASA and became the chief test pilot for Grob Egrett in Mindelheim, Germany.

The research project caught the attention and financial backing of wealthy adventurer Steve Fossett who, with Enevoldson, piloted the Perlan I glider to a record altitude for gliders of 50,761 feet in the mountain waves at El Calafate, Argentina on 30 August 2006. One year later, Fossett was killed when an airplane he was flying crashed in the Sierra Nevada mountains.

"Initially, Steve Fossett was the only money in the project", Enevoldson said. "We were dead in the water until Morgan Sandercock, an Australian glider pilot and manager for a mining company provided financial support."

Launching from the southern tip of Argentina, the Perlan II will be able to use the mountain lee wave created by this wind to fly to 90,000 feet in flights lasting up to seven hours. The project will collect data to study



what role the polar vortex plays in ozone depletion and how it influences global weather patterns.

Ed Warnock, who accompanied Enevoldson to Minden, said the project has a three-part mission: science, engineering and education. The science goal is to fly in and record data in stratospheric mountain lee waves. Scientists believe the waves play a dominating role in ozone depletion, causing mixing in the stratosphere and having an impact on global weather patterns.

"Anything we can do to improve modeling of the mixing process, to understand how long the polar vortex will last and the extent of it is not a bad thing," Enevoldson said. "We can quit guessing how the atmosphere works. We'll have the data."

The Perlan II is to be test flown in the Sierras in Nevada and California with the hope of some flights to 40,000 feet. "We'll bring it here next spring for a shakedown," Enevoldson said. The Perlan II and staff will head to Argentina next summer to fly the research mission. Enevoldson estimates there are only three 2-day periods per year in a 3-month window. "We've got to be prepared," he said.

Enevoldson said chief designer Greg Cole and the Windward Performance team stayed with the project even when funding was in jeopardy. "We were out of money, but not out of enthusiasm," Enevoldson said. Now he has a new team which he identifies as 'sponsors' rather than investors." So far, \$2.8M has been contributed in private donations. Donors include Dennis Tito, the world's first privately funded astronaut.

from the *Windward Performance* website and *The Record Courier*, Minden, NV

Changes at Minden

The winds of change are blowing at Minden – almost as strongly as their famous wave winds. *Soar Minden*, a business that has been in place for 30 years and served international soaring pilots from all around the world, has closed its doors after a long and acrimonious fight with airport management.

It is a complex story with more than two sides. Basically, the airport management cites a series of accidents and incidents, along with violations of the airport's commercial business rules. The opposing view is that *Soar Minden* has been relentlessly persecuted for a long time due to encroachment at the airport of "Big Business" who see soaring as a deterrent to growth of more lucrative aviation operations.

As for the safety record, it has been written that there are bound to be some problems with such a large and highly active soaring operation, but this has not been out of proportion.

Meanwhile, *SoaringNV*, a relative newcomer at Minden–Tahoe Airport, continues serving international visitors. Aside from this, there is a plan for a Soaring Center & Museum which is beginning to gather steam. So, at least for the time being, Minden remains open for soaring business and jet traffic remains light.

However, the underlying fact is that Minden Airport hasn't decided if it wants to retain its traditional role as the premiere soaring destination in the USA or if it wants to follow a more lucrative trail involving an influx of biz-jets. No airport can be great at both ends of the aviation spectrum.

Jim Herd
from *Soaring NZ*



Canada at the World Junior Championships

There was a small team entry from Canada at the 2011 World Junior Championships held in Musbach, Germany close to the Black Forest from 4 to 19 August. Our lone pilot, above, was Selena Boyle, flying an LS-1d, with her "team" manager Chris Gough. Selena has a good blog at <http://selenapb.blogspot.com/>. General information and results are at www.jwgc2011.de, and their story will appear in the next issue.

While her result was not stellar, Selena has been getting a ton of experience competing in our last two Nats, JoeyGlide in Australia, and at this Worlds, and will keep improving.



† Ray Perino and Keith Watson

While in pursuit of their passion for soaring, Ray, 64, and Keith, 50, were lost to their family and friends, and to the soaring community, in a tragic midair gliding accident on 3 September over Mount Swansea near Invermere, BC. *Mel Blackburn*

RAY received his university education in the Boston area. On graduating, his idealism motivated him to volunteer with the US Youth Corp during the time of the Vietnam War, and at the end of his stint with the Corp, Ray felt forced to leave the USA and immigrate to Canada to be able to live in accordance with his values.

Ray had a lengthy and respected career in education, working in the Toronto area initially as a teacher and then as a school administrator. When the time came for Ray to retire, he and his wife moved to the Columbia Valley where he was able to indulge his passion for gliding while both of them were able to enjoy the golf and skiing in the surrounding area, and later they moved to the Okanagan Valley.

Ray was a very active member of the Canadian Rockies Soaring Club and was instrumental in the club's continued success. He served as club president for two years and during that time put the club on a more solid organizational footing by helping to write a new constitution.

Ray's greatest contribution to the club was as an instructor. He spent many hours in the rear seat of the 2-33 with the club's youth scholarship recipients and with others who came to learn to soar. It was a perfect match; it allowed Ray to combine his skills as a professional teacher with the enjoyment he got from helping to mould young adults. Ray developed an excellent rapport with each of his students; he was patient and professional, and his students responded enthusiastically to his leadership.

In spite of the large amount of time that Ray spent instructing, he always challenged himself to develop his cross-country soaring skills. In 2004 he was awarded SAC's "200" (novice) Trophy for his flights in his PW-5. After acquiring his SZD-55 (W7) he developed his skills further, with distances in excess of 500 km each year, with the longest flight being 690 km in 2010. This year Ray focused his attention on expanding his cross-country flights in the very scenic Purcell Mountains to the west where strong lift and equally strong sink in that area are equally breathtaking and a challenge to any pilot's soaring skills.

Ray was a private person with a wry sense of humour and always a pleasure to talk with. He was never boastful of his accomplishments, preferring to share with other club

KEITH had a very accomplished career in the entertainment industry as a sound technician, working independently and with Allstar Sound on performances in Calgary and worldwide. He toured throughout North America and Europe with many performing artists.

Keith's first exposure to gliding was in 2003 during a vacation in Hawaii when he took a glider ride at Dillingham Airfield. On his return home he joined the Canadian Rockies club and began his lessons. Keith was a capable and motivated student and quickly soloed. At the end of his first season at the club, Keith wrote the following words:

"From my first flight in the Duo Discus with Trevor Florence on the last day of the Easter weekend, to my solo flight on 31 May, to my first hour-long flight in the club's 2-33, to my longest flight of over 2½ hours, to my first cross-country flight in the Lark with Ernst Schneider, or to that day in September when Martin Jones stood by and helped me climb into a PW-5 for the first time, 2003 was a year of many wonderful experiences that I would not trade for the world. I have joined a great soaring club and I have met many new friends who have shared with me their passion for soaring."

In subsequent seasons Keith continued to work on his cross-country soaring, and in 2005 he was awarded SAC's "200" Trophy.

Keith's ready smile, his willingness to help with any project quickly made him a much appreciated member of the club. His sharp wit often made him the centre of the conversations on the clubhouse deck. He also developed a culinary reputation for his delicious layered Mexican dip.

During the past eight years, any time that Keith wasn't working he could be found in the skies soaring with his friends. He touched the hearts of so many people who enjoyed his friendship, work ethic, and commitment to make every day a new and exciting performance. ❖

members the joys of each flight. During the years that Ray was a member of CRSC, club members were privileged to share numerous interesting and enjoyable conversations with him. Through those exchanges everyone developed the utmost respect for Ray and felt a strong bond with him. ❖

Everyone is going electric

data from various sources

Every sailplane manufacturer is now researching or actually marrying electric motors with their sailplanes. Battery energy and capacity per pound is still a major limiting factor; however, motor usability should go from minutes to maybe hours with the inevitable next generation of electrical energy storage devices. There is also a lot of engineering research going into efficient, small fuel cells which may replace the battery. The technology is advancing rapidly, and with the mechanical simplicity, great ease of operation, low noise, and environmental friendliness of electric power, the day of the internal combustion engine for most sailplanes is ebbing.

- A hybrid electric drive system was on display at recent European airshows, so internal combustion is not history just yet. A Diamond *Super Dimona* motorglider was demonstrated that featured a 70 kW electric motor powered from a continuously running lower powered small Wankel engine. Fuel consumption is very low since the combustion engine always runs at a constant low output of 30 kW. The excess power required for takeoff is supplied by a battery which is recharged by the engine during flight.

- The Pipistrel *Taurus Electro G2* glider won the Lindbergh Prize for the best Electric Aircraft. See <<http://lindberghprize.org/>>. The prize was awarded at the AERO trade fair in Germany. The finalists were the Hugues Duval *Electric Cri-Cri*, Pipistrel's *Taurus Electro*, and the *Sunseeker II* solar airplane by Eric Raymond.

The Pipistrel *Taurus Electro* was chosen because it had a 'plug and play' electric power system available for commercial sale to other airplane makers, and because it included a completely integrated solar trailer that allows the airplane to operate independent of commercial power. This solar trailer was apparently a large factor in the jury choosing the *Taurus Electro G2* as the winner.

The trailer can charge the *Taurus Electro G2*'s batteries in as little as five hours and maintain the charge while the glider is in the trailer. The trailer offers both 12V connection (to charge your instruments, etc.) and 110V/220V connections at front and back of the trailer, where one connects the *Taurus Electro G2*'s charger. The solar cells can be bypassed so the glider can be charged with commercial power inside the trailer when parked in a hangar/garage. The system includes a 3 kWh buffer battery in the trailer and its energy can be transmitted directly in-

to the glider, so the Taurus Electro G2 can be charged at night with the energy that has accumulated during the day.

- Glaser-Dirks is busy now on a DG1001TE, an electric version of their sustainer motor glider. DG has been sceptical about electric, particularly in connection with self-launchers for big two-place gliders, even with the new lithium polymer batteries. But they needed to get into the game and decided that an electric turbo was a good place to start.

A turbo's requirements are different from a self-launcher; a turbo engine is smaller, lighter and needs a lot less power – as a minimum requirement it needs only sufficient power to maintain a glider's height to reach the nearest airfield where one can get an aerotow. Also, a turbo engine has to be easier to operate than a self-launcher's engine since a turbo is used much less frequently – pilots will not be as familiar with it as they are with a self-launcher where they use it on every flight – and an electric sustainer is even simpler to operate and more reliable than internal combustion power. More on the DG1001TE at <http://www.dg-flugzeugbau.de/dg1001te-e.html>.

- More Pipistrel. They have built the first four-place electric aircraft to be flown in the world, the *Taurus G4*. The unique design has come about by grafting two *Taurus* gliders together with a 5 metre centre section that



includes a pylon housing the electric engine and batteries. The G4 bears some similarity to the *Twin Mustang* fighter and Scaled Composite's *White Knight Two* (even the Blanik L13 was once twinned for aerodynamic research). The G4 was designed for the 2011 CAFE/NASA "Green Flight Challenge" (details at http://cafefoundation.org/v2/main_home.php). This competition will be held from 25 September to 3 October at Santa Rosa, CA and has a first prize of \$1.3M.

The G4 had its first test flight on 12 August at Oshkosh (<http://blog.cafefoundation.org/?p=4098> has the details). The aircraft is powered by a 145 kW brushless electric motor driving a large 2 metre custom two-blade propeller.

The total wingspan is 21.4 metres making the span not much shorter than a DC3. The aircraft has good gliding capabilities, though it is not designed as a glider but as a very efficient aeroplane utilizing electric propulsion.

The G4 is a proof-of-concept aircraft, a test bed Pipistrel is using for many of the technologies which will be introduced into their *Panthera* aircraft. After these competitions end, it is expected the aircraft will be sold to someone wanting a unique and one-off design for personal use, or to a company wanting to further investigate future propulsion technologies on an already proven airframe, with the ability to quickly replace or substitute the propulsion system. ❖



A passing front on 20 August at the Toronto Soaring Club backdrops their ASK-13

Dave Gossen



During a great soaring day at the Winnipeg Gliding Club, Pat Pelletier does a fly-by in the club Astir CS.

Justin Gillespie

Soldier On ...

from page 19

in their boardroom. These men, mostly in their twenties and thirties, received wounds in Afghanistan that were sufficient, in most cases, to end their military careers. They are now getting education and training to better fit them into careers in civilian life. For example, one young man, aged 27, although looking outwardly healthy, is partially deaf and has lost most of his vision in one eye, as the result of an RPV rocket explosion. These young men were accompanied by their wives or significant others, together with Greg Lagacé of the Soldier On program, and all six soldiers thoroughly enjoyed their glider flying experiences.

The Soldier On glider flights were an outstanding success due to the work of all the volunteers involved. These included Jarek Twardowski (towpilot), Wolfgang Weichert (GGC glider pilot), Mike Clarke and Charles Petersen (York glider pilots), Mario Cwickla, Daniel Duclos, Jess Rougeau and Donna Achimov (GGC), Linda Brand and various ground marshalls of the CASM, and I hope I haven't missed any others.

Thanks to Charles for driving the ASK-21 all the way from Toronto for the event and to York Soaring for the use of their ASK-21. A very large vote of thanks to the CASM and their staff members for making this whole event possible and a great success. Thanks also to Greg Lagacé of Soldier On for making possible this opportunity for these young soldiers with disabilities to experience the therapeutic effects of silent flight. ❖

ASC winch ...

from page 20

The manufacturer will be installing a new type of computer, control panel, and a cable-mounted pitot this winter. We will then have tension, line speed, and the air speed at the glider end of the rope displayed and controlled at the winch. The absence of this information has forced our newbie winch drivers to closely monitor and interpret the glider response rather than to depend on the computer to control those parameters. It's harder this way but I think our winch operators will be better for it.

The winch will be attending our Cowley camps and I hope Cu Nim will be using the neighbour's farm land to extend our rope lengths out to nearly 10,000 feet. Once that is possible the resulting 5000 foot, \$15 launches will make aerobatic training camps possible and practical. Just a dream now, but so was this winch eight years ago. ❖

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a good day at Uvalde

from page 21

I was at 7500 feet and the computer said I needed 17,500 to get home. Jörg and Jerzy who were about 30 kilometres ahead of me on their final glides reported 8 knot climbs, so I pushed on bypassing weaker climbs in anticipation of a good climb further ahead.

I never found the 8 knot climb and stopped for one 5.6 knot thermal on this leg, climbing 700 feet before moving on. As it turns out, I didn't need to stop again and was able to bump my way home under the streets and covered the leg at 173 km/h and arrived 17 minutes overtime.

The flight was good for third place on the day, covering 615 km at 143 km/h. *Seeyou* task stats show that I took nine thermals to fly the task averaging 6.7 kts and I achieved a mean L/D of 127:1 at an average ground speed of 170 km/h. ❖

FAI badges

Walter Weir

3 Sumac Court, Burketon, RR2, Blackstock, ON L0B 1B0
(905) 263-4374, <2waltweir@gmail.com>

These Badges and Badge legs were recorded in the Canadian Soaring Register during the period 11 June to 13 September 2011.

1000 km DIPLOMA (1000 km flight)

14 Jerzy Szemplinski SOSA 1027.7 ASG-29 Reedsville, PA
(World no. 575)

SILVER BADGE (50 km flight)

1052 Hank Hees Saskatoon
1053 Pascal Hayet Québec
1054 John Brake York

DIAMOND DISTANCE (500 km flight)

Walter Mueller GPSS/ESC 515.7 Open Cirrus Chipman, AB

GOLD DISTANCE (300 km goal flight)

John Brake York 304.0 Kestrel 19m Arthur E, ON

SILVER DISTANCE (50 km flight)

Hank Hees Saskatoon 59.4 Apis MCs Cudworth, SK
Pascal Hayet Québec 55.9 Lark IS-29D2 St-Raymond, QC
John Brake York 89.0 Kestrel 19m Arthur E, ON

SILVER DURATION (5 hour flight)

Simon Paquet Québec 5:14 Pilatus B-4 St-Raymond, QC
John Brake York 5:09 Kestrel 19m Arthur E, ON

SILVER ALTITUDE (1000 m height gain)

John Brake York 1265 Kestrel 19m Arthur E, ON

C BADGE (1 hour flight)

2945 Ray Lynch SOSA 1:19 ASK-21 Rockton, ON
2946 Liam Abbott York 4:11 1-26 Arthur E, ON
2947 Mark Araujo York 1:09 1-34 Arthur E, ON
2948 Yvan Coté Québec 1:16 L-23 St-Raymond, QC
2949 Tracy Brake York 1:26 2-33A Arthur E, ON
2950 John Brake York 5:09 Kestrel 19m Arthur E, ON
2951 Marissa Kelly York 2:06 Grob CS77 Arthur E, ON
2952 Jordan Pepin York 2:05 2-33A Arthur E, ON
2953 Jeffery Ruttan York 1:29 1-34 Arthur E, ON
2954 Jon Visca York 1:25 1-26 Arthur E, ON
2955 Spencer Warren York 1:06 Grob 103 Arthur E, ON

FAI records

Roger Hildesheim

49 Maitland Street, Box 1351, Richmond, ON K0A 2Z0
(613) 838-4470, <rogerh@ca.inter.net>

The following record claims have been approved:

Pilot Bruce Friesen
Date/place 29 May 2011, Chipman, AB
Record type Free Triangle Distance, Territorial, Open & Club
FAI category 3.1.4d
Sailplane type Standard Austria C-FPDM
Distance 512.2 km (609.5 km Club)
Previous record Tim Wood 481.0 km (2007 Open)
Tony Burton 515.7 km (2004 Club)

Pilot Bruce Friesen
Date/place 29 May 2011, Chipman, AB
Record type Triangle Distance, Territorial, Club
FAI category 3.1.4h
Sailplane type Standard Austria C-FPDM
Distance 599.2 km
Previous record Tony Burton 515.7 km (2004)

Pilot Bruce Friesen
Date/place 29 May 2011, Chipman, AB
Record type 500 km Speed Triangle, Territorial, Club
FAI category 3.1.4j
Sailplane type Standard Austria C-FPDM
Speed 85.1 km/h
Previous record Tim Wood 78.6 km/h (2010)

Pilot Tim Wood
Date /place 4 June 2011, Elko, BC
Record type Free Out-and-Return Distance, Territorial, 15m
FAI category 3.1.4b
Sailplane type DG-400 C-GETW
Distance 612.6 km
Previous record Ian Spence 596.7 km (2009)

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	Processing fee for each FAI application form submitted	\$15.00
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Order these through the SAC office

33	FAI 'A' badge, silver plate pin (available from your club)	\$ 3.00
34	FAI 'B' badge, silver plate pin (available from your club)	\$ 3.00
35	SAC BRONZE badge pin (available from your club)	\$ 3.00

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2	Insigne FAI 'C', écusson en tissu
3	Insigne FAI d'ARGENT
4	Insigne FAI d'OR, plaqué d'or
5	DIAMANTS pour insigne FAI
6	Certificat FAI de vol à voile (reçu de réception des insignes)
	Frais de services pour chaque formulaire de demande soumis
36	Insigne FAI ARGENT, écusson en tissu, 3" dia.
37	Insigne FAI OR, écusson en tissu, 3" dia.

Disponibles au bureau de l'ACVV

33	Insigne FAI 'A', plaqué d'argent (disponible au club)
34	Insigne FAI 'B', plaqué d'argent (disponible au club)
35	Insigne ACVV badge de BRONZE (disponible au club)

Votre paiement devrait accompagner la commande. La livraison est incluse dans le prix. TPS n'est pas requise. Les résidents de l'Ontario sont priés d'ajouter la taxe de 8%.

The question of whether to split the Club class was put to a vote. It is not clear to me under what authority a vote by contest pilots can change the published rules. The vote was to split the Club class into Club Class 1 and Club Class 2. Most pilots voting were not in Club Class 2 and would not therefore be adversely affected by the outcome. The vote was not even limited to the Club class pilots – the Racing class and even visiting American pilots were allowed to vote as well. Again I make the point that competitors were voting to disallow fellow competitors the chance to compete for a spot on the National team.

I intended to compete at a Nationals contest at which I could earn seeding points. To be relegated to the class not necessarily eligible for World team selection based on my performance is the equivalent to buying a lottery ticket that states “likely ineligible to win”. With regret, I withdrew from the contest. When I later entered a protest at the end of the contest about the rule change vote, I was told that as I was no longer a contestant I could not file a protest even though I was a registered contestant at the time of the rule changes.

My points of concern are as follows:

- Published rules of seeding should not be changed within six months of a contest (let alone the night before). Changing the rules twelve hours before the first day does not allow any reasonable option to change the glider to fly.
- Voting by competitors to disallow another competitor’s right to compete for World team selection is unjust and against sportsmanship.
- The gliders in the Club Class “B” were all (with the possible exception of the PW-5 and a Dart) eligible for competition in FAI World Club Class competition and deemed to fall within an acceptable handicap spread – there was no logical reason to split the class.
- The IGC definition of Club class allows a wide range of older small gliders within a specified range of performances, eg. Libelle, Standard Cirrus, LS1, Pilatus, with the scores being adjusted by handicapping. Disposable ballast must not be used in this class. By allowing water in Club Class “1” at the 2011 Nationals, an FAI handicapped Racing class was created and not a Club class to which a pilot could be seeded.
- Any of the Club Class “2” pilots and gliders could have participated in the US Sports Class Nationals (a foreign country) and received seeding points for the Canadian 2011 Club class list but were denied points flying in their own National competition.
- The pilots registered in the Club class greatly outnumbered the FAI Racing class yet were still treated as a poor relation. Twenty-seven pilots would have been competing for just one seeded spot for the Club class while twenty pilots in the Racing class were competing for three spots. Club class pilots are not being given respect and consideration as true FAI competition class pilots.
- Competition for SAC-provided team funding should be open to all qualified SAC members. If the team is not selected based on performance, then SAC funding should not be provided.
- As about 10% of funds from every SAC membership are now allotted to support the World contest team, team eligibility should be open to all participating SAC members who meet the FAI qualifications in the class that they choose to fly.

In conclusion

Members in good standing of SAC have been excluded from the opportunity to earn a position on the Canadian World contest team against published rules and acceptable standards of fair play and sportsmanship. A review of procedures must be conducted by SAC and a proper, fair and equitable procedure implemented and demonstrated that enables all eligible SAC members to participate. ❖

way, it’s not just our conscious thoughts that may become impaired – the entire subconscious brain is impaired as well. Under physiological stress, these subconscious analytical and coordination functions will be more susceptible to error or illusion, and we’re unaware of the deficiency precisely because it operates in the unconscious – we are aware of neither excellence nor impairment.

Thus, when we’re *conscious* of feeling exhausted, distracted, or fuzzy, when we are aware of impairment, we have to infer that *all* the complex subconscious processes are impaired as well, and compensate appropriately by double-checking, by performing precisely as trained, and by staying on the ground if you haven’t launched yet.

This subtle impairment is the opposite of what took down Tom: he simply abruptly realigned his semicircular canals, creating a sudden, powerful sense of banking more steeply and tipping nose down. Without a clear visual fix to correct this, he will automatically and *subconsciously* reduce bank and lift the nose – not realizing he is reacting to falsity. It got quiet, the controls got sloppy. He looked down from the 1-26 to see the trees filling the view over the glare shield.

He blamed a sudden thermal gust – it was all he could think of – but the reality was that he and his glider were broken by his senses acting normally. It could happen to me; it could happen to you. ❖

magazines

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SAILPLANE & GLIDING — the bimonthly journal of the BGA. £39/yr airmail, £22.75 surface. <www.gliding.co.uk/sailplaneandgliding/subscriptions.htm>.

SOARING — the monthly journal of the Soaring Society of America. Subscriptions, US\$46. Credit cards accepted. Box 2100, Hobbs, NM 88241-2100. <feedback@ssa.org>. (505) 392-1177.

GLIDING AUSTRALIA — **NEW!** Bi-monthly journal of the Gliding Federation of Australia. <www.soaring.org.au>. International rates for on-line access.

SOARING NZ — Editor, Jill McCaw. Personal cheque or credit cards accepted, NZ\$122. McCaw Media Ltd., 430 Halswell Rd, Christchurch, NZ <j.mccaw@xtra.co.nz>.

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Fox One Ed Hollestelle of Solaire Canada has retired from distributing glider instrumentation to enjoy the perks of semi-retirement. Dave Springfield of Fox One Corp has taken on the Canadian distribution for instruments and software for LX Nav, LX Navigation, SeeYou, Becker and Dittel radios, and will continue to support Ed’s former customers. For more product details see the Fox One Corp website at <www.foxonecorp.com>.

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