2014/2

free flight vol libre

Priorities

WE ARE FORTUNATE to be surrounded by a wonderful team of volunteer directors, committee chairmen and committee members with different professional skills, backgrounds, and aeronautical experience who complement each other in the tasks that need to be done in our association. I thank them for their hard work. The members of the Board of Directors are:

• *Sylvain Bourque*, the Eastern Zone Director and SAC President, started gliding in 1994. Since then he has been an active member of AVV Champlain involved in training, towing, and in accounting as treasurer. He is a SAC Class 1 glider instructor and owns his CPL. He has organized the winter French ground school in the Montreal area since 1995. He is an aeronautical radio licence examiner, aviation language proficiency test examiner (E-F), and an authorized person for gliding licensing. Sylvain owns a Pegase with two other partners. Sylvain is a field production cameraman instructor and supervising technician for CBC/Radio-Canada in Montreal. I'm proud to be part of this Board that has such a good variety of backgrounds and a huge involvement in the soaring community.

• *George Domaradzki* is the director for the newly formed Eastern Ontario Zone. This zone consists of Gatineau Gliding Club, Rideau Valley Soaring, Bonnechere Soaring and Montreal Soaring Council (which is actually located in Eastern Ontario.) George has been flying gliders since 1998 and has been an instructor since 2004. He is currently the president of Rideau Valley Soaring. George also coordinates the Ottawa Area Glider Pilot Ground School every alternate year and had given various theoretical lessons. George is the proud owner of an ASW-20 that he flies whenever he is not scheduled for instructing. George has recently retired from the Federal Government where he was a demographer, enabling him to carry out more mid-week flying and instructing duties.

• *Stephen Szikora*, the new Southern Ontario Zone Director and SAC VP, was first exposed to gliding as an Air Cadet in 1978 and earned his PPL in 1988 and his GPL in 1989. Stephen is currently a member at York Soaring and was previously a member at Toronto Soaring and Air Sailing, where he was club President for eight years. His motivation for joining the Board include improving the governance process and communication within the organization. When not flying gliders, towing gliders, pushing gliders, or fixing gliders, he likes to cut the York grass.

• *Jay Allardyce* is the Prairie Zone Director and Secretary. He represents the clubs in Saskatchewan and Manitoba. Jay has a strong interest in the marketing and publicity of gliding in Canada and has taken the lead on this front. Jay flies out of the Winnipeg Gliding Club, owns an ASW-19 with two other partners and is an avid cross-country pilot. He is also an active instructor and towpilot.

• *Al Hoar* is the new Alberta Zone Director. He started lessons at Cu Nim in 1992, encouraged by taking an intro flight a few years before. "Two years after licensing I purchased a half share in a Std. Cirrus C-GEOD with partner George Dunbar. In 1996, I became a Cu Nim instructor, and still am. I am a past-President of Cu Nim, and from 2006 to 2009 was the Cu Nim CFI. The national contest at North Battleford in 2008 was another highlight. I bought a PIK-20E in 2004. Self-launching was fun until the motor failed and I destroyed the glider landing in trees on take-off at Valemount in 2006. It's back to the Cirrus for me, as well as an RV6 that I share with another club member."

• *David Collard*, Pacific Zone Director and SAC Treasurer, was first exposed to gliding by his sister and brother-in-law, Lois and Leo Smith (SAC President in 1958) in the 50s at the Gatineau Gliding Club. He joined the RCMP in 1957 and, after eight years doing police work in Manitoba, entered its Air Division with whom he flew for seventeen years. While in Regina, David became active with the Regina Gliding and Soaring Club as a glider pilot and chief towpilot. At the National level he was the SAC Prairie Zone Director (and VP in 1981 and '82). He also has his CPL. He has earned a Gold Badge with 2 Diamonds. A memorable experience for him was crewing for Ulli Werneburg at the World Championships in Paderborn, Germany in 1981. David now flies with the Western Area Sailplane Society (WASPS) and shares a Genesis 2 with a partner.

⇨ **p27**

free flight vol libre

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

ISSN 0827 – 2557

The pdf copy of this issue is in colour on the SAC *free flight* web page.

A nice soaring day at Vancouver Soaring last September. View is to the west looking at Hope Mountain. It provides one of main ridge lift slopes to about 3500 feet before pilots head off on flights to other peaks nearby, or a wave behind Dog Mountain, or up and down the Fraser and Coquihalla Rivers and Silver Creek valleys that come together at Hope.

Photo: Daan Wynberg

DEPARTMENTS

SAC **Safety** report for 2013

Dan Daly, National Safety Officer

THIS YEAR WE HAD AT LEAST FOURTEEN ACCIDENTS, two being fatal accidents with five dead. Last year's good reporting seems to have been an aberration, since about a quarter of the clubs who submitted reports in 2012 have not yet done so as of 6 February (due 1 December). The quality of reports varied from "one-liners" to thorough description of the incident, multiple viewpoints (pilot, witnesses), analysis, and corrective action (if required). I have included CADORS reports (accidents or incidents including the word "glider" between 1 Jan 13 and 31 Dec 13.

Reported Accidents

Pemberton fatal mid-air (2 in glider, 2 in Cessna 150)
From CADORS: *A Stemme S10-VT powered glider on a northbound track and a Cessna-150F on a southbound track collided 3.2 nm west of the Pemberton Airport over the Nairn Falls campsite. Four people and one dog sustained fatal injuries. The motorglider was returning to the field after a tourist flight.* A TSB Class 3 investigation is underway and a report is expected.

Comment: The question of technology has been raised by some members; the Stemme was not PowerFLARM equipped. In this case, if the C-150 had been transponder equipped and on (unknown), its transponder would not have been interrogated by ATC because of terrain masking in the mountains, thus it would not have been picked up by the glider had a PowerFLARM been fitted. This collision seems to have been between a climbing or cruising high-winged aircraft and a descending low-winged aircraft (white, against a grey mountains) – the worst case condition. VFR flying is "see and be seen", and we all must make every effort to look out, particularly in the vicinity of airports with mixed traffic. Whether the Cessna heard the radio call is unknown; do you routinely call when approaching an aerodrome (even the "home drome"?). Are glider operations indicated on the VFR Nav Chart? A simple call to NavCanada gets it on. If within radar coverage, do you have PowerFLARM with PCAS (I understand that a unit with only FLARM will be available soon, see inset). The Flight Training and Safety Committee strongly recommends PowerFLARM as a secondary method of collision avoidance – primary is always a good lookout.

A non-PCAS, non-flight recorder (thus significantly less expensive) version will be announced at the late February SSA Convention in Reno; this satisfies the complaints of clubs remote from major ATC centres or mountain valleys that some features of the current system make it too expensive (the IGC FR can be added for extra cost). Details are in *rec.aviation.soaring*. Once the info and availability is confirmed, I will post to the SAC Forum. FLARM works!

London fatal crash
Aircraft was a home-built 1981 Marske Pioneer II. Pilot was 76, had considerable total time, 8:35 hours on type, and 10 hours in the last 30 days. It was 2 pm, with a gusty SW wind. Fifteen flights in the previous three months. Accident flight was the fifth flight of the day. The pilot had his glider towed to the flight line, assisted launching the aircraft before him, and spoke at length with other members – he seemed normal to them. According to the towpilot, take-off was normal. Launch crew noted some PIOs shortly after lift-off, then more dramatic swinging to the left and right of the towplane. On the fourth major swing the glider released at about 200 feet, turned left approximately 270 degrees in an apparent attempt to return to the runway before it dove straight into a corn field.

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. Individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest.

E-mail contributions as an attachment in Word or a text file. Text is subject to editing to fit the space available and the quality standards of the magazine. Send photos as unmodifed hi-resolution .jpg or .tif files.

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.

Material from *free flight* may be reprinted without prior permission, but SAC requests that both the magazine and the author be given acknowledgement.

For change of address, contact the SAC office at *sac@sac.ca*. Copies in .pdf format are free from the SAC website, *www.sac.ca*.

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. 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.

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, communiquez par *sac@sac.ca*. La revue est disponible gratuitement, en format "pdf" au *www.sac.ca*.

EDITOR
Tony Burton
Box 1916 Claresholm, AB T0L 0T0
(courier service to 335 – 50 Ave W)
(403) 625-4563
t-burton@telus.net

copy proofing – Ursula Wiese
French content – Sylvain Bourque

ADVERTISING
SAC office (613) 236-4901 ext. 109
e-mail ***sac@sac.ca***

Date limite:
10 **mars, juin**
septembre, decembre

The Pioneer is a very light wing loading aircraft, with critical centre of gravity (the pilot moves his seat until balanced on the wheel to ensure he is within the narrow CG range), and control in gusty winds would have been difficult.

TSB officials inspected the crash site and the glider, interviewed the towpilot and one of the launch crew. A report is expected.

NSO comment The recommended action on a release at 200-250 feet is to land straight ahead. Low level maneuvering in gusty winds in an unfamiliar aircraft can be a fatal choice.

Non-fatal accidents (injury or damage)

1. L33 canopy opened on tow; solo student pilot held it closed after release. Approached nearest runway while holding canopy closed with one hand, other on stick (ie, no spoilers). Landed downwind at high speed. Flew length of runway into over-run. Forced nose onto ground to assist braking – a/c damaged. Pilot was not comfortable releasing the stick to lock side-pivoting canopy in flight. Deficient pre-flight check.
   a. A right wing low sideslip would have allowed the canopy to be closed without threat of it blowing open. Aircraft trimmed to proper speed then, once hands-off is safe, latch canopy, and continue flying.
   b. Identical to an incident at another club in 2012, almost word for word.

2. ASK-21 – Loop in towrope when pilot undergoing spring check attempted "cannot release" signal in low tow position. Instructor released and wing damaged by tow link. Club had reverted to high tow to avoid danger of being hit by tow link after release in low tow. Still this is a difficult maneuver that engenders frequent rope breaks (perhaps better done in Condor). Should difficult maneuvers be done on spring check, or after some proficiency is gained in the season?

3. L33 – Flying out of XXX on 9 July intending to return to the field the pilot climbed SW of the field in good soaring conditions. After reaching Highway 16 he turned for home but lift failed. He chose a hayfield SW of home as optimal land-out and flew a circuit as trained. On run-out a wing tip caught in the hay crop and the glider groundlooped. Pilot reports, "mistake made, I had too much energy at contact". It was dismantled and loaded into the trailer by fellow club members. When the aircraft was inspected on return damage was found to the left wing tip and to the fuselage tail cone. The aircraft damage consisted of several hits to the exterior skin 126" and 162" aft of the datum, with no cracking to any of the frames or longerons. $8000 damage.

4. Jantar – landed with undercarriage not locked down, the resulting undercarriage collapse also cracked the front canopy. The training curriculum will be updated to include gear-up landing scenario and how to handle undercarriage that will not lock down properly.

5. Jantar – lost canopy when it separated from the aircraft in flight due being unlocked.

6. An inexperienced pilot agreed to land long, but actually stopped at mid-runway. The accident glider – an Apis – whose pilot had coordinated the order of landing and where its position would be (long) with the other pilot – had no other options. The position of the other glider on the runway stressed the pilot, who tried to force the glider to the ground too early, causing the gear to collapse. The gear progressively collapsed, shedding energy, doing some belly damage and a lot to the gear doors. Pilot was uninjured. The investigation suggested the length of runway was sufficient for a normal approach, flare, hold-off, and roll-out. (Thought – how good are the wheel brakes on your club gliders? How good on your private glider?) Repair cost – $10,000.

7. Grob lost rear canopy on take-off. The pilot had to instruct and assist passenger who was sitting in the front seat. The towplane had returned and was idling in front of the Grob. Once the passenger was safely loaded and ready to go, (front canopy left ⇨ **p25**

Wonderment

Ray Wood, SOSA

competing at the low end of the performance curve

PRIOR TO THE 2011 NATIONALS, I had not ventured any long distances in the PW-5. The idea of competing in *Victor Sierra* felt a little like that anticipation of the shock about to be felt when diving into a cold lake. I flew my Silver Badge and the SOSA Mud Bowl in a 1-26 in 1998. During that season, Eric Gillespie and I developed a soaring partnership in supporting each other's pursuits that continues today.

We went on to purchase a Standard Cirrus, and later graduated to an ASW-17. I flew many hours of low stress, long distance cross-country with it; I even won the 2001 Mud Bowl. I then took a large step backwards in performance to a glider that was easier to rig (get a crew for) when I started flying the PW-5. I had flown many extended local flights but nothing I would call serious cross-country soaring. I wasn't gaining any new experiences.

When SOSA announced it would host the 2011 Nats, I immediately recognized an opportunity for a great many new experiences within a short period of time. Dave Springford, offering words of encouragement, reminded me that the scoring is handicapped and is considered favourable for low performance gliders. (Damned engineers and their old slide rules, when you compare the polar curve of a PW-5 to an ASW-17, the luck factor in the thermal hunting range means the 17 wins big time).

WHAT WAS I THINKING? I would be flying the lowest performance glider in the Sports Class of the National Soaring Championship!

When Dave asked if I was signed up for the upcoming Nats yet, my reply was, I needed to check with my partner in the PW-5. When Eric replied, "I'm sure we can work that out", I was not long in completing my registration. Of course, I had also secured my retrieve crew, an absolute necessity at this end of the polar curve, I had the proof of that in 2011. So once again, I would probably be flying the lowest performance glider in the Sports Class.

Unlike my reaction to registering for the 2011 Nats, which was more or less, again, WHAT WAS I THINKING? I have decided to share some thoughts and learning opportunities to encourage others who may think they or their glider aren't up to competing in the Canadian Nationals. The requirements to register are a Silver Badge and to have participated in at least one other contest, ie. May Fly, the SOSA Mud Bowl, or a Provincials. In addition to a sense of adventure, a willingness to learn, and a sense of humour for the days where you are being beaten, as I was, by a girl… Selina Boyle of the Canadian Junior Soaring Team.

In 2011, I had met the requirements but had had no serious cross-country experience in the PW-5. Participating in the 2011 National "land out" championships was cause for a great deal of reflection. I recently read, *"experience is not the best teacher, reflecting on experience is."* With three landouts in six contest days plus a landout on the first practice day, followed by steady improvement in the scoring each day, I had much to reflect on.

While there are people at the contest vying for positions to fly at the Worlds, I entered in the 2011 Nats with three goals for the contest:

1 That I would not land out every flying day,
2 I would complete at least one task and, finally,
3 Not come in dead last!

Reflecting on Goal 1 I quickly recognized that I had good company on the days I landed out; many pilots in both classes were acting as ambassadors of our great sport, introducing a large number of farm families to our sport. One farmer met three glider pilots in two days. Then there was the day a great number of our pilots dropped in on the Tillsonburg airport, even the local pizza delivery guy got an introduction to gliders and their pilots when ten landed at the airport after the café had closed (great spot to eat breakfast or lunch. But late in the day, it's a call for delivery pizza).

The simple truth of those landouts was that we were flying on the edge of marginal soaring days, my landing out was not just about my skill but the conditions of the day. Another contributing factor was a mechanical vario that was improperly compensated – thanks to Ed Hollestelle for working out the bugs. Having an instrument panel that gives accurate information *and* the ability to interpret it correctly is vital to simply completing a task. The improper set-up gave me the impression of a greater sink rate than I was actually experiencing, causing me to fly at speeds far in excess of what was needed to fly efficiently, leading me to some of my early landouts. At the low end of the polar curve, slow is fast – getting around the task and getting home gets the speed points, not flying fast to an off-field landing.

At the contest start, I found I was going to be among a large number of crewless pilots for the practice days and the first contest day due to work pressures for part of my crew. Being one of the crewless made me more aware

of the vulnerability of each of us acting without ground support. In spite of the fact that this was a serious competition, the need to support each other created a more cooperative than competitive attitude (at least while on the ground). That attitude made the 2011 National "land out" championships not only workable but a lot of fun, getting to know each other through the non flying tasks our crew members would normally help with and by stepping in for retrieves when possible.

Goal 2 Well, after landing out a couple of times I became very focussed on simply getting around the task. The first day I landed back at SOSA I had cut my task so short that the only pilots with a lower score for the day had either landed out or hadn't headed out on task. That day caused me to take a closer look at the rules governing the tasks and a new goal to improve my decision-making to ensure I accomplished Goal 3. It also occurred to me that not going out on course was *not* a valid option! This was a contest, you don't score if you don't at least try. As in every other part of our lives, it's amazing the heights we can soar to if we just try. During practice, *not* heading out on the chosen task or modifying the task part way through will treat the crew well for those times when you really need them to be there for you.

As for **Goal 3**, I managed to clear that hurdle with room to spare by finishing second on each of the last two contest days. After some reflection on the last contest day, I realized I was still focusing on completing the task and arriving home, not on what it would take to win the day. The decision to just nick the cylinder on the first turnpoint, followed by the decision not to go further west at the second turnpoint to make better use of the Lake Erie convergence line, I robbed myself of a first place finish by only a few points.

At the end of each day, flight traces were analyzed, lots of opportunity for coaching from the best soaring pilots in Canada, including "that girl" who kept beating me while she was practising to compete in the Junior World Soaring Championship. At the morning briefing, the previous day's winners shared their tale of the winning flights. On many of the days we would be hearing from Jörg Stieber, Jerzy Szemplinski, and Dave Springford to name a few, each of them National Champions with several trips to the World Championships. I can't think of another sport where the international team competitors are there to compete and help aspiring pilots learn the secrets of reaching the top.

Another great opportunity was learning from the experience of others as they shared their thoughts on what went right, the challenges faced each day – it helped me realize I was not alone in my experiences. While there are people at the contest vying for positions to fly at the Worlds, the spirit of cooperation and willingness to help and teach made this a warm and exciting experience.

The most important thing I learned was that you *can* fly a lower performance glider in a contest and do well. With two second place finishes, my confidence level was raised to the point where *Victor Sierra* is often spotted now cruising the Lake Erie convergence line and other places farther from home. Flying in a contest at this level, you have the opportunity to learn from and be encouraged by Canada's best soaring pilots.

You've got to love handicapped scoring when you're at the low end of the performance curve. If you've had any contest experience and are even thinking about flying in the Nationals this year, take the plunge – GO FOR IT – the memories and experience are priceless! ❖

Martin Brassard

Friendly fear

Dr. Daniel Johnson, SOARING

fear creates caution, which is protective
fear creates anxiety, which is not

I WISH TO LOOK AT SOME PATTERNS of human behaviour related to fear. (I am using "fear" in the broad psychological sense: a fundamental, undifferentiated human emotion. Google it up if you want the debates and nuances.)

Feeling fear, protectively

I wrote a column on judgment, highlighting a fatal stall, that appeared in SOARING in April, 2012, *tinyurl.com/lne2u73,* which is one of my better essays, worth reading. The story about "Tim" was not fiction. With that story, as with all my stories of glider accidents, I take a real incident and fictionalize it – primarily because writing an "accident report" is not the goal; the details and the responsibility of persons are distractions from the teaching point, which is better made with a parable, so I fictionalize. The story followed carefully the details of the NTSB account of his accident. It's historical fiction, to be precise. The point of Tim's amazingly bad judgment is that, under physiological stress, normally wise pilots may do foolish things. Can we learn anything from the accident?

The NTSB report states, *"A witness stated that he saw the glider returning to Y70 from the east. The glider was traveling at a 'very slow speed' and the winds were gusting to 28 knots. As the glider got closer to the airport, it appeared that it sidestepped and lined up for a straight-in approach to runway 27 (4298 by 75 feet, asphalt). The witness stated that about 200 feet, instead of deploying spoilers to land, the glider entered into a 90 degree turn to the south as if to 'work a thermal' over runway 18/36 (4261 feet by 340 feet, turf). The wind was pushing the glider 'hard'. The glider entered a turn to the left as if to enter a left downwind. At this point, the glider's left wing dropped, followed by its nose, almost straight down to a northerly heading, while at an altitude that was about three times the height of the nearby trees… The glider entered trees at about a 60 degree angle."*

The report quotes the AWOS during that time as 270-290°, 18-20 kt, gusting 24-27, later increasing.

One may find this story of very poor judgment to be unbelievable – and later, for reasons we cannot know, struggling to get away to start a contest flight, the pilot found himself at 200 feet, essentially lined up on the ideal landing runway – and decided it would be a good idea to turn, at very low altitude, in a strong and gusty wind.

It's hard work flying in strong winds, and Tim was late starting. Tim would have been physiologically and psychologically stressed, causing fatigue. Fatigue is a syndrome of many causes that impair performance and judgment – to the extent that skilled, experienced, wise people may make unbelievably foolish decisions.

Tim made decisions that resulted in his death, so I guess that qualifies for the label "poor judgment". But we can assume that in *his* mind it seemed like the logical thing to do, and that he wasn't planning to stall-spin. We can't know what he may have had in mind, and though accident analysis is fascinating, the problem is prior actions – he should not have allowed himself to get where he was.

Analysis boils down to two possibilities: either he was trying to get away from an impossibly low altitude (when the wind is gusting over 20, there are never thermals big enough in which to turn, with long wings, down low), or he had decided to land, even though badly positioned.

If he was planning to land, he was actually high for runway 27 – over the intersection of the paved 9-27 and 18-36, about 1000 feet of runway already behind him, over the near end of the grass verge used by gliders; perhaps he judged his altitude to be enough for a quick 360.

My own experience is that, with plenty of airspeed, this is easily feasible in calmer air in a glider of ASW-27 performance. I've done it in a Blanik in calm air, over the end of a runway, for the same reason. He wasn't going terribly slow – the NTSB report states that his data devices,

What is fatigue? Fatigue is a broad term that indicates, generally, an unconscious or conscious disinclination toward necessary action. It is a syndrome with many causes; with fatigue, error rates increase long before we feel tired, or bored, or sleepy.

- Fatigue occurs from physiologic stress such as infection, work, hypothermia, dehydration, hyperthermia, medication, abnormal blood sugar, hypoxia, high or low barometric pressure, etc.
- Fatigue is caused by social tension or disruption, performance anxiety, time pressure, vigilance needs, repeated alerts, repetitive tasks, lack of stimulation, boredom, noise, etc.
- Sleepiness is a particular type of fatigue caused by things like inadequate sleep time, poor quality sleep, motion, or dysynchronous circadian rhythm (jet lag). In my experience, inadequate sleep is not the most important source of fatigue. Sleepiness is a danger signal that we have been impaired for awhile, and we should respond accordingly.

which were retrieved and analyzed, showed the glider's true airspeed at the time of the accident was 96 km/h, exactly between the white and green arc lower ends. On the other hand, in a 20-30 kt headwind with full spoilers, one's descent is, shall we say, satisfyingly steep, and the ground speed on landing is at bicycling velocity. And he could have set up a slipping approach. He had plenty of room to land.

If his plan was to climb away, in that wind, that low – well, there are only disorganized bumps in such conditions – truly a foolish fantasy. We repeat the obvious: the air we fly through in gliders is invisible, especially the turbulence it contains. The air close to the ground, in strong wind, tumbles and burbles, and within which it actually may reverse direction, whirling in small rotors.

A pilot such as this is not likely to accidentally cross control or accidentally stall. However, he would not have been the first highly competent pilot to have one wing in very different wind than the other. I have entered incipient spins many times in the turbulence of thermals, and the turbulence near ground in strong winds like these has the same effect.

The point, dear reader, is that (we) very competent and wise people sometimes do unbelievably stupid things when fatigued (stressed). And research has shown that we start making mistakes hours before we start feeling fatigued. We can respond to this truth in three ways:

- One is to avoid fatigue by avoiding dehydration, hypothermia, sleep deprivation, medications, and psychological stress.
- Another is respond to fatigue of all types with a touch of fear (labeled "caution"), treat it as meaning that we are impaired, and until we are able to land, fly like a beginner – cautiously and with wide margins.
- The third is what's been traditionally taught: if one of the possible outcomes is death, create a big margin for error. Yes, it is possible to safely land with pattern entry of 300 feet – but it's also possible to die that way, if turbulence or traffic or our own perception and coordination are not quite what we expect. So we teach use of a higher altitude, which allows pilots to compensate for all sorts of unexpectednesses, including our own misjudgments.

The highest aircraft accident rates have always been by those pilots who have a few hundred hours. Analyses have always cited "complacency" as a factor, which would include the accurate discovery that we don't always "need" the margins taught in training (and it's a lot more thrilling to perform on the edge).

A correspondent pointed me to a 1993 article that lists many skilled soaring pilots killed in Europe < *http://tinyurl.com/2lqv5kv* > (the DG web site) and stated that he has known about 15 guys killed in soaring, mostly guys he had met at soaring contests.

Why do we keep losing skilled pilots? Partly, it's a loss of fear of flying at the boundary of safety, a lack of fear of the unseen (turbulence and other aircraft, for examples) and/or the unknown. We're blind to our ignorance, we can't be aware of what we don't know: the only safe attitude is that always there may be an unknown factor, and keeping plenty of margin to accommodate to the unknown is safe.

There are two things that reliably degrade the performance of every athlete: complacency and abandoning fundamentals of technique. Pilots are athletes, and a little dose of fear plus discipline on the fundamentals will reduce the tragedy rate. To repeat: ***brilliant pilots like you sometimes do blindingly stupid things,*** even without intending to. Okay, change of pace.

Causing others to fear

Turn in your missal today to *http://soaringcafe.com/2013/04/an-apology/*. Again, no fiction. Frank Paynter, one of the other columnists in this magazine, scared some colleagues in a contest some months ago. He was chastised by the contest director, and Frank posted both the critical letter and an apologetic response to *Soaring Cafe*. Doing so required moral courage.

One of the problems with causing fear in others is that it causes emotions – anxiety or anger – that impairs their performance. Strong emotion is extremely distracting; when it occurs in a soaring contest this may extend the risk from person to person like falling dominoes.

I simply wish to have us think about that fact that we may unintentionally frighten others, and how this might come about, so that we can intelligently modify our attitude about our actions, to include others' perception of risk. I will explain here some common ways that we may do so without intending to.

A failure of telepathy

Here's a basic situation provoking fear: the highly skilled person appears to take risks when his or her abilities are not known.

Rob is young, and a talented and skilled driver. Marian has recently moved from her parents' dairy farm near Amery, Wisconsin. Rob is driving her to dinner near the end of rush hour in Chicago. Rob, who knows the roads and traffic almost intuitively, zips along, changing lanes quickly back and forth, braking, accelerating, reading the signal lights and traffic far ahead in order to pick openings as they develop and to arrive for their 7 pm reservation in plenty of time. He's having fun.

Marian sits quietly, sometimes bowing her head. She is trying not to shake visibly. Why did she get into this kamikaze's car? She thought Chicago would be more exciting than the farm, but this is a carnival ride from hell! Rob pulls up in front of the restaurant, walks around, opens her door with a flourish. Marian just sits there, a zombie. "Are you okay?" he asks. "Um, yeah," she squeaks. "Just give me a minute." She isn't sure she will be able to stand up. She feels dizzy and short of breath. She sits for a full minute, calming herself, then lets Rob take her arm and, feeling wobbly, walks with him into the restaurant, thankful she had decided not to wear heels. Whether there's a second date – indeed, whether she takes a taxi

home – depends very much on whether she and Rob will be able to grapple with this failure of telepathy. The problem of course, is that Rob understands very well how to anticipate and limit risks in this situation. But Marian does not know this. To her, he seems to be taking extraordinary risks; to him, he is just driving normally.

I'm confident that many of us have created similar distress in others while we drive without intending to. I have; years ago, my sister dawdled with her wedding prep, and I discovered that I had only a half-hour to get her and the fiancé downtown to the courthouse for a marriage licence before it closed. Years later she told me calmly how terrifying the drive was. I had taken minimal risks, but she couldn't have known. Lesson: the spectator who has his own skin in the game may have no idea about our competence or judgment, and is justified in assuming the lowest common denominator.

Another way to cause fear is by removing control from the other person. This is easy to do between two aircraft because often only one is visible to the other. For example, very early in my soaring career, I was near a Nevada airport in a 1-26, sharing airspace with a few other gliders scratching around for altitude. I finally found a strong thermal. As you know, a 1-26, at slow airspeed, in a bank of 45 degrees or better, makes a small circle and climbs well.

A few hundred feet above me was a low-time pilot, making turns with a shallow bank angle, big circles, and climbing slowly. I was ascending much faster than he, and it was obvious we might come close. I very carefully kept him in my sight throughout the climb, and when I got to his altitude, carefully adjusted my speed and bank so that while I climbed through his altitude I had him in sight continually and was turning away as I went above.

After we landed, he (and the safety director) chewed on me pretty hard. He had been terrified. Of course he could not ever have seen me, because by keeping him where I could see him continually, I was always in his blind spots. My radio calls were confusing because he heard me but could not see me. Then, when I finally showed up, I popped into his vision close, inside, and turning away.

I felt bad, but it was a very long time before I realized that the problem mainly was that I had not early on maneuvered to let him see me – which would have given him some sense of control, would have let him negotiate a passing maneuver he felt comfortable with, and that would have avoided the last-second scary surprise.

A second situation is when we see a pilot do something that has turned out badly before. An instructor was flying with a student, the grandson of a fellow pilot who was watching from the ground. During the downwind leg, the instructor had the student deviate from a normal pattern to help him develop judgment in case he got out of position. Unseen by them, an airplane joined the pattern in the standard way – and from the ground appeared to be about to collide.

After a safe landing by both aircraft, Grampa was irate. Years before, he had watched a dear friend collide his glider fatally with an airplane in the traffic pattern. You can imagine the powerful emotions of anxiety, fear, and grief that inspired an eloquent and angry chastisement of the instructor. It little matters who was at fault or who had the right of way: the rules are made to create default decisions, to prevent uncertainty, but preservation of life and safety is a superior law, and we want to *feel* safe as well as have a safe outcome.

A sense of proportion

Let's roll these ideas together, and consider that it makes a difference who's frightened, and who's the critic. For example, I'm a physician so the criticism of a colleague is very different from, and strikes more profoundly, than the criticism by a patient. The difference is that the colleague's expertise gives great weight to the "suggestions for change."

In the stories above, Marian's fear was due partly to her inexperience and her unawareness of Rob's skill. But a caring gentleman would, honestly, have anticipated this and been aware of her body language. He was rude, and he'd better have some pretty strong compensating virtues to be worth another date. Frank's situation is like mine: he frightened fellow racing pilots. Their fear means that he truly violated their standards of risk, hence the formal letter of reprimand, and the formal response.

Apology v. Repentance

The concept of "sin" has been lost in modern society. It's not a purely religious concept; sin occurs when we hurt or distress others by crossing into the wrong behavioural territory. It involves crossing an understood line, and it has adverse consequences for someone else. Most of the time we do this inadvertently. If we distress others deliberately, that damages friendship and we lose their respect. Communication is important here, because the distress may be invisible, or the damage invisible to us, obscured in our dust. Somebody has to speak up.

"Apology" It's our expression of regret for the consequences, directed toward the distressed person. This is socially useful and appropriate, but is merely the decoration on the cake. *"Repentance"* means to change our mind, such that we are no longer inclined to repeat the distressing act. "I'm sorry I took the money from the till" has to be followed by consistent, demonstrable honesty to (slowly) rebuild trust and respect.

When we sin toward a fellow pilot, apology is fine and necessary, but it's repentance he wants to see – which is not something we say, but something we do, changing the pattern of our behaviour so as to show that we're no longer inclined to again cause the distress. Apology without repentance is simply dishonest. Change is not religious – it's collegial.

Doing this can convert fear to respect. We gain friendship by choosing to be kind, choosing not to provoke fear. We can convert fear to respect by admitting when we've caused distress or harm, and by changing our thinking in order to change our actions. It's a way to be liked and respected, something we all treasure. ❖

flying the *Shark*

Nick Bonnière, Gatineau

AFTER A CANCELLED DAY at the Nationals last year, Gabriel Duford offered me his brand new 304S *Shark* for a test flight, an offer I was quick to accept. I offered him my 10 year old (yes, already) LAK-17a so we could fly together and judge performance side-by-side, both gliders rigged in 18m configuration. We had been waiting for three hours on the grid for thermals to kick, but it wasn't to be, so the test flight was probably going to be short, but there were some signs to the west that looked hopeful.

The first thing that is obvious about the *Shark* is the attention to detail and presentation. The cockpit is polished carbon fibre – hi-tech everywhere from LED indicators on the panel to show flap setting to a Zeus flight computer taking centre stage. Of course, you also have the option for a jet engine too. As I got ready for the flight after a thorough briefing, I found that the glider's cockpit sides are higher than in my LAK-17a and the nose is higher, meaning that my legs are higher up. It feels odd at first but you get used to it, and there is much higher ground clearance at the front than most gliders.

The take-off was uneventful. I found a bit more friction in the ailerons than in the LAK-17a, but found better rudder control, requiring less rudder input than my LAK-17a in 18m configuration. After release, I found a thermal which gave me a chance to adjust to the different control coordination as less rudder input was needed. I tried to slow it down to 42 knots like my LAK-17a, as Gabriel was catching up to me in the thermal, but it didn't feel right and I found it thermals better at 48-50 knots with a steeper bank.

The feedback in the ailerons is less than what I'm used to in my LAK-17a. This could be a disadvantage as you feel the thermal less, but it would be an advantage in rough thermals where you'd have less tendency to overcompensate making thermal centring corrections. The pitch sensitivity is lower than in the LAK-17a, as the glider flies in stronger or weaker lift, not requiring quite as much elevator control input. I usually thermal left as it feels more comfortable for me, probably due to extensive left thermalling before the gate opens at contests, but in the 304S, thermalling right feels easier than left for some reason. I guess it's a question of cockpit visibility and horizon reference that's different and more rudder control too, but I think the somewhat lower pitch sensitivity is the main reason, providing better speed control.

The weather cooperated and we were able to do some thermalling and running. I wanted to a get feel for the glide performance at higher interthermal speeds so I increased the speed. The glider doesn't pitch much as you adjust the flaps for higher speed and it settles quite nicely into swift mode, and I got the feeling it likes to run.

The landing was uneventful, with good spoiler control, and a strong hydraulic brake to stop short and, because of the balance and nose high attitude, I didn't find a tendency to nose over when braking hard, something I have to watch for on most gliders and also on my LAK-17a.

One flight is not enough to really judge overall performance, comparing the two gliders I found subtle differences in the handling. Overall, the 304S is a little heavier, but has more wing area. It requires a little more speed for thermalling, but climbs really well. There is a little less 'feel' in the controls, but you get used to it. I found the trim is placed a bit close to the flap handle so is not easy to adjust because of this, but that's probably something you get used to as well.

It is nice to try a different glider once in a while, and you don't often get the chance to fly a competitive new glider, so thanks, Gabriel, for this opportunity. Now I have to arrange for a test flight in a LAK-17BFES, with a larger rudder, new airfoil and wing design, electric sustainer and option for 21m span. ❖

Christine Futter

Nick (right) with his LAK, and Gabriel.

Competition and XC in 2013

the report of the Sporting committee

Jörg Stieber, chairman

IGC Plenary Meeting 2013 I attended the IGC Plenary Meeting on March 1&2, 2013 in Arnhem, Netherlands. The full minutes of the meeting are available for download from the FAI web site: <*www.fai.org/downloads/igc/IGC_2013_Minutes*> and <*www.fai.org/downloads/igc/IGC_2013_Plenary_Decisions*>. I will be representing SAC at the upcoming IGC Plenary Meeting in Varese, Italy 7-8 March 2014. The agenda and all supporting material for this meeting is available for download at: <*fai.org/igc-news/38061-igc-2014-plenary-agenda-has-been-published*>. The most important agenda point of the meeting will be a proposal to simplify the Sporting Code. In the end, this will likely result in fundamental changes to SC3. *[See comment on this meeting on page 22. Tony]*

2013 Canadian Nationals The Canadian Nationals were hosted by the Gatineau Gliding Club at the Pendleton airfield near Ottawa. The small field of competitors was divided into two classes:

FAI Class – all 18m gliders or larger – 6 contestants
Club Class – 7 contestants

The weather was challenging. Hot and humid conditions with weak blue thermals or low cloud bases prevailed most days. There was only one day when a true racing task was possible. Contest Director Roger Hildesheim, assisted by weatherman and scorer Dan Daly, did a great job setting appropriate tasks despite the difficult conditions. On a number of days it was difficult to get even a minimum task in.

Club Class lost the first contest day when not enough pilots achieved marking distance. This resulted in Club Class not achieving the four contest days required for a valid Canadian National Championships for the second year in a row. FAI Class had 4 contest days. A wheel-up landing which occurred at the contest site resulted in damage to a glider. Fortunately the pilot was not injured but had to withdraw.

The winners were: FAI Class

Jörg Stieber	JS	LS-8-18	2819 pts	100.0%
Nick Bonnière	ST	LAK-17A-18	2671 pts	94.7%
Gabriel Duford	W6	304S Shark	2370 pts	84.1%

(maximum achievable score – 2936 pts)

Club Class (not a valid competition in 2013)

Pierre Cypihot	S1	ASW-20	1965 pts	100.0%
Chris Wilson	W2	Mosquito	1711 pts	87.1%
Martin Lacasse	M7	ASW-24	1635 pts	83.2%

(maximum achievable score – 2125 pts)

The following trophies were awarded:

- *Wolf Mix Trophy* – FAI Class Champion *Jörg Stieber*
- *Dow Trophy* – Best Flight
  FAI *Jörg Stieber* Day 3, 67.7 km/h (handicapped)
  Club *Pierre Cypihot* Day 2, 62.2 km/h (handicapped)
- *SOSA Trophy* – Best Novice *Martin Lacasse* M7

There is a detailed account of the Nationals in the fall 2013 edition of *Free Flight*. Regrettably Jerzy Szemplinski and Dave Springford, Canada's two top seeded pilots, were not able to compete in the Nationals due to medical issues. However, both are back flying now.

Despite the poor weather, I believe the competition was enjoyed by all. Safety and good sportsmanship prevailed on the ground and in the air. On behalf of all competitors, I want to thank GGG and particularly the Hildesheim family for being great hosts to the competitors and their crews and sharing their superb club facilities.

Hosting grant In recent years it has become increasingly difficult to find clubs willing to take on the burden and financial risk of hosting Canadian Nationals. The Sporting Committee applauds the decision of the SAC Board of Directors to support clubs hosting future competitions with a grant.

2013 Competition seeding list

The main factors for the calculation of the 2013 Seeding List were the results of the 2013 Canadian Nationals and the 2012 World Championships. The top 5 seeded pilots in group A were:

1	Jerzy Szemplinski	103.30
2	Dave Springford	101.90
3	Jörg Stieber	97.49
4	Nick Bonnière	93.40
5	Pierre Gavillet	82.80

The complete seeding list is posted on the SAC web site in the section Competitive Soaring and was published in the fall edition of *Free Flight*.

Canadian participation in US National competitions

In 2013 Canadian pilots competed successfully in the following US Nationals:

US 18m Nationals, Lancaster, SC (26 competitors)

XG	Jerzy Szemplinski	2nd	ASG-29	99.8%
MS	Sergei Morozov	9th	ASG-29	85.2%
ST	Nick Bonnière	11th	LAK-17A	80.7%
OX	Willem Langelaan	13th	Antares 18S	77.0%

Congratulations to Jerzy Szemplinski on his excellent flying and placing a very close second in the US 18m Nationals.

US Sports & Club Class Nationals in Reedsville, PA
Sports Class (18 competitors):

GJ *Brian Milner* 13th Nimbus 4 49.2%

Club Class (17 competitors):

MF *Krzysztof Wiercioch* 10th Jantar 76.5%

US 15m & Open Class Nationals in Hobbs, NM

15m Class (30 competitors):

2W *Luke Szczepaniak* 12th ASW-27 86.8%

Open Class (12 competitors):

GJ *Brian Milner* 10th Nimbus 4 70.2%

8th FAI Junior World Gliding Championships, Leszno
Emmanuel Cadieux represented Canada in Club Class at the 8th JWGC in Leszno, Poland, 28 July to 10 Aug. The weather proved to be very difficult and Emmanuel was up against strong European teams. He was supported by his father Robert as Team Captain and meteorologist Jean Richard. Flying a Cirrus 75, Emmanuel scored well in the first few days but, without the help of a teammate in weak conditions, he landed out twice which cost him dearly. Emmanuel placed 44th out of 48 with 61.6% of the winner's score.

Despite the pressures of competing, Emmanuel found time to update his blog regularly to keep his fans at home informed. He followed up with a great article in the fall edition of *Free Flight*. Emmanuel is young enough to qualify again for the 2015 Junior Worlds in Narromine, Australia. With two full seasons to train, and building on his experience from Leszno, he could be the best-prepared pilot who has ever represented Canada at the Junior World Gliding Championships.

OLC Canada 2013 After a very strong 2012 season the OLC results dropped a bit in 2013. The slightly lower numbers for participants and overall flights are likely the result of a number of low scoring flights not being counted since OLC is now only scoring flights with a minimum of 50 points. The cause for the drop of total distance scored was likely the wet season in Ontario.

	2010	2011	2012	2013
No. of participants	268	250	279	265
No. flts scored in Canada	2594	2513	3041	2554
No. km scored in Canada	450,811	410,056	516,587	423,948
No. km by a single pilot – *Trevor Florence*	14,935	15,781	16,661	17,559
Tot. km scored by a club – *Canadian Rockies*	70,033	70,092	78,187	49,844

OLC winners and achievements

OLC – Canada

Trevor Florence – Duo Discus; from Invermere, BC, 10 June, 906.37 km; 840 OLC pts

OLC – North America

Adam Zieba – ASW-28E-18; from Ridge Soaring, PA, 12 May, 1,412.22 km; 1261 OLC pts (5th best OLC in N. A.)

Six Canadian pilots submitted flights over 1000 km to OLC North America.

OLC Canada Champions (6 best flights):

Adam Zieba, York Soaring Association	4084 pts
Trevor Florence, Canadian Rockies Soaring	3882 pts
Ian Spence, Canadian Rockies Soaring	3877 pts

OLC Canada Junior Champions (6 best flights):

Thomas Butts, SOSA Gliding Club	1974 pts
Robert Zachemski, SOSA Gliding Club	1909 pts
Emmanuel Cadieux, MSC	1771 pts

OLC Canada – best Novice – glider pilots with less than 200 hours PiC (not verified)

Vlada Dekina, SOSA Gliding Club	2151 pts
Thomas Butts, SOSA Gliding Club	1974 pts
Chris Razl, York Soaring	1950 pts

Top Canadians in the OLC North America (6 best flights):

Adam Zieba, York Soaring	4788 pts - 27th overall
Marian Nowak, Toronto Soaring	3976 pts - 56th overall
Trevor Florence, Cdn Rockies	3882 pts - 61st overall

Plans for 2014

Spring Soaring Seminar The seminar, with emphasis on cross-country training and contest flying, will be held in conjunction with the SAC AGM at Algonquin College in Ottawa. The funds raised from the seminar will support the Canadian Team for Leszno this year.

Nationals rules for 2014 A pilot input session on one of the many rain days during the Nationals provided valuable feedback from contest pilots on rules, task setting and other matters. Several provisions of the rules were discussed and affirmed. There was a strong consensus to incorporate the Assigned Speed Task (AST) in the 2014 rules. Other suggestions such as evaluating different handicap systems and holding future Nationals at a US location with stronger and more reliable conditions, are under consideration but will not be incorporated without a broader discussion.

Canadian Nationals 2014 – "Fly with the Best"
The next Nationals will be hosted by SOSA Gliding Club from 25 June to 4 July. June 23 and 24 will be the official practice days. The registration is open at <*www.sac.ca/nationals/*>. The members of the Canadian Team for Leszno will compete in the Nationals. Come and fly with the best!

Canadian Team – 33rd World Gliding Championships
The 33rd WGC will be held in two locations this year:

- Club Class, Std Class, 20m 2-seat Class at Räyskälä, Finland 22 Jun to 06 Jul 2014
- 15m Class, 18m Class, Open Class at Leszno, Poland 27 July to 10 Aug 2014

Due to limited contest resources, we will not field a team for Räyskälä. The team to represent Canada in Leszno was selected based on the 2013 Seeding List:

15m Class – Dave Springford (SOSA)	ASW-27
18m Class – Jerzy Szemplinski (SOSA)	ASG-29
Team captain – Jarek Twardowski (GGC)	

Jerzy secured a glider of the same type he owns. Dave obtained the ASW-27 through Schleicher. He flew this plane successfully in Lüsse in 2008 and Szeged in 2010.

Jerzy and Dave have deep experience at this level of competition, as this will be the fourth WGC in a row for both pilots and their crewing spouses. Fielding a team for an overseas contest requires complex logistics and is a very costly affair, and the pilots will fly at several ⇨ **p30**

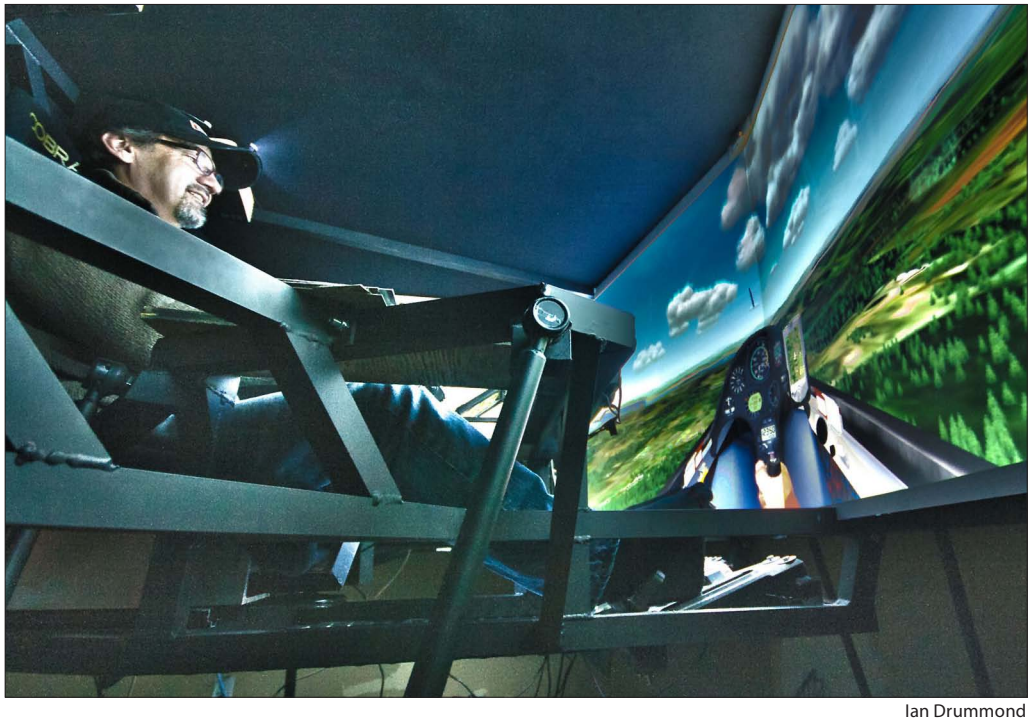
The big sim

Chester Fitchett, Cu Nim

Fraser Depue

AS SOON as my wife and I became students at Cu Nim, I started construction of an immersive simulator. The first version was a wood frame with two 4'x3' projector screens. The goal has always been full motion – pitch, roll, yaw, surge, heave and sway – 6 degrees of freedom. *Redbird* makes 3DoF simulators with pitch, roll, and yaw. They are excellent trainers – but with small screens and limited motion, they don't provide the full suspension of disbelief I had hoped for.

My idea – climb into a completely enclosed box, projecting the displays on the inside of the box. This gives nice big displays – no thick plastic outlines where LCD monitors join together. The entire box sits on a "Stewart platform" – the particular arrangement of hydraulic or electric actuators commonly used for large commercial sims. Our problem is that commercial flight sims have no height constraints, typically they are two stories high. I've got to fit this machine in a bedroom with an eight foot ceiling! Creating a design that maximizes the motion while not punching holes into the attic wasn't trivial.



Ian Drummond

Enjoying a flight and test of the simulator wrap-around scenery.

Software Condor can be configured to continuously send information about the state of the airplane – of particular interest is acceleration and rate of rotation. Simulating motion requires writing software that continuously analyzes the state of the airplane, and decides where to move the simulator to best trick the mind into accepting the motion that the eye sees. This is the tricky 'mathy' part – once you've decided where the platform needs to be, calculating what each motor needs to do to bring the platform there is relatively easier.

A good motion simulator will trick the brain into feeling much more motion than the simulator is creating. If the eye can see external reference points, the brain will not believe, and you won't feel the 'amplification' of motion. Many small motion simulators don't fill the peripheral vision,

drastically reducing their effectiveness. During university, I drove tractor trailers around Calgary. Once, at a warehouse as I was backing up, the trucks on both sides drove away at the same time. I was overwhelmed by a feeling of accelerating backwards. Bracing for impact, I slammed on the brakes but the brakes didn't seem to work. As soon as the trucks cleared, the feeling of motion disappeared, leaving me relieved but very rattled.

The simulator was staged for photos in our backyard, just before moving it inside after it was transported from work in a Toyota Matrix, and reassembled. Once inside, we mounted projectors and screens, enclosed the frame with black fabric, and installed the controls.

The new big simulator is not moving quite yet as there are a few unfinished items. When we renovated our house, I didn't see a need to run a 220V 40 Amp circuit into a bedroom! At work, we are designing the controllers for running the big electric motors for this simulator, a process which has left me a little bit smarter and a lot more humble. I hope to have it in motion this summer. Even without motion, it impresses everyone who sees it, so you are welcome to stop by and try it also. In addition to Condor, there is an excellent war game simulation with the P-51D Mustang, A-10C Warthog, and the UH-12 Huey.

Simulator course It was sad to see the Cu Nim simulators sit at the club all winter – so we moved them into Calgary, and offer sim training for students twice per week. *For more on these elegant, compact simulators, see the article in the 2013/3 Free Flight. Tony*

We've now lost half of our bedrooms to simulators! Students are at all levels of experience, so what I've learned from the experience is that keeping everyone on one curriculum is not practical. Most students arrive with their own agenda, and the role of the sim 'instructor' is showing how to operate the sim, and imposing the same flying discipline taught in the real gliders. It's easy to get into bad habits on the simulator – knowing that someone is watching helps keep us motivated to do all the checks, fly proper circuits and even keep a look-out. Students have particularly enjoyed doing cross-country flights, especially 2 or 3 gliders travelling together on a task.

What I've learned from simulator training is that the fundamental limiting factor for how fast students can solo and licence is their willingness to make time in their life and focus on studying and training. A club could put huge effort into improving training for no benefit if the students don't hold up their end!

Cu Nim simulator improvements I'm building a Cu Nim class simulator for the Winnipeg club – an excellent oppor-tunity to try out new ideas. Some lessons learned from the Cu Nim simulators are:

- Mapping Condor functionality to the joystick buttons is pointless and creates a maintenance and training nightmare. Many people are using Condor at home – so leaving most functions on the keyboard is easiest for everyone.
- Operation of spoilers and trim should closely mimic the physical action required in the gliders. I had a landing last year where I wanted to put the spoilers away, and opened them instead. Fortunately, the instructor immediately took over. Better sim training would have produced the correct action.
- The joystick needs to be between your legs, same as the glider, giving full freedom for the knees to move up when moving the rudder.
- Crosswind take-off and landing in Condor is dangerously easy. We don't like to practise these to the limits with the real ships, so better simulation would be a big win.

An inexpensive solution for the spoilers and trim was to put a SZ45 throttle quadrant beside the chair. A microswitch added to the spoiler mechanism is used to trigger the brakes. The joystick has been more difficult. My big simulator uses a rugged $400 joystick with a narrow base. It's ideal, but still not tough enough for a glider club. If anyone has ideas, please send me an e-mail.

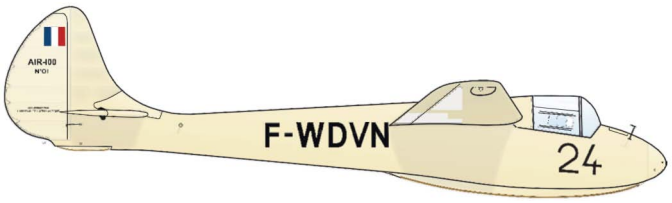
For crosswind flying, I purchased *X-Plane 10*. It has an incredible physics model, but the user interface is painful. In a course environment where an expert is present to set up specific scenarios, it's an incredible tool for practising flying in extreme conditions. From my testing, I learned I never want to land in a 15 knot crosswind or leave an ASK-21 on the runway in a 40 knot wind. For general home or club use, Condor is the only choice.

It would be much easier to create a simulator that held up if all users treated it with the same respect accorded to gliders. Abuse occurs when the user is in 'gaming' mode, instead of focusing on flying and learning. As my friend George says, if you want to stress test a new product, just leave it at a glider club! ❖

Chester runs *Phidgets Inc*. Phidgets are devices that interface computers and technology to the real world. The company makes boards for almost any need – hundreds of different sensors, and dozens of controllers. Chester's background is computer programming and electronics design, and loves playing with metal working as a hobby. He started gliding in fall 2012, licensed in 2013, and is impatient for the snow to melt so he can fly his APIS glider.

Le destin peu commun d'un planeur de légende

Jo Lanoë, CVV Québec



QUELLE DIFFÉRENCE y a-t-il entre ces deux planeurs ?

Wichita Falls, Texas, 1947

Québec, QC, 2009

Aucune, c'est le même, mais avec 62 années de différence. Ce planeur de marque **Air 100**, d'origine française, est le premier prototype de la série, construit en 1947 par la société Arsenal de Châtillon-sous-Bagneux. Il fit son premier vol le 10 juin 1947. Le 14 juillet de la même année, après seulement 4 vols d'essai, il prit part au concours international de Wichita Falls au Texas, où il a battit le record de distance de France avec 506 km, aux mains de Éric Nessler, au cours d'un vol de 7 heures.

C'était la première fois en Amérique du Nord qu'un planeur dépassait la marque de 500 km. Ce planeur s'est mérité des commentaires élogieux, comme celui de Don Pollard :
« *My suspicions were confirmed in about thirty minutes ; the ship does have amazing performance. In spite of the fact that it is a large sailplane, the control pressures are very light and very responsive. It is truly a pleasure to see sixty feet of wing respond immediately to finger tip pressure. It is very stable in turns and has quite normal stall and spin characteristics. The minimum sink appeared to be about 1.7 feet per second at 60 km/h, which is superior to any sailplane flying today. The dive brakes operated very smoothly and were quite effective* ».

Ce type de planeur a servi à battre de nombreux records, dont celui de durée féminin de 35 h 53 min par Marcelle Choisnet en 1948 sur l'Air 100 n°5, et celui de durée masculin, jamais égalé depuis, de 56 h 15 minutes en 1952 par Charles Atger, sur l'Air 100 n°12. En 1947, au concours d'Elmira, le pilote américain Don Pollard aux commandes de notre planeur Air 100 n°001 remporta l'épreuve avec 477 points, devançant largement le second qui n'obtenait que 133 points.

Voulant en savoir plus sur les innovations de design à l'origine de ces performances, le Dr August Raspet du Department of Aerospace Engineering de la Mississippi State University décida de l'acheter pour l'étudier plus en détail. C'est ainsi que ce planeur a vécu une grande partie de sa carrière en Amérique du Nord, sous l'immatriculation N-29H, jusqu'à ce qu'il soit acquis par un des membres fondateurs du Club de Vol à Voile de Québec, Alexandre Woinowsky- Krieger, le 2 février 1958, et réimmatriculé C-FZCV.

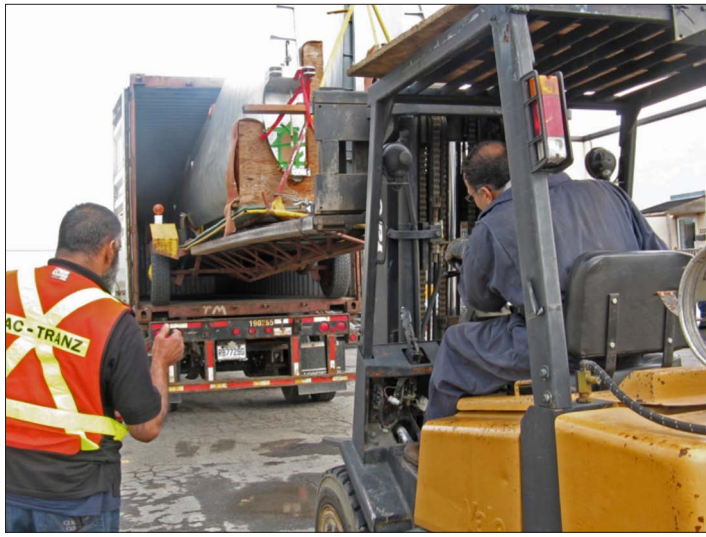
1958, Aéroport de Québec,
avec Alex Krieger dans le Air 100.

Au bout d'un certain temps, Alex en fit don au club, puis l'Air 100 resta rangé au fond d'un hangar plusieurs années, accumulant la poussière, jusqu'à ce qu'un autre membre fondateur du club, le regretté Claude Rousseau, habile constructeur de planeurs (mais aussi détenteur d'un vol exceptionnel à 18,000 pieds en 1960 avec ce planeur), décida avec Mario Lepire, Richard Noël et d'autres membres du club de le remettre en état de vol. C'est le résultat de cette remise en état en 2008-2009 que vous voyez sur la deuxième photo. Il était apprécié par tous pour ses qualités de vol « à l'ancienne », un peu moins pour son confort malgré tout.

Hélas, le poids des ans, et surtout le temps et les efforts requis pour le démonter et le remonter, ont fini par décourager les plus motivés, et il retourna bien tristement au fond du hangar, jusqu'à ce qu'on l'oublie.

La valeur patrimoniale de ce bel oiseau n'a pas échappé à Jo Lanoë, un autre membre du club, qui a fait plusieurs tentatives de l'offrir à un musée au Canada, puis en France, jusqu'à ce que le Musée régional de l'Air d'Angers, dans l'ouest de la France, décide de s'en porter acquéreur. Christian Ravel, le vice-président Patrimoine et Archives du Musée, était parfaitement conscient de la valeur patrimoniale de ce prototype 001 d'une série de plus de 40 unités construites, vendu aux États-Unis, en Afrique du Sud, en Suède, en Égypte, et de son histoire peu ordinaire. Il a lancé le projet de remettre ce planeur dans son état original et d'en faire l'attraction centrale de ce musée, appuyé en cela par Patrick Gandil, directeur général, et Marianne Gilotte, directrice des archives de la Direction générale de l'Aviation civile en France, tous deux parrains du projet. Une demande de classement de ce planeur comme Monument historique est en cours.

C'est finalement en octobre 2013 que ce planeur reprenait la mer pour retourner dans sa contrée d'origine 66 ans plus tard, où il sera remis en état et exposé au Musée d'Angers (voir *<http://www.musee-aviation-angers.fr/collections/planeurs/>*).



Pour les amateurs d'histoire qui désireraient en savoir plus sur l'épopée de ce planeur de légende, une monographie de 60 pages a été préparée par le Musée d'Angers. Pour en obtenir une copie, contactez Jo Lanoë à *< jo@jolanoe.com >*.

Claude Rousseau: Remarquez le train d'atterrissage « amovible », que l'on largue dès qu'on a quitté le sol, pour atterrir sur le patin.

The AIR 100 – the uncommon fate of a legendary bird

Do you see a difference between those two gliders in the side-by-side photos on the opposite page? It's the same glider, just 62 years apart – the left taken in Wichita Falls, Texas in 1947, the right in Québec in August, 2009.

This glider, the Air 100, of French origin, is the first prototype of a large family, built in 1947 by the Arsenal manufacture, located in Châtillon-sous-Bagneux. Her maiden flight took place on 10 June 1947. On 14 July of the same year, after just four test flights, she flew at an international contest in Wichita Falls, TX, and broke the French distance record with 506 km, with Éric Nessler at the ⇨ **p24**

2013 Trophies & Awards

Phil Stade, chairman

BAIC Trophy *Best flight of the year, pure glider*
Trevor Florence – Canadian Rockies Soaring Club
Schempp Hirth Duo Discus – C-FDUO

Trevor spends a lot of time in his Duo introducing pilots and first-timers to the beauty of soaring the Columbia Valley and surrounding areas. His 10 June, 8:40 hr flight with passenger Chris Hildebrandt appears to be one of those special flights.

June 10 839.6 pts, 906.4 km at 104.5 km/h

Canadair Trophy *Best 6 flights of the year, motorglider*
Adam Zieba – York Soaring Association
4083.9 OLC points, 3861.9 km total, 643.6 km avg/flight

All of Adam's flights were flown out of York in C-GAXH, his ASW 28E/18m glider. This is the second year that Adam posted the 6 best flights of the year. Well done Adam.

		OLC Pts	*Dist.(km)*
1.	July 25	827.7	766.9
2.	Aug 15	698.5	632.9
3.	Aug 16	696.6	645.0
4.	Aug 5	642.0	617.4
5.	Aug 24	631.5	596.0
6.	June 19	587.6	603.7

Canadair Trophy *Best 6 flights of the year, pure glider*
Trevor Florence – Canadian Rockies Soaring Club
3882.0 OLC points, 3829.8 km total, 638.3 km avg/flight

Five of Trevor's qualifying flights were flown in his Duo Discus from Invermere, BC. His 31 July flight was in his venerable 1968 H301 Libelle. Congratulations Trevor.

		OLC Pts	*Dist.(km)*
1.	June 10	839.6	906.4
2.	July 31	752.4	682.6
3.	July 23	612.7	595.0
4.	July 26	594.4	563.4
5.	June 6	553.2	567.6
6.	July 3	529.7	514.8

"200" Trophy *best 6 flights, pilot <200 hrs P1 at season start*
Vlada Dekina – SOSA
2151.5 OLC points, 1723.8 km, 287.3 km avg/flight

Vlada flies out of SOSA but all her trophy winning flights launched from Invermere, BC. C-GISC, an Invermere Soaring Centre PW-5, was her aircraft of choice for these flights.

		OLC Pts	*Dist.(km)*
1.	July 26	410.7	327.6
2.	July 24	406.6	337.4
3.	July 31	388.5	283.2
4.	July 30	337.8	276.1
5.	July 21	333.5	273.0
6.	July 25	274.4	226.5

Stachow Trophy – absolute altitude in excess of 5000m
Gary Hill, of the Edmonton Soaring Club, is the winner of the 2013 Stachow Trophy for the highest flight recorded in Canada. The winning flight occurred on 7 October at the Fall Cowley Wave Camp. The flight was flown in the ESC Puchacz, C-FMJS.

Absolute altitude – 28,000 feet (8534 m)
Height gained – 19,100 feet (5822 m)

One of the notable features of this flight is the five minute climb after release. Gary gained 6972 feet in that time for an average of 1394 feet per minute. The entire flight was only 1:23 hours, a notably short flight to 28,000.

Notable flight award – 21,211 feet
Pierre Beaulieu at Baie St-Paul, Quebec
On 16 September 2012, Pierre climbed in his ASW-19 C-GTZZ to 21,211 feet during the annual Baie St-Paul Wave Camp held by Club de Vol à Voile de Québec. Flights of this altitude are not common in Eastern Canada so although the flight occurred in 2012 we still wish to recognize its significance with this award. Congratulations go to Pierre and all those involved with their wave camps.

Other trophies

Walter Piercy Trophy *(instructor of the year)*
George Domaradzki, Rideau Valley Soaring

George completed 156 instructor flights (57 hours) and is the most active instructor of his club with over 40% of the instructing. He is also club president and has organized and taught on the *Ottawa Area Ground School* with GGC for five years. When he is not teaching, he is active with other club projects and mid-week Air Cadet training. He is often first to arrive in the morning and last to leave in the evening.

He was also the RVSS representative on the Ottawa TCA restructuring which will result in a great increase in the airspace allotted for their use, and making it safer for cross-country pilots.

Hank Janzen Award
(pilot with best contribution in the year to flight safety)
Dan Daly, Gatineau Gliding Club

Dan has been the SAC Safety Officer and the most active member of the FT&SC for the past 3 years and has been commended for his detailed and thorough Annual Safety reports and insightful analysis and recommendations. Dan has been instrumental in providing safety information on the new SAC web site and in assisting with coordinating the implementation of PowerFLARM and liaison with Industry Canada.

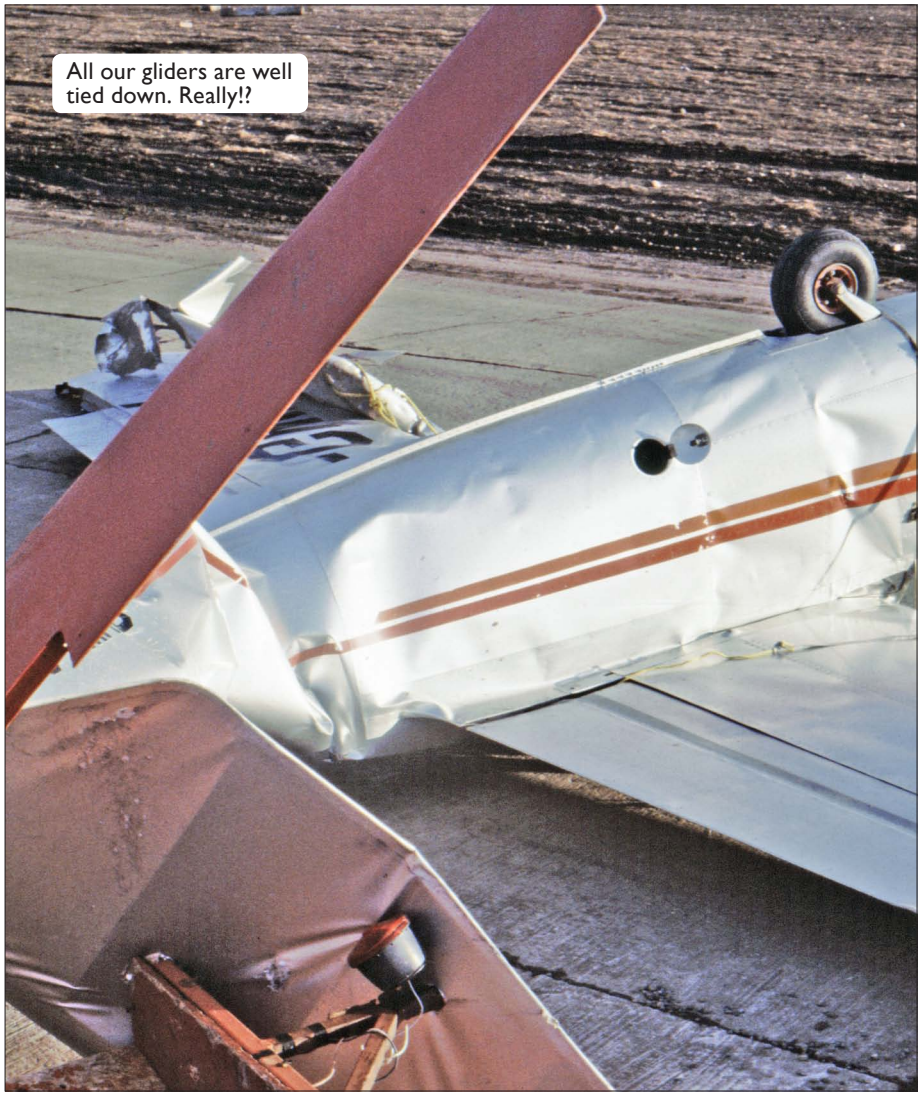
Roden and Silver C Gull Trophies
Not awarded for 2013 ❖

Common glider accidents in training – hard landings

The following information is primarily aimed at instructors but all pilots can benefit. Most of this information is covered on the current SAC instructor courses. Based on the major accidents over the last decade in Canada, FT&SC has prepared a list of training points that instructors can use to mitigate the chance of having similar accidents with a student or will help students avoid similar accidents when the student is solo/post licence. These points should be reviewed each spring by instructors. A further good reference for these points is Derek Piggott's *Gliding Safety* and *Understanding Gliding* available at most glider pilot supply sources.

- Stay in your comfort zone to take control in time and know your personal limits/capabilities.
- A stabilized approach leads to good landings, unstabilized expect problems (air speed and rate of descent constant while on correct glide slope to reference point).
- Monitor the approach speed and rate of descent keeping the student's approach speed at or over the minimum approach speed. High rate of descent and low airspeed is high risk for hard landing.
- If full airbrake is used on approach, have the student reduce the airbrake to ½ to ¾ (depending on their effectiveness) into the round out. Many instructors have been taught to use full spoilers for the round out, but this has caused more problems with accidents. As modern gliders have more effective airbrakes now, the method described here is preferred. In short field landings increasing the airbrakes after the start of the rotation (once the descent is checked) to minimize the hold off can be taught to advanced experienced students.
- When approaching the ground before rotation, instructors should keep their hand low and loosely around near the base of the control stick ready to grip it if needed but not interfering with the feel of the controls for the student. The stick may be moving wildly at a critical moment and difficult to grasp.
- Place a hand or fist on fuselage side wall before round out to block airbrake handle travel if student attempts more than ½-¾ air brake during round out and hold off. Student opening when intending to close airbrakes is common leading to hard landings or stalls.
- Monitor height of rotation and if too high get student to lower nose slightly to correct height and flare again. If airspeed is too low take control.
- If rotation is late take control and close airbrakes immediately. No discussion except, *"I have control"*, leave yourself enough time to save the landing.
- Height loss side slips should be recovered at 100 feet in early flights. If student can consistently do stabilized approaches and speed control in slips this can be lowered to 50 feet in light winds.
- Wind shear has caused problems and instructors must watch for signs and approach slightly faster depending on strength of gusts (see POH for recommendations, if none exist add gust factor to approach speed). Be prepared to take control as higher risk of a hard landing. Signs of possible wind shear include:
  - Variable wind speed or direction.
  - Difference of more than 5 knots in wind speed in gusts.
  - If there is a crosswind and it is gusty.
  - If wind shadows exist at the field.
  - Wind and obstacles on the approach.
  - Wind comes from a direction that is not usual at your home field.
  - Strange lower cloud formation present such as roller clouds.
- Watch out for student trying to land too fast (insufficient rotation)and/or not holding off the landing.
- Watch for student trying to plant the main wheel on the ground (moving control stick forward in hold off.) See section below on PIO and Wheel Barrowing.
- During tailwind landings monitor airspeed closer as student may try to slow glider.
- Rain or other wing contamination may increase stall speed dramatically. Be cautious with airbrake use, and additional airspeed may be required.

Dan Cook



Tony Burton

… about tying shoes

Pre-launch preparations for flight, and the first few seconds of a launch, are the leading (40%) cause of glider accidents. Pilots fail to assemble their gliders properly, fail to perform pre-flight inspections properly, fail to perform pre-take-off checklists properly, fail to train wing runners and bystanders properly, and fail to be prepared for common and uncommon launch emergencies.

One of the major problems is pilot recognition of weaknesses in their knowledge and skills. The basic attitude is "Don't tell me! I've been doing this for a long time and know everything I need to know." Complacency.

Suggesting someone should buy a book, or attend a seminar is very frustrating, because most glider pilots simply will not make any effort to become educated, or review matters to enhance their safety. And so the accidents will continue. But those few of you who have a modicum of interest will hopefully participate in [safety] postings, and perhaps pass the information on to others. Some may actually spend a few hours reading a book.

Lack of knowledge is very difficult to deal with. People go through flight training and take a flight test, which should assure the basic knowledge and skill necessary to fly safely (at least for the moment), but the statistics and evidence show otherwise. People are willing to assume they know enough to fly safely. However, it is *easy* to demonstrate the fundamental lack of knowledge. I like to use tying your shoes as an example of how easy it is to assume you know enough.

Most people do not know how to tie their shoes correctly. After a period of time, the shoes need to be re-tied. This is not important in everyday living, but if you are being chased through the woods by the evil enemy, and your shoe comes off…

- Cross the two strings as everyone does.
- Make a loop with the right shoe string (so far, so good).
- Take the other string and bring it around the first loop in preparation of bringing the string though the space you just made.
- Now, most people bring the second string around the first loop *counterclockwise*. This is wrong and makes a weak knot. Bring the second string around the first loop in a *clockwise* manner and the result is a knot similar to a square knot.

There. After all these years, you now know how to make a stable knot for your shoes. Bring on the evil enemy. It is this way for many things:

- Do you really know how to properly assemble your glider?
- Do you really know how to perform a critical assembly check? A proper pre-flight inspection?
- Do you really know how to perform a before take-off check?
- Do the wing runners know how to do this seemingly simple task in a manner that enhances flight safety? Etc, etc, etc. . .

The evidence strongly indicates the answer to most of these is "no".

Tom Knauff

ASME – la version française

Bernard Eckey m'a donné le mandat de préparer la version française de son excellent livre, ***Advanced Soaring Made Easy****. La traduction de son contenu a été fait par un pilote français. J'ai une copie électronique de la version originale anglaise et je ferai durant la saison le travail d'adaptation en français du livre. Le nouveau livre sera imprimé en Europe et sera disponible avant la fin de cette année.*

Nous vous aviserons du prix de vente ainsi que sa disponibilité lorsque le livre sera sur le marché.

I am in the process of designing and doing the layout of a French language version of Bernard Eckey's excellent book, *"Advanced Soaring Made Easy"*. The text translation was done by a pilot in France. The new book will be printed in Europe and should be available for sale before the end of the year.

Price and ordering info will come when the book becomes available.

Tony Burton

Wing runner checklist

Many launch accidents can been avoided if the wing runner is even minimally aware of the surroundings. How can a launch take place with the spoilers open if the person holding the wing tip had their eyes open? Below is a wing runners check list from Tom Knauff. The SSA web site also has a course for wing runners that clubs may modify to suit their needs. Go to <*http://www.soaringsafety.org/school/wingrunner/toc.htm*>.

This list does not lend itself to the usual simple acronym, but should be practised by anyone responsible for launching a glider – often the new students in the club.

There are four general categories of safety when launching a glider by aerotow: the area, the glider, the towplane, and the launch.

The area

- Are other aircraft taking off or landing?
- Are people or obstructions creating distractions or hazards? Make bystanders move away to reduce distractions.

The glider

- Tail dolly off?
- Critical assembly check and positive control check done? Ask pilot before entering the cockpit: "Can I help you perform a critical assembly and positive control check?"
- Ballast required? Be alert when small, or very heavy people sit in the front seat.
- Observe the pilot performing common checklist items.

Now walk to the wing tip and check:

- Canopies look locked?
- Dive brakes look locked?
- Flaps in logical position?

The towplane

- Condition – tires, flaps look okay (pay attention as it taxis into position.
- Tow rope (inspect and show end to glider pilot before connecting).

The launch

- Air traffic & runway clear.
- Take up slack.
- Level wing (balanced) on pilot signal.
- Give "Go" signal on pilot signal.

miscellany

Changes to the SAC Video Library

Ted Froelich indicated that he wishes to pass on the duties of the video library. Thank you Ted for having carried out the duties for the past 17 years. I have seen many of these videos and I believe they are important – especially the Canadian club videos, which go back several decades. Ted has indicated that there has been a decline in borrowing SAC videos in recent years, likely due to issues of accessibility and publicity. I will look into this.

The material I have consists of the following:

- All video originals (most in VCR format)
- DVD recorder
- VCR player
- DVD copies
- DVD blanks and cases

Here is what I intend to do:

- I will continue to make the videos available to our members. (Ted sent out copies of our videos when requested. Members could either borrow a DVD and return it or they could purchase a DVD copy at $6 for a typical one-hour video.)
- I will continue to convert our VCR originals to DVD format. This will ensure a more secure way of archiving historic videos.
- I will look into having the videos available on the SAC web site. The consultant working on our web site redesign has told me that there is no problem with putting the videos up on the web site. We will likely not put up "professional" copyrighted videos, unless we obtain permission. So we will still need to figure out if there is a more efficient way of making these available. More information to come as it develops.

George Domaradzki
Eastern Ontario Zone Director

Horst Dahlem has donated his HP-11A CF-QIR with all equipment to the BC Museum of Aviation, located at the Sydney Airport on Vancouver Island. Due to the good services of one of the directors, Russ Hudson, it was somewhat refurbished, primarily by polishing it, and displayed in that somewhat rakish position which resembles an inverted dive. There is a dummy in the cockpit. The museum is very happy with their display and have received many favourable comments from visitors about the aircraft.

Mac's last wave flight

This is a great soaring yarn courtesy of a friend of Doug Scott. He e-mailed him saying, "Let me share with you a true story that I shall call Mac's Last Wave flight".

I have this month been towing at my club's annual wave camp in the New Hampshire mountains. This year we held a ceremony where we spread the ashes of a dear member named "Mac" Windsor who died earlier this year. We towed his son Jonathan (not a glider pilot) as passenger in the Puchacz up to the front range where Jonathan released some of Mac's ashes over the mountains where he loved to fly.

Also with us this year was a young fellow named Chris who had purchased Mac's old glider – an HP-14 – from Mac's family and who was at the camp attempting his Diamond climb. Being about the same age as Jonathan, he and Jonathan hit it off quite well with each other.

Jonathan was quite impressed with Chris' respect for Mac's old homebuilt which, to be candid, was now in much better shape than Mac ever had it. He asked Chris if he would like "a little piece of Mac" to carry in the glider as a memento, and Chris said that such would be a great honour.

So, with some degree of solemnity, a portion of Mac's remains were sealed into a 35mm film can and lashed to an aft bulkhead of the HP. We smiled to think that Mac could, in this quaint way, continue to fly his beloved HP…

The issue was all but forgotten two days later when the wave was working to 27,000 feet plus and many new pilots, including Chris, were working at their altitude Diamonds. Then, while Chris was climbing in the HP through 16,000 on his way to a Diamond, he was startled by a loud *"Ka-Boom"* from the rear of the HP. Cautiously, Chris continued the flight, got his Diamond, and landed back at the field.

Inspection of the rear of the HP disclosed that we had apparently sealed Mac a bit too tightly in the film can, and he and the can had exploded from the pressure difference at altitude. The entire aft fuselage of the HP was now thoroughly dusted with Mac who will likely remain in the rivets, crevasses and cracks of the HP forever.

Knowing Mac as I do, I am sure that he is somewhere laughing himself silly at all of this.

Roy Bourgeois

IGC meeting dynamics scuttle first try at Sporting Code simplification

The annual meeting of the IGC met in Varese, Italy on 7-8 March. At the 2013 meeting, they passed a resolution directing the Sporting Code committee to examine how this simplification might proceed and to prepare a proposal to that effect for this 2014 meeting. You saw the justification for this project in the article I originally wrote for the IGC in the 2012/1 issue of Free Flight, *"Saving the poor badge pilot"*.

As a result, the committee wrote and distributed to the gliding community (mainly through the *igc-discuss@fai.org* site) many "how-about-this-idea" thoughts regarding the way to go. To say the least, there was a lot of reaction, with some quite unhappy with the idea that simplifying the Sporting Code would also mean changing it. In my view, it is not possible to make the Code less difficult to follow without reducing the number of ways tasks are flown and task evidence recorded.

Nevertheless, over the year a list of changes developed that seemed workable, and the idea was to group what seemed to be the most favourable ones into an omnibus proposal in order to shorten the voting process. To smooth the way, I distributed the list of potential changes in *igc-discuss* for a straw poll in order to gauge the reaction, and only included the items in the final proposal that polled a favourable "yea/nay" ratio.

Then things started to fall apart. There was some strong opposition, and the IGC Bureau decided to split the proposal into many separate votes in the belief that nothing would pass otherwise. In the process, some of the listed changes were poorly reworded or were unintentionally dropped. Then "meeting dynamics" took over, and almost all substantive simplifications were voted down, even the ones that were heavily favoured in the pre-meeting poll.

Jörg Stieber, attending as the Canadian IGC delegate, e-mailed me saying:

It would have been good to have a moderator for the discussion on the igc group, dissecting the multitude of ideas that were brought forward and then discussing them one by one. Instead it turned into a mudslinging exercise where the good ideas got drowned in the noise.

To be frank, the proposed changes were not presented well and the rationale for the changes were weak at best. It would have needed a champion who presented the changes one by one, proposed vs existing, and the rationale for change. As it turned out, the session was pretty confused and confusing. There was a moment when [the Sporting Code chairman] said he was confused, the Bureau members were confused, all adding to the confusion of the delegates. Not a good situation.

There were a few points that made sense but were lost by a narrow margin, possibly because some delegates did not understand. I hope these points will be revisited in the future. However, on most points the vote was very clear. I would interpret the results as a clear direction to simplify the procedural side but not to change the overall system.

I discovered later that two useful changes to the Code failed as a result of *Abstaining* votes being added to the *Nays*, which is required by the FAI Statutes. For example, the proposal to simplify the start/finish to just a line failed with a 16-10-7 Yes-No-Abstain vote, when the delegates had favoured this change by a 13 to 1 margin in the poll question! So this meeting's verdict was that it was acceptable to simplify the Sporting Code so long as nothing substantial changed.

Some small changes *did* get through that will probably come into effect as of 1 Oct 2015:

- the start/finish line goes from 1 to 3 km.
- the mechanical barograph is gone.
- the "3 TP distance" task gets a name change to "Pilot Option". (On its own this is quite inconsequential, it just fell out of the fragmentation of the overall proposal.)
- for badge pilots, the Silver distance must be a flight at least 50 km from the launch; it gets back to its historical roots and eliminates the 50 km leg that may barely get you much over 25 km from home.

The big upcoming editorial change to the Code that will keep me busy is to completely separate the badge and record flying rules. This will make it much easier for badge pilots to understand the requirements; they will be able to see everything they need to do in an expanded Chapter 2, which now just defines the badges in the current Code.

Tony Burton
IGC Sporting Code committee

Jens Faulhaber

Cu Nim– a dynamic club

Five years of involvement in gliding and three years as the president of Cu Nim has led me to an interesting conclusion about the dichotomy of how gliding clubs are managed. While flying, regardless if it is just around the club, on a cross-country flight, or climbing for a Diamond, we are constantly evaluating our situation, thinking how to improve our flying and make the appropriate corrections, especially while landing. Not thinking is going backwards. So, why on earth, if our sport and the required actions are this dynamic, is club management in general so reticent to change?

Often it seems as if all the dynamism of our flying stays up there and doesn't permeate down to our actions within gliding clubs. This is exactly the lethargy we wanted to move away from at Cu Nim. In one word… make the club *dynamic*. Society changes day by day and we are used to quick responses, products delivered right away, and complete satisfaction. Is this one of the reasons why gliding has decreasing numbers worldwide? I am not entirely sure, but the realization of the need to be dynamic is making Cu Nim grow.

In a matter of four years we have acquired two new two-seaters, an ASK-21 and a DG-1000S. The new trainers are surely not cheap but they are a delight to fly. We are paying for them with a combination of bank and members loans. One source of income is introductory flights, but also the increase in happy members. Don't be afraid to renew the fleet – it brings more members and refloats club morale. That smile that pilots have after a nice flight in the DG takes days to erase from their faces. Trust me, I still have mine. All in all, the club is paying off debt fairly fast and we should be debt free again in four to five years if all goes well.

Currently we are in the process of selecting a newer single-seater to promote more cross-country flying by our licensed pilots, and the decision has been made for DG-300. Interestingly enough, the renewal of the fleet has changed the orientation of the club. Years ago, when gliders like the 2-33 were the trainers, the only option after licensing was to get a private glider in order to continue improving your flying. Not anymore at Cu Nim. It is true that waiting time is an issue, but boy, is it ever worth the wait to fly the DG or the K-21.

Instructing in these is definitely more pleasant for our instructors who devote so much of their time to the club. Costs are shared within the membership and it gives access to very nice equipment. A drawback to fleet renewal is that the new glass ships are heavier. We had three options to consider: a longer runway, paving the runway, or getting a better towplane. Yup, we're looking at the least expensive option – number three – and have decided on a Cessna 182 that was for sale locally.

Several activities and events made the season much fun. We participated in *Chics Take Flight*, which was a success again with Central Alberta taking on as the host. Tony Burton had his Russia on display at WestJet Days in Calgary. For the third consecutive year we hosted the RAA fly-in breakfast – each year we get more planes (25 was the count this August) and more pilots interested in getting to know the club, having intro flights, and enjoying a morning with fellow aviators.

Ted Sorensen gave a week of aerobatics training for Cu Nim instructors. Although it rained 40% of the week, the conclusion that participants had was along the line of 'I thought I had mastered flying… not anymore… there is so much more to learn and improve'. Last but not least, we also held a student week where four students flew every day of the week for three or four flights a day. It made a big difference in their development which resulted in first solos soon after. Thanks to CFI Allan Wood and to Phil Stade for their help and enthusiasm.

Snow was falling when I wrote this column in January, but we have not stopped working at the club. We have laid the gravel foundation for a new garage that we plan to build this year and use it for in-house glider repairs and storing equipment. Plans are underway to get new retrieve vehicles, and the annuals of the gliders were done in November so we can be flying at the first hint of the fast-approaching spring. 2013 was a very good year and I thank the club for giving me the chance to serve as the president. It has been a pleasure.

Pablo Wainstein

Cu Nim's K-21 – "Flighty"

The other events at the 2014 AGM

February 28th, March 1st and 2nd, was a busy weekend in Ottawa. There was the actual AGM of course, see the Minutes on the SAC web site for details about that. There were other happenings as well.

Friday evening The SAC Board met from about 7pm until midnight. Plans for Saturday's meeting were discussed and finalized. Work is progressing on a significant change to the SAC web site. A presentation was made to the Board showing many of the features. The new web site will be much more engaging, frequently providing new content, and providing a reason for many repeat visits.

Saturday at Algonquin College
The meeting room was a lecture theatre, consisting of chairs behind tables, arranged in tiers up toward the back. A large screen was used to present AGM data such as financial reports and later by the various presenters.

There were very interesting presentations following the AGM by the CAS-sponsored Spring Soaring Seminar.

Emmanuel Cadieux Showed pictures and talked about his experiences at the Junior World Championships in Leszno, Poland last year. He found it fascinating: from the venue, which is all for gliders and has its own control tower as well as meeting and dining facilities, to telling a story of unwittingly leading another competitor to his first landout. At the landout retrieve, the two crews became friends and stayed so for the duration of the contest. Emmanuel flew a Cirrus 75 (Std.

Cirrus manufactured under licence) in the Club Class. His best finishes were 16th and 17th. There were seven tasks flown with a total of around 14,000 km flown – the winner received 4924 points and Emmanuel 3031 points for 44th.

Dave Springford Presented pictures and had a discussion regarding the competition experiences of the Canadian Team at the Worlds in Uvalde, Texas, summer of 2012. It's fascinating to see how close the competitor scores were and how a small judgment error can cost a few minutes and cause a competitor to lose twenty positions. It was an exciting day for Canada when Jerzy Szemplinski and Dave Springford finished in first and second place on the relatively short final day of competition. Dust on the grid, dust devils in the air and high speeds characterized this contest. The slowest day winning speed was 134 km/hour.

Lunch was provided in the same room as was used for the meeting. Following the lunch, there was an advanced soaring presentation provided by the Canadian Team. There was a $40 charge for this, fund-raising for the team. I doubt if anyone was disappointed, the presentations were very good.

Jörg Stieber "Is this the day? A discussion of soaring weather, where to find information, how to interpret the information and specific information about southern Ontario weather and what makes a very special day for soaring there. Remarkable photos of cloud patterns caused by a convergence creating lift over long distances.

Pierre Gavillet Field landings – and the limited decision time available. Pierre discussed flying decisions and how time constraints can cause a person to make poor decisions. Applied to the field landing situation it is too easy to leave decisions late and run out of adequate time to make good decisions. One significant point, among the many good ones, is to make as many decisions as possible well before the landout process even starts.

Nick Bonnière Finding, then optimizing climbs in thermals. Your variometer is always late, so what to do to still quickly find the best part of the thermal? Techniques were discussed and shown by diagrams. Quickly centering thermals is critical to good cross-country speed.

Willem Langelaan Optimizing speed, what to do between thermals and why? Glides between thermals, glides to turnpoints, glides to finish, glides to clear obstructions such as ridges were all discussed. There are differences in best practice in all these glides. Not something I had even thought of before.

The day ended allowing time for visiting and returning home. Many of the attendees had driven to Ottawa just for the day.

Sunday morning The SAC Board met again between nine and noon. George Domaradzki, the new Board member for Eastern Ontario, attended. SAC committees were the main topic. General objective – better communication to members about what each committee is, and what it does.

The next face-to-face Board meeting is probably in Toronto in November.

Al Hoar,
Alberta Zone Director

---

the uncommon fate of a legendary bird

from page 17

controls, after a seven hour flight. It was the first time a glider went over the 500 km distance in North America. This glider got very positive comments, like this one from Don Pollard, a US champion in those years:

My perceptions were confirmed in about thirty minutes; the ship does have amazing performance. In spite of the fact that it is a large sailplane, the control pressures are very light and very responsive. It is truly a pleasure to see sixty-feet of wing respond immediately to finger tip pressure. It is very stable in turns and has quite normal stall and spin characteristics. The minimum sink appeared to be about 1.7 feet per second at 60 km/h, which is superior to any sailplane flying today. The dive brakes operated very smoothly and were quite effective.

Other gliders of the same type contributed to numerous records, including the female duration record of 35:53 hours by Marcelle Choisnet in 1948 with Air 100 serial no. 5, and the male duration record, never matched since, of 56:15 hours in 1952 by Charles Atger, with Air 100 no. 12. In 1947, at a contest in Elmira, NY, the US pilot Don Pollard at the controls of this very Air 100 prototype, won the contest with a score of 477 points, much ahead of his immediate follower who only scored 133 points.

Eager to discover the kind of innovations at the heart of these flights, Dr. August Raspet from the Department of Aerospace Engineering at the Mississippi State University opted to purchase the glider to further analyze its design. Hence this glider spent a significant part of its career in North America, under the N-29H markings, until it was acquired by one of the founding members of Club de Vol à Voile de Québec, Alexandre Woinowsky-Krieger, on 2 February 1958, with markings of C-FZCV.

After a while, Alex donated the glider to our club, and the Air 100 was hiding in the back of a hangar collecting dust, until another founding member of our club, the late Claude Rousseau, a talented glider builder (also holder of a remarkable 18,000 foot flight in 1960 with this same glider), decided with the help of Mario Lepire and Richard Noël and other club members to refurbish it for flight certification. It is the result of these patient efforts in 2008-2009 that you see on the second picture at the top. The Air 100 was beloved for her « vintage » flight handling characteristics, though somewhat less for her uncomfortable seating. In the photo, notice the dolly attached under the skid. It is released to drop soon after take-off, with the glider then landing on the skid.

Unfortunately, years accumulated, and the tedious time and effort required to rig and derig her eventually discouraged the most motivated fans, and she went back to the rear of her hangar, until she was somewhat forgotten.

The historical value of this sleek bird caught the interest of Jo Lanoë, another club member. After several attempts to get the attention of air museums in Canada, then in France, he finally got a deal with the Musée régional de l'Air d'Angers in western France, to acquire it.

Christian Ravel, vice president Heritage and Archives at the Museum, was fully aware of the historical value of this very first prototype of a long series of 40 gliders built over time, some sold in USA, South Africa, Sweden, and Egypt. He initiated the project to refurbish her in the same appearance she was in 1947, and make her the central attraction of their museum. A procedure is in process to make her a National Monument.

Finally, in October 2013, the glider went back to sea to reach her country of origin 66 years later, where it will be featured at <*http://www.musee-aviation-angers.fr/collections/planeurs/*>. For history fans who want to know more on this legendary bird, a 60-page monograph is in preparation by the Museum.

To get a copy (in French), please contact Jo Lanoë at <*jo@jolanoe.com*>. ❖

up due to heat), the pilot proceeded to enter the rear seat and make pre-flight checks. Once the thumbs up was given, the normal launch procedure commenced with a wing walker giving signals to the towplane. The tow was normal until the glider was airborne. There was a strong crosswind at the point of rotation and the pilot had to compensate with rudder crabbing down the runway. Seconds after, the rear canopy popped open and shattered against the wing. The pilot reclosed the canopy, then pulled the release and landed on the same runway.

Towpilot "About 40% down the runway I felt a tug on the rear of the aircraft, but it subsided (never knowing most of the time prior to take-off if there is a student at the controls or if it's an intro ride). I assumed a student had some difficulty with staying aligned and just focused on staying straight."

Witness "From the flight line, I noticed the Grob 103 suddenly pull up during the take-off about half way down the runway. The glider appeared to be about 30 to 50 feet off the ground in a 30° nose up attitude. I saw the rear canopy was open. The glider then went back to a nose down attitude briefly and then went nose up for a second time. I vividly recall mentally willing the pilot to put the nose down and release. Almost immediately, the nose went back down and I watched the glider land at the very end of the runway."

8. Gear-up landing with considerable damage. Entered the circuit from downwind of field below 1000 feet. Joined base leg high with almost full spoilers (powerful on this type). Speed was good. Pilot heard "Gear up" on radio. To lower the gear, hands were swapped, left from spoilers to stick, right from stick to gear, on short final. Spoilers went fully open and nose pitched down (top side only divebrakes) during hand switch.

Glider struck nose, then tail, with the gear still up. Significant damage to fuselage. Pilot suffered stiff neck. Pilot, on reflection, feels he should have given up task earlier, avoid joining circuit from downwind, done a landing check, and not reacted to the landing call (a gear up landing usually does little damage).

Club Safety Officer A poor landing is often a result of a poor approach, which is the result of a poor circuit; also, if you see an aircraft with the gear up, leave them alone, a smooth landing has little consequence, but trying to get the gear down in a panic almost always ends poorly. Decision to land to the stop on runway from the IGC file was 54 seconds.

9. Canopy lost in flight – SZD Puchacz SZD-50-3. Departed from airport southbound on runway. The entire flight after tow was southeast of the field 1–2 miles. Student flew entire take-off, tow, box wake, released at 3000 agl. The flight started with stalls and recovery, followed by incipient spin and a full spin. Instructor took control, initiated a spin, and continued to maintain control into the recovery. At approximately 70 knots indicated during the pull portion of the recovery the canopy suddenly released and swung open. Immediately after the canopy opened it broke off the hinge and cleared the aircraft without contacting the tail. Canopy failed at approximately 2200 agl.

After the canopy had broken off, the instructor maintained control of the aircraft and asked the student to make an emergency radio call. The airspeed indicator and altimeter in the front cockpit were visible from the back but not reading correctly. Flight and approach was flown with extra airspeed for safety purposes and was landed safely. There were no injuries, or other damage to the aircraft.

The instructor did the pre-flight inspection of the aircraft. During that time it was mentioned that the aircraft canopy may have been grounded due to recent canopy issues. The instructor received information that the canopy was recently inspected by an AME and confirmed the canopy was serviceable.

It has come to our [club's] attention recently there is a minimum tension or "pull" required on the canopy latch to ensure proper closure. This information was not in the operating handbook – we have very likely been under loading the canopy latches for years. A tension scale has been purchased and the factory recommended tension will be adjusted to the canopy's latches.

10. Puchacz spoilers open on tow; Pawnee releases with difficulty halfway down runway several seconds after handle actuation. Puchacz hits ground hard and groundloops. Minor injuries. Spoilers confirmed closed by wing runner (but probably not locked) on questioning. Towpilot: We checked the tow release on the ground after the fact. Under tension, in certain orientations, the rope does not release until some slack is applied, then it drops off. We tried the same thing with the other towplane and had the same result. Towplane releases are being replaced with modern ones.

11. CADORS: *The Montreal Soaring Council Burkhart Grob glider (C-GLTQ) with instructor and student on board was being towed to altitude by the [MSC] Cessna 305A (C-FERD). At an altitude of approximately 3000 feet, the student flying, veered the glider towards the towplane instead of away from it. The tow rope had not been released and the towplane slowed down sufficiently for the glider to begin overtaking it. The rope became lodged on the aircraft between the right aileron and the wing. The rope eventually failed and both aircraft returned safely to the field. The Cessna 305A sustained aileron and wing damage.*

NSO comment – it is likely the aileron/wing damage was on the glider by the write up; MSC did not submit a safety report this year so the facts are difficult to sort out.

12. 1-34 lost canopy on take-off Pilot: The canopy came off when I was taking off. I tried to get it closed but I couldn't. I went out of position on tow and released at about 300 feet. I ran out of runway so I turned left and landed on a farmer's field.

Witness (a licensed pilot on ground):
Initial take-off normal until about 100 feet. Two black objects fell away from the aircraft and the glider failed to maintain safe position behind the towplane. Erratic flight continued while the combination turned 180. Glider released, flew length of field, turned left 100 degrees and flew out of sight into a field. Towpilot risked life to give glider extra time and height.

Incidents

Full details on these are contained in the full 2013 report in the Document Vault. I strongly encourage every pilot/student to read them closely before their first flight of the year.

Assembly/Disassembly/Maintenance (10)
Ground towing. Almost always due to inattention. Lots of damage.
Launch (15) A wide assortment…
Rope breaks (4) Several occurred on instructional flights. Could a simulator be used to decrease risk of "training" breaks?
Airprox/near mid-airs/airspace (17)
Mid-airs have killed six pilots in the time I've been Safety Officer. Read these and see if your club is mitigating the risks in your particular circumstances (Power FLARM/airspace CYA(S)).
Gear-up landings (4 – was 7 last year)
Some known problems.
Towplanes (13- was 33) A wide selection…
Runway incursions (6, was 10 in 2012)
Poorly trained retrieve vehicle driving is very dangerous and should be a focus in club spring training.
Circuit Planning/Low arrivals/Circuits (16, was 21+) Take-offs are optional, but landings are mandatory!

Canopies (9) This is entirely preventable. Do your checks!

Other – LS-4
Glider was observed to have multiple (4) cracks in the empennage area. There were two cracks in the tail dolly area, one crack at the top of the vertical stabilizer where it flares a tiny bit into the mounted horizontal stabilizer and about a 9 inch crack running vertically one inch forward of the trailing edge of the rudder.

Findings: None of these were reported by the "incident" pilots. Probable causes of some of these damages: The tail dolly could have been twisted, or not installed properly causing cracking in that area. The crack in the vertical stab just under the horizontal stab would almost surely be someone picking up the tail by the horizontal stab or somehow put a load on the horizontal stab causing stress where the two meet. The cracked rudder is more difficult to understand. It is possible that someone holding the rudder or moving the rudder with an energetic person on the rudder pedals during a control check could cause a high load concentration on a small area causing cracking. The height of the crack is about right to support this theory.

That multiple DIs did not detect the four cracks in the tail is disturbing.

Analysis

I am mystified why the adoption of PowerFLARM is so slow, particularly at clubs under approaches to major airports. It is easily installed, has low power draw, and produces enough alarms of unseen traffic to improve the pilot's lookout. To get some statistics, we asked clubs to report how many units were installed. Of the 12 clubs that submitted reports, 5 reported, and three of those had no PowerFLARMs (SOSA had most club and private gliders with PowerFLARM, and many with transponders. Edmonton reported three).

Only four clubs reported the number of flights done, which makes year-to-year statistical comparison of accidents and incidents per thousand flying hours impossible.

There are two cases on airtows with instructors on board where enough slack developed for the tow rope to wrap around the glider wing; we were lucky that damage was limited to the trailing edge and ailerons. Another year with lost canopies in flight. Many of these, and some other incidents, are completely preventable if pilots correctly do their Daily Inspections, CALL checks, and pre-landing checks. Many of the ground towing incidents would have been preventable with working radios in the tow vehicles.

The number of assembly problems – tailplanes, ailerons, and so on – are incidents which will kill you, and *MUST* be a club focus over the next year. I urge all pilots to follow a thorough checklist on assembly, and do a thorough DI and walk-around before *every* flight. This is particularly important on a new type, where I think either an owner of the same type or an experienced instructor should be consulted.

So, an upcoming season… was your club one of the two that did safety audits this year? Ask, and if not, ask why not. Read the more detailed annual safety report at *www.sac.ca* – Document Vault – Safety and Training. Look at an area where you are comfortable, and spend an hour inspecting your club's operation (that is, play Safety Officer for the day) and try to see if you have problems that have been seen before (be tactful). Don't interrupt pilots during assembly, or when they're doing checks. Do the IMSAFE check as well, and if you have personal issues, perhaps take a dual flight with a friend, or relax on the ground instead of flying. Does your club use the Risk Management Matrix that was developed last year, and if your club does contests, does it use the Contest Risk Management Matrix given a test run at the 2013 Nationals?

As a pilot, have you done the annual currency quiz in the *Aviation Safety Letter*? Have you bought, for about the price of a tow, a recent book on gliding? Almost all of them have great sections on safety. How often do you fly with an instructor, or with another pilot whose opinions you respect? Trade flights in the club 2-seater and get an honest opinion of your flying. I think it's great when someone points out things that have crept into my flying (last one – looking only at the landing area on base leg, not coming back to the nose to check attitude), and nothing bothers me like a check flight where the instructor says "all good". It's only with honest self-examination that you will be a safe pilot.

Adding to your experience with the instructor course, or learning aerobatics, all add to your bag of tricks when your luck runs out and your skill is put to the test (Tom Knauff says you don't rise to the challenge, you fall to the level of your training in an emergency). *Never let your glider go to a place that your mind has not been five minutes before.*

I've been SAC National Safety Officer for three years, and I've enjoyed working with the FT&SC and club safety officers, but I have some issues with my family life that mean I won't be able to continue in this role, as of the 2014 SAC AGM. I thank the clubs who did report, and encourage club Safety Officers to use this data in their spring safety meetings. After the AGM, I will post this to the Document Vault (under Safety and Training), as well as the presentation from the AGM.

A final plea – please consider providing permission for flight safety access for accident IGC files, so that the causes can be determined, and mitigating action taken to save your friends. I wish everyone frequent and safe soaring in the next year.

SAC Membership fees for 2014

In the table to the right, note the following recent membership changes since 2010. Consult the Bylaws in the membership section for more details.

A Junior member includes members under the age of 21 or a full-time student under the age of 25 as of January 1st of the membership year. This membership category has voting privileges.

A Youth member is a regular member or Air Cadet member who is under 19 years of age as of January 1st of the membership year. They are non-voting Members.

Note 1 – all club members must be SAC members to be covered by the SAC insurance program. This also includes student pilots even if they are not solo.
Note 2 – Half-year rates are applicable after August 1st, but for new members only.

Frais de cotisation de l'ACVV – 2014

Prenez note des récents changements suivants touchant les cotisations. Consultez les statuts de l'ACVV-SAC (By-laws) pour toute information supplémentaire sur les catégories de membres.

La catégorie de membre « Étudiant » (Junior) comprend tous les membres qui ont moins de 21 ans, ou les étudiants à temps plein qui sont âgés de moins de 25 ans au premier janvier de l'année de l'inscription. Cette catégorie de membre a droit de vote aux assemblées.

La catégorie de membre « Jeune » (Youth) s'applique à tous les membres qui ont moins de 19 ans au premier janvier de l'année de l'inscription. La cotisation du membre ACVV « Jeune » est gratuite. Cette catégorie de membre n'a pas droit de vote aux assemblées.

Notes 1 – tous les membres des clubs doivent être membre de l'ACVV-SAC afin d'être couvert par les assurances de l'ACVV-SAC. Ceci inclus aussi les élèves-pilotes qui ne sont pas solo.
Notes 2 – Le tarif mi-saison est applicable après le 1er août pour les nouveaux membres seulement.

Member Category *Catégorie de membre*	Full Season *Saison complète*	1/2 Season *Mi-saison*
Club Affiliated */Affilié à un club*	$100	$50
Corporate / *Société*	$100	$50
Spousal / *Conjoint*	$50	$25
Junior / *Étudiant*	$50	$25
Associate / *Associé*	$50	$25
Youth or Air Cadet / *Jeune ou Cadet de l'air*	$0	$0

Priorities

from page 2

I take this opportunity to invite you to read the complete 2013 SAC annual reports & 2014 AGM minutes document available on the SAC web site in the Document Vault/Minutes & Reports. It reports what SAC volunteers are doing for you. You should read it, especially if you ask yourself what SAC is doing for you or if you are asking where the tax deductible $100 goes that you are giving to SAC every year.

You should all read this year's safety report prepared by Dan Daly (SAC National Safety Officer) to improve safety. Note that his report here in *Free Flight* omits details of incidents – the full report is on the SAC web site. Reading the previous year's safety reports will show you that the same errors repeat every year. Something has to be done by members and clubs to improve safety in Canada; start by putting in place at your club the National Safety Program and review it periodically. The NSP is available in the Document Vault under *Safety and Training*.

The Ontario Zone has been divided into two zones to better balance club representation: the Southern Ontario Zone and the Eastern Ontario Zone. In 2013, the Ontario Zone included 9 clubs and 449 members of all the 991 SAC members. The Southern Ontario Zone now has six clubs and 328 members, the Eastern Ontario Zone includes four clubs and 208 members (the Montreal Soaring Council and its 87 members are now in this zone), the Eastern Zone now has four clubs and 154 members, the Prairies Zone has four clubs and 72 members, the Alberta Zone has five clubs and 123 members, and the Pacific Zone has seven clubs and 101 members.

Sylvain Bourque,
SAC President

2013 SAC Insurance annual report

For those with questions or comments about the insurance plan, please use the SAC insurance address, *insurance@sac.ca*, as it is usually the most reliable way to reach me. I am usually able to reply back to people within a couple of days.

I note with sadness the recent passing of Richard Longhurst. Richard had a long history with soaring and SAC and was chairman of the Insurance Committee when I first became involved. I always valued his advice, even after he assisted less directly. I'm sure others will miss him even more.

Our loss ratio continues to trend down from our high in '08-'09 where hull claims were greater than the premiums collected and the insurer was losing money on that portion of the plan. The loss ratio is the percentage of premiums paid out in claims to aircraft owners. It is a prime determinant of the plan's premium rates, so the continued downward trend bodes well for our safety efforts as well as our ongoing premium rates and insurability as a group. Through the SAC Insurance Group Plan, we continue to credit those private owners and clubs with a 3-year claims-free record with a "No Claim Credit" at their renewal. This recognizes those keeping safety foremost in their flying practices. For 2013, the plan credited an average of 3% to those owners and clubs with claims-free records.

2013 marked the first year that our underwriter, CAIG, provided a 5% discount to those owners who invested in safety by installing FLARM units in their glider. The discount is available to all gliders and towplanes insured in the plan with a FLARM unit. CAIG continues to recognize the initiative of the soaring community to proactively work towards our own and others' safety in the air.

Last season, one third of the aircraft in the SAC Group Plan were FLARM equipped. We expect the portion of the total fleet with FLARM installed to continue to increase. Several clubs had equipped their full club fleet with FLARMS at the beginning of the policy year and several have equipped their fleets during the season and will be further eligible for credits in 2014. Several clubs now have all club and private gliders operating from their field FLARM-equipped and others have a majority equipped.

2014 renewals As I write this, we are in the process of negotiating the plan renewal with the underwriting companies. Our process, through our broker Jones Brown, is to request quotes from interested underwriters. Once the submissions have been reviewed and final rates have been negotiated, we will finalize any changes for the 2014 plan. In part because of our continued downward loss trend, we hope to see a continued decrease in our base premium rates.

The 2014 policy year runs from 31 March 2014 to 31 March 2015. As usual, coverage will be extended through to 30 April 2014 to renewing owners to allow for the renewal process; however, it is important to complete your renewal as early as possible before 30 April. Failure to renew your coverage and submit premiums can cause your coverage to be void in case of an incident, with no payment of your claim.

Club renewal packages will be e-mailed to each club insurance contact as soon as available in late March. Private owner renewal notices will be sent out via e-mail as well. It is important to be sure to let us know if you have changed your e-mail address. If you have NOT received your renewal notice by now, contact me at *insurance@sac.ca*.

Your SAC membership "validates" your

insurance, so please ensure that you deal with your SAC membership promptly in April or May by submitting payment to your club. Failure to be a current SAC member could create difficulties in quickly handling your claim. It's equally important that clubs forward their membership updates to the SAC office *in a timely manner*. Ensure that member information and fees as applicable are submitted for all club members to ensure coverage.

I'm sure most of you have heard that there are other new options available for glider insurance in the marketplace. This is not a "new" situation as there have always, to a greater or lesser extent, been other options. The goal of a group insurance plan such as SAC offers is to offer stable, reasonable rates to the group, while providing the best possible coverage to the group as a whole. This may not always offer the lowest possible rate to any one individual, but often the real difference is relatively minor, particularly when considered against the broad coverage available to the extended group and not just an individual's risk.

The SAC group insurance plan has provided full, competitive coverage to all SAC clubs and private owners for over 25 years, regardless of experience and location within Canada. During some of those years we had extremely high claims experience, but our insurance company worked with us to try and hold premium changes to a reasonable level and did not leave the soaring community stranded, as some other underwriters have in the past.

Over the years, the plan has evolved and responded to provide a full umbrella to all those involved in SAC, be they clubs, associated commercial operators, glider pilots, club executive, instructors, towpilots, wing runners and all club members. Coverage is also extended to other FAI-affiliated (eg. SSA) soaring members. All SAC members and clubs and their visitors benefit from the consistent reliable coverage being available to them. It is a policy that provides coverage tailored to soaring pilots and clubs in Canada.

SAC does not provide insurance itself. The SAC plan is currently underwritten by *Canadian Aviation Insurance Group* (CAIG) and administered through our broker, Jones Brown. While we have dealt with other brokers in the past, both Jones Brown and CAIG have provided consistently high quality service over the years. Collectively, they represent many years of experience in aviation insurance, especially in Canada and soaring in particular. We have always had excellent claims service, with claims being settled fairly and promptly.

Insurance rates, regardless of the insurer, vary over time, reflecting both market conditions and more importantly, the loss experience of both the insurer and the policy holder. The rates within the SAC policy have risen and fallen over the years, in large part, due to our accident experience as a group. We have never "lost" the ability to provide insurance to all our members due to exceedingly high rates. As several of our members have pointed out to me, their personal experience has been that other insurers have had lower rates until they had losses, then their previous insurer either increased rates to an unaffordable level or refused to offer a renewal at all.

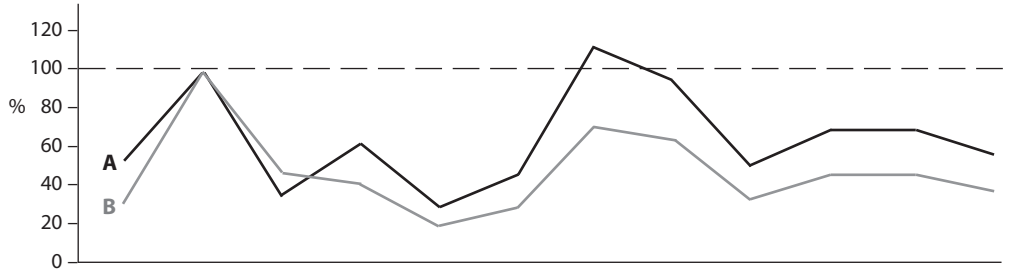
As a collective group, SAC has been able to ensure that insurance has always been available at reasonable rates to everyone participating in Canadian soaring. This will continue as long as we have a viable size group to attract quality insurers. Some of the benefits of the SAC plan are:

1. A true group plan, with SAC holding the master insurance policy that provides coverage for all clubs, private owners, and individual members. Our rates are based on our experience as a group, and are set regardless of individual experience level or history. The SAC plan supports soaring in Canada with a unique all-risks policy that covers the owners and all those participating in soaring flight operations.
2. Aircraft coverage are: combined hull and liability insurance, or liability only, and optional trailer coverage.
3. Club premises liability coverage.
4. Winch operations coverage.
5. Specific additional liability coverage for instructors.
6. Premium credits for clubs and owners with no claims.
7. Premium discounts for FLARM installation and use.
8. No limitations or notifications required for contest participation.
9. Support by the underwriter (CAIG) for SAC safety and training programs by the Flight Training and Safety Committee.
10. Consistently reliable, prompt claims settlement and service.
11. Full legal representation for liability claims.

Keith Hay
chairman

SAC INSURANCE HISTORY, 2002 – 2013

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Insured Clubs	35	33	36	32	29	29	23	24	25	23	22	22
Hull Loss Ratio (%) **A**	51	97	32	60	26	42	110	96	47	66	66	53
Total loss ratio (%) **B**	29	96	45	38	16	27	68	63	30	43	44	36
No claim bonus paid ($)				9538	7632	8400	6586	5140	6887	8191	12758	10497
FLARM discounts ($)												8844



FAI records

Roger Hildesheim

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

The following record claim has been approved:

Pilot	**Brian Milner**
Date/place	10 May 2012, Mifflin, PA
Sailplane	Ventus 2cxT (N900BM)
Record type	Free 3TP distance: Citizen, Open, 15m, Club
FAI category	3.1.4c
Distance	**2078.4** km (Open & 15m), **1804.1** km (Club)
Task	start Lock Haven, TPs at Narrows, Lock Haven, Bluefield, finish at Mifflin
Previous record	Adam Zieba, 2010 1474.1 km, Open & 15m 1387.1 km Club

After a long and complex claim/submission/approval process, this record has finally been approved for Brian Milner (finishing the record approval for the free O&R portion of the claim given in the last issue).

This has been one of the most challenging record claims to submit and process (I think Brian would agree). The flight could have set many more records but weak conditions after starting the task forced Brian to use his sustainer engine to stay on the ridge.

The use of the sustainer invalidated the pre-flight task declaration and limited any claims for this flight to the "Free" categories. Since then, and after a variety of health and professional challenges, Brian and I finally managed to zero in on an acceptable set of Canadian "Free" records for this flight.

Congratulations to Brian on an amazing achievement. Those bolded distances above will likely stand for a very long time!

soaring services

Fox One Canadian distribution for instruments and software for LX Navigation, SeeYou, Becker and Dittel radios, and will continue to support Ed's former customers. For more product details go to <*www.foxone corp. com*>.

High Performance Sailplanes Dealer for Antares gliders, ClearNav Instruments, soaring computers and varios, SAGE mechanical varios, Strong parachutes and Cobra trailers. For product details visit <*www.langelaan.com*> or e-mail <*willem@langelaan.com*>.

MZ Supplies Canadian dealer for Schleicher sailplanes, Borgelt instruments, Kelly covers. Ulli Werneburg, <*wernebmz@magma.ca*>, (613) 826-6606.

Solaire Canada Dealer for the new PowerFLARM "core" (brick) and portable collision avoidance systems. Now transponder and ADSB capable and approved for use in Canada (and the USA). Also still available some new and used PDA, PNA and Dell Streak devices, various flight computers, instruments etc. For more details, visit <*www.solairecanada.com*> or e-mail *ed@solairecanada.com*. New phone (226) 271-5322.

Sportine Aviacija Canadian dealer for LAK sailplanes. LAK-17a – 15/18m flapped; LAK-19 – 15/18m Standard; LAK 20 2-seat 23/26m Open. <*www.lak.lt*>. <*nick.bonniere@withonestone.com*>.

Windpath North American dealer for SZD-54-2 Perkoz, SZD 51-1 Junior, SZD-59 Acro, and SZD55-1. Also MDM-1 Fox, PW-6, PW-5, and Avionic trailers. Jerzy Szemplinski, <*www.windpath.ca*>, info@windpath.ca, (905) 848-1250.

Sporting Committee report

from page 13

competitions starting in April to prepare for the Worlds. Follow their progress on the team web site: <*www.sac.ca/team/*>. The contest web site is <*www.wgc2014.hb.pl/*>.

International competition calendar

FAI World Grand Prix Championship 9 – 16 May 2014	Sisteron, France
33rd FAI World Championships 22 Jun to 6 Jul 2014	Räyskälä, Finland
33rd FAI World Championships 21 Jul to 10 Aug 2014	Leszno, Poland
1st FAI Pan-American Championship 6 – 17 Apr 2015	Chilhowee, USA
18th FAI European Championships 12 – 25 Jul 2015	Ocseny, Hungary
8th FAI Women's World Championship 1 – 14 Aug 2015	Arnborg, Denmark
1st FAI World 13.5m Championship 1 – 15 Aug 2015	Pociunai, Lithuania
9th FAI Junior World Championships Dec 2015	Narromine, Australia

A full list of competitions is posted at the IGC web site:
<*www.fai.org/igc-events/igc-events-calendar-and-results*>

Seeding rules update The Seeding Rules are under review and will be updated for the 2014 competition season. The following changes are being considered:

- Competition factor for pre-Worlds. The current factor of 1.10 seems too high considering the factors for Worlds (1.12) and European Championships (1.10). A more appropriate factor would be in the 1.07 – 1.08 range.
- Integration of seeding scores between FAI and Club Class. Currently there is no mechanism to compensate for possible differences in competitiveness between FAI and Club Class.
- Allowing current year's US Nationals to count for the first term. We have to balance the requirement for our top-ranked pilots to have a significant presence at Canadian Nationals against the benefits in terms of training and experience of foreign contests. The 2013 Canadian Nationals with only four contest days, three of which were marginal, are a good example of a competition with only limited value for seeding.

New member of the Sporting Committee

Steve Hogg of Cu Nim has joined the committee as its fourth member. I want to thank Steve and the other members of the committee for volunteering their time. Thanks also to Ursula Wiese for maintaining and updating sporting data in the *Book of the Best*. ❖

magazines

GLIDING AUSTRALIA – the bimonthly journal of the Gliding Federation of Australia. <*www.soaring.org.au*>. International rates for on-line access.

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.

SOARING NZ – personal check or credit cards accepted, NZ$122. McCaw Media Ltd., 430 Halswell Rd, Christchurch, NZ <*j.mccaw@xtra.co.nz*>.

Eastern Zone

AIR CURRENCY ENHANCEMENT SOC.
Debert, NS robfrancis@tru.eastlink.ca

AÉRO CLUB DES CANTONS DE L'EST
Bromont Airport, QC
Marc Arsenault (514) 862-1216
marcarsenault@sympatico.ca

AVV CHAMPLAIN
St. Dominique A/P, QC
www.avvc.qc.ca

CVV QUEBEC
St. Raymond A/P, QC
(418) 337-4905 www.cvvq.net

Eastern Ontario Zone

BONNECHERE SOARING
Dave Beeching (613) 584-9336
beechingd@symptico.ca

GATINEAU GLIDING CLUB
Pendleton A/P
www.gatineauglidingclub.ca

MONTREAL SOARING COUNCIL
Hawkesbury A/P (613) 632-5438
www.flymsc.org

RIDEAU VALLEY SOARING
35 km S of Ottawa at Kars
club phone (613) 366-8202
www.rvss.ca/

Southern Ontario Zone

SOSA GLIDING CLUB
NW of Rockton
(519) 740-9328
www.sosaglidingclub.com

YORK SOARING ASSOCIATION
7 km east of Arthur
club phone (519) 848-3621
info (416) 250-6871
www.yorksoaring.com

ERIN SOARING SOCIETY
7 km east of Arthur
www.erinsoaring.com
info@erinsoaring.com

GREAT LAKES GLIDING
NW of Tottenham
www.greatlakesgliding.com

LONDON SOARING CLUB
between Kintore & Embro
www.londonsoaringclub.ca

TORONTO SOARING CLUB
24 km W of Shelburne
www.torontosoaring.ca

Prairie Zone

PRINCE ALBERT GLIDING & SOARING
Birch Hills A/P, SK
www.soar.sk.ca/pagsc/

REGINA GLIDING & SOARING CLUB
Strawberry Lakes, SK
www.soar.regina.sk.ca

SASKATOON SOARING CLUB
Cudworth, SK
www.soar.sk.ca/ssc

WINNIPEG GLIDING CLUB
Starbuck, MB
www.wgc.mb.ca

Alberta Zone

ALBERTA SOARING COUNCIL
asc@stade.ca
Clubs/Cowley info: www.soaring.ab.ca

CENTRAL ALBERTA GLIDING CLUB
Innisfail A/P,
www.cagcsoaring.ca

CU NIM GLIDING CLUB
Black Diamond
club phone (403) 938-2796
www.cunim.org

EDMONTON SOARING CLUB
North of Chipman
www.edmontonsoaringclub.com

GRANDE PRAIRIE SOARING SOC.
Beaverlodge A/P
www.soaring.ab.ca/gpss/

LETHBRIDGE SOARING SOCIETY
Lethbridge, AB
Ed Kalau edkalau@shaw.ca

Pacific Zone

ALBERNI VALLEY SOARING ASSN
Port Alberni A/P, BC
http://avsa.ca

CANADIAN ROCKIES SOARING CLUB
Invermere A/P, BC
www.canadianrockiessoaring.com

VANCOUVER SOARING ASSN
Hope A/P, BC
club phone: (604) 869-7211
hope.gliding@yahoo.com

ALBERNI VALLEY SOARING ASSN
Port Alberni A/P, BC
http://avsa.ca

WESTERN AREA SAILPLANE SOC. (WASPS)
Vernon A/P, BC
cookdaniel@shaw.ca

Maria Szemplinska

ZONE DIRECTORS

President & Eastern
Sylvain Bourque (514) 592-0283
slybourque@gmail.com

Eastern Ontario
George Domaradzki (613) 858-9646
george.domaradzki@sympatico.ca

Southern Ontario & VP
Stephen Szikora (519) 836-7049
stephen.szikora@sympatico.ca

Prairie & Secretary
Jay Allardyce (204) 688-7627
jay.allardyce@standardaero.com

Alberta
Alan Hoar (403) 288-7205 (H)
al_h@shaw.ca

Pacific & Treasurer
David Collard 1-866-745-1440
dacollard@telus.net

Air Cadets / Youth
Jay Allardyce (204) 688-7627
jay.allardyce@standardaero.com

Airspace
Scott McMaster
(519) 884-2303 & 620-0447 (H)
scott@mcmaster.ca
Members:
Roger Harris
rharris@petrillobujold.ca
Tom Fudakowski
cynthia.fudakowski010@sympatico.com
Bram Tilroe *btilroe@gmail.com*

Flight Training & Safety
Dan Cook, (250) 938-1300
cookdaniel@shaw.ca
Members:
Gabriel Duford
gabriel.duford@videotron.ca
Joe Gegenbauer *gegb@shaw.ca*
John Toles *j.toles@shaw.ca*
Dean Toplis *dtoplis@rogers.com*

COMMITTEES

SAC National Safety Officer
vacant

Insurance
Keith Hay
(403) 949-2509
insurance@sac.ca

Marketing & Publicity
Jay Allardyce (204) 688-7627
jay.allardyce@standardaero.com

Medical
Dr. Guy Thériault
theriaultguy@hotmail.com

Sporting
Jörg Stieber
519-662-3218 (H), 662-4000 (B)
joerg@odg.com
Members:
Chris Gough
christophermgough@gmail.com
Steve Hogg *hoggwild@telus.net*
Walter Weir *2waltweir@gmail.com*

Sub-committees:
Contest Letters: Chris Gough
christophermgough@gmail.com
Badges: Walter Weir
2waltweir@gmail.com
Records: Roger Hildesheim
rogerh@ca.inter.net
Trophies: Phil Stade *asc@stade.ca*
OLC help: Tony Firmin
t-firm@rogers.com

Technical
Paul Fortier (613) 258-4297 (H)
paulfortier1@juno.com
Members:
Chris Eaves *mail@xu-aviation.com*
Wolfgang Weichert
wkweichert@gmail.com

CANADA POST POSTES CANADA

Publications mail agreement no.
40013347