2014/1

free flight
vol libre

Priorities

THE SAC BOARD OF DIRECTORS MET IN CALGARY on November 8 to 10, 2013. The fall meeting is the only face to face time the Board has other than at the AGM. It gives the Board the opportunity to immerse themselves with SAC business and to deal with ongoing national issues, committee items, and planning for 2014.

New SAC by-laws These are needed to comply with new RCAAA rules to maintain our current status. The new by-laws are to be approved by SAC members at 2014 AGM and will be posted on the SAC web site in December 2013 for your review. Thanks to Stephen Szikora for all his work and expertise on this file. We are fortunate to have him on the SAC BoD as his legal background has been invaluable.

New reward incentive program for clubs One of the agenda items was the ongoing need to have SAC member clubs volunteer to host a sanctioned Zone and/or National competition. The Board recognizes that for a club to agree to host one of these competitions they must obtain the agreement and cooperation of the majority of their members. In some cases this can be as great a challenge as hosting the event, as not all club members are necessarily in favour of supporting contests and/or they see the hosting as being disruptive to their normal club activities with little to be gained from their efforts. Taking the above factors into consideration and to offer a reward to the club(s) for the benefit of all their members, the following motion was moved and passed:

> "Club Hosting Grant. SAC will establish an annual hosting grant provided to the sustaining member club that hosts a sanctioned competition to the amount of $4000 for a sanctioned National or $1000 for a sanctioned zone competition."

The SAC Sporting committee is responsible for recommending to the SAC Board what qualifies as a sanctioned competition and from this, determine what hosting club or clubs qualify to receive their share of a grant. More than one club could be involved in hosting a sanctioned zone or national competition. The establishment of this grant program is for an annual national contest and an annual contest for each of the SAC zones. The grant would be paid to the hosting club on completion of the contest. How the grant will be used at the club level is left to the discretion of the club. We envision this as an opportunity for the hosting club to use the money towards capital expenditure(s) which could benefit all their members. The grant is a thank you for all the club effort in hosting the contest and those of the club volunteers that make it happen.

Cancellation of the returning member's rebate to a club The program was instigated as an incentive for clubs to be proactive in contacting past members to return to club/soaring. Only two clubs have received a rebate and every indication is that the returning members did so without being approached by the club to come back and therefore the SAC BoD at the November meeting passed a motion to cancel the program as of 2014.

Declining SAC membership This continues to be an issue as there were 45 fewer paid SAC members in 2013 than in the prior year. This 5% decline is on track with what is generally happening in soaring world wide.

Planned web site upgrade One of our discussion items on the agenda was the current state of the SAC web site. The board recognizes that the web site is an important service to the members and is an essential focal point for the association. For many years, an invaluable crew of volunteers has kept the web site humming along and to them we are very grateful for their service to the association and to the members. But volunteers only have so much free time and when the site goes down or needs an upgrade to the latest software version, when you're relying on volunteers, you're at the mercy of everyone' schedule and busy lives. ⇨ **p28**

free flight vol libre

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

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The HpH 304 "Shark", the newest Czech design derived from the old Glasflügel Mosquito, features an advanced wing/winglet in 15/18m. There is also a jet sustainer version. Nick Bonnière readies for a launch at GGC.

Photo: Gabriel Duford

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

DEPARTMENTS

an electronic presence

Good use of the Internet to promote a small, volunteer-run soaring club, and improve efficiency to boot.

Tim Forbes, RVSS

RECENTLY, SAC HAS BEEN URGING CLUBS to engage in their own marketing and promotion. Rideau Valley Soaring School went looking at club web sites across Canada for inspiration and found several very good examples. We also found clubs that were as much in need of help as ourselves, some without sites at all. Several of the lessons learned by – and processes adopted at – Rideau Valley Soaring School could be of benefit to other Canadian soaring clubs or the national body itself.

The nerve centre of RVSS is an 8' by 8' red shack, adjacent the aiming point on runway 26. It's a modest, solar-powered operation, fairly described as shoestring. On flying days, the gates are open and our parking lot fills. At other times we might appear to be closed. In fact, we are available 7/24, year-round.

About a year ago, we decided to reevaluate our Internet footprint. Our site had become dated but new tools promised to deliver a better experience for visitors and members alike. Importantly, there was hope that the administrative work – which necessarily involves so many players – could be streamlined and accomplished on our own time. The atmosphere at the club could remain focused on flying while much of the commerce and communications could happen elsewhere. We wanted our site to showcase the club – with information on recruitment and training – and be the go-to place for members seeking information on safety, club policies and personal development.

Administration of even a small soaring club is daunting. Our goal was to bring in more visitors and recruits, improve the joining process, and boost service for the existing members. At the same time, we aimed to reduce the workload on a number of volunteer contributors.

Visitors Travellers on busy Highway 416 are alerted to our club by Ontario Tourism-oriented signs. Approaching the gates you will see new signs sporting our logo and short-and-simple address: *rvss.ca*. Its likely, though, that many visitors to the airfield find our web site first. By intention, common search terms like "Ottawa soaring" now rank RVSS at the top of results. In the past, information on the Canadian deficit was on the search results! Visitors to our web site want key information and usually have a short attention span. The menus are designed to take viewers directly to pages with the right information. If not, the search box produces results as you type.

Visitors have a keen interest in introductory flights so we made Flight Certificates easy to purchase on-line with a credit card. The treasurer and club member dedicated to creating them are immediately notified of electronic payments. Almost all certificates are returned to the purchaser by email for redemption at the airfield. We also provide certificates by regular mail, but this option is seldom used.

Fresh news – incorporation of social media A web site without news or updates is less interesting and will generate fewer return visits. To keep our main page fresh, we prominently feature a snippet of recent news in the form of a Twitter message. Many people associate Twitter with micro-messages received on the tiny screens of cell phones, but a great deal of the value of this social media tool lies in an ability to embed succinct messages directly into a web site. Twitter messages give life and currency to otherwise static web pages. We have publicly acknowledged significant

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.

Email 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 and subscriptions for non-SAC members ($30 or $55 for 1 or 2 years, US$35/$60 in USA & overseas), 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 ou s'abonner à la revue, communiquez par *sac@sac.ca*. Le tarif d'abonnement est de 30$ pour 1 an et 55$ pour 2 ans. Pour l'extérieur du Canada, le tarif est de 35$US pour 1 an et 60$US pour 2 ans. La revue est disponible gratuitement, en format "pdf" au *www.sac.ca*.

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achievements of our members by using Twitter and hope this motivates and validates our young pilots. We make announcements of upcoming club events like safety meetings and the commencement of the winter ground school.

These messages can also be monitored from mobile phones, tablets and computers and many of our young members chose to "follow us" with those options. Some of our tweets have been picked up by the Soaring Society of America and broadcast to their own followers.

A little-known feature of Twitter is that tweets can be deleted, causing them to disappear from a web site. A bad-news message – for example the cancellation of flying because of rain – can be erased later in the day and the earlier positive news about a pilot's first solo then regains its former featured position. Twitter is a good medium to communicate critical messages briefly. Erasing unimportant messages leaves a more interesting diary when visitors look at the stream of remaining tweets on our news page.

Publishing news on a site is a commitment. Unfair or not, the age of the news is an indication of activity to the reader. The absence of recent news and the presence of stale news will call into question the currency of the site. SAC could keep abreast of club happenings more effectively by following the Twitter feeds that many clubs already have and by using RSS feeds to pick up news articles from the club sites. The current model requires submission by club representatives and has mostly fallen out of use.

We'll get back to you – quickly When someone finds something of interest on our web site and makes contact with us, we aim to respond quickly and make the most of the opportunity. *Now* is the best chance of making a new member, inviting someone for an introductory flight or enrolling a student in ground school.

Perhaps you landed on our contacts page and decided to send a message to *<info@rvss.ca>*. That message immediately lands in the personal in-box of an assigned member. Without the need to monitor a separate account, the member can't really forget to process these messages. In many cases, the messages are caught as they arrive and responses are almost instant. Our customers form the impression that the club is lively and enthusiastic.

When one volunteer tires of answering inquiries, we link *info@rvss.ca* to another member's in-box. Any external site such as *www.sac.ca* that lists our informational email address is unaffected; the mail simply goes to a new destination. Some clubs have given members' personal email addresses as contact points on *www.sac.ca* and are at the mercy of the SAC webmaster to make a timely update.

Many visitors want to speak with someone directly, so our telephone number is conspicuously displayed on every page of our site. The phone is answered when possible, but after three rings we can direct the calls to the club president's cell phone for a further chance of interception. (This feature was disabled in the summer but will likely be used during winter when call volume is low and no one is at the airfield.) Should the call go unanswered, a voice-mail service takes the call. Messages are immediately redistributed by email to a small group dedicated to responding to voice messages. The audio comes as an email attachment that can be played on computers and smart phones. The caller's telephone number is shown in the subject. Voice-mail delivered by email provides another mechanism for the club to quickly respond to enquiries. Should the message be about payment for fuel delivery, it is easy to forward the email to the treasurer. Voice-mail can still be retrieved by telephone but we seldom bother with that method any longer. This reliance on email has allowed us to continue to respond to enquiries when travelling and avoid assigning replacement volunteers in many instances.

New member application process Like any introduction, the chance to make a positive first impression happens when a new member joins the club. In the past, ⇨ **p26**

"Ubuntu"

David Donaldson, Great Lakes

I AM CONTINUALLY amazed at the hospitality that accompanies our sport. This past summer, having finally accumulated enough frequent flyer points, my wife and I flew to Vancouver for a long overdue visit with my oldest friend, Garry. I've visited him a few when out west on business and I had the great pleasure of celebrating my 20th anniverary of soaring by taking him for a flight over the mountains at Pemberton. Well that was ten years ago and now, on the 30th anniversary, we with our wives headed to Hope and the Vancouver Soaring Association.

The weather was marginal so we relaxed our plans for an early start, assured they would be flying, we headed to the field. As expected the greeting was warm and friendly. With our later start we were, of course, late in the line for launch. After the required study, written test and check flight, I was cleared (nice to see that VSA is thorough!). Garry and I then climbed into the DG-505 for the last flight of the day.

Although the weather was less than desirable, we still had a fantastic flight. As it neared its end we could be heard several times saying, "Okay, last pass on the ridge and we will head back." As we crossed the valley on our way home we received a radio call: "There are two hungry ladies down here!" – that was Paul, our new friend, who wanted us to join him for dinner. So the five of us were ready to head to Paul's favourite Chinese food buffet and delighted to be joined by Ray, who had been my check pilot earlier in the day. We had a wonderful evening of flying stories, camaraderie and birthday cake, a pretty great way to celebrate my birthday!

Fast forward to late September; back at our home field I was expecting a friend for a first glider flight but the weather had other ideas. I arrived shortly after Jim, he was getting the tour from Alan, our early bird. As Jim is a photographer, I wanted to get him up on a good day and today was not it. We could still fly if the weather improved but we all agreed it was best to wait for a better day. So with time on my hands I decided to work on my home built motorglider project (more on that in a later issue). Long story short, we spent the day assembling it and completing a weight and balance.

You are probably beginning to wonder why this story is noteworthy. Well here I was at the field on a day that was not quite marginal. As the day progressed, more and more people showed up and instead of checking the weather and staying home or finding out we were not flying and then going home, they all stayed and lent a hand to us. By the time we were done we had more than enough hands to rig and de-rig. There was lots of laughter and hangar flying. Jim even stayed for the day. He left with a huge smile and a, "thanks, that was fun!" Jim returned a couple of weeks later for a spectacular hour plus flight with some great pictures from the day.

Sometimes I think that we take ourselves too seriously and lose sight of what is really important. While we are there for the flying I think the true joy in this sport is the relationships that we develop and the hospitality. Soaring is a community, we cannot operate solo. Besides, even if we could, what fun is that?

There is a South African philosophy popularised by Desmond Tutu, "One of the sayings in our country is *Ubuntu* – the essence of being human. Ubuntu speaks particularly about the fact that you can't exist as a human being in isolation. It speaks about our interconnectedness. You can't be human all by yourself and when you have this quality – Ubuntu – you are known for your generosity."

The next time you are at the field and stressing over some detail, pause and take a look around. You are surrounded by Ubuntu; hospitality abounds in this sport. People dedicating their time and talents all in the pursuit of the joy of soaring. Thanks to everyone who have contributed to a wonderful thirty years, I am looking forward to another thirty with a great appreciation for those who share it with me!

PS: While writing this article, I stopped by the field to test fit the half-made cover for my new airplane. I arrived after dark on a cold snowy November evening only to find Jan and Alan wishing each other a good night. You see, they had just spent the day moving Jan's motorcycle with the assistance of Mike's trailer. A sincere, "thanks for your help" was met with, "any time." – Ubuntu. ❖

How I spent my summer vacation

by Ethan Brown

WHEN I WENT INTO GRADE 9 this past fall I was pretty sure that my English teacher was going to make this the first assignment. If the topic was not about my summer vacation then it would be one of those "Tell me about yourself so that I can understand you better" kind of assignments. Really!! Every kid in this class went camping, went to the lake, or took a long trip to visit some relative. Gag! If I was an English teacher I would *not* want to read sixty essays that were all the same. And that red pen! What is with the red pen? How come every English teacher in the entire universe uses a red pen? At least four years of university and a gazillion years of teaching and the best they can come up with is a red pen?

If I was an English Teacher (ET) I would want to read about some nerd who spent the summer working on alternative energy sources, then improving the efficiency of batteries by .03%. No, scratch that – too much data and not enough action. Maybe I would want to read about some ultra-humanitarian who used her allowance as seed money and started an internet Save-the-World fund. Yawn. Noble, but I think it has already been done. Then again, maybe the ET would be interested in an ordinary kid doing something he has always done which turned out to be something out of the ordinary for the others in my class.

For as long as I can remember, my dad and I have been going out to one of the local airports a couple of times during the week, all day Saturday and sometimes Sunday. My dad flies and most of his friends fly. I have spent hundreds of hours in airplanes and I have spent even more time helping out at the gliding field and around the other airports.

Maybe for some kids this would be an extraordinary experience, but for the kids in our gliding club, CAGC, camping at the airport is what we do. The adults sit around the fire and tell the same old stories, over and over and over. They love it when a guest shows up because they can tell the same stories AGAIN. We even have our birthday parties there.

When we were younger we would light a huge fire in the firepit and then when it got really dark, we would grab our flashlights and Leo would take us "hunting". We went hunting for coyotes, gophers, bears and probably even alligators. It turns out that Leo was not much of a hunter because one time we actually found a pair of eyes staring at us in the darkness and he trampled one of the kids on his way back to the campers.

So when I told club members that I would like to solo on my fourteenth birthday, they did not question it. They just said they would make it happen. So I guess it was not really a big deal – it was just part of what we were all doing every weekend anyway.

I kind of always knew that you could solo a glider at 14 but I never really thought that a power plane could be soloed at 14 too. Most people seemed to think that you had to be 16. Turns out they were wrong. I would be turning 14 on August 11, so during the winter my mom signed me up for power ground school. Two nights a week and all day Saturday for three weeks.

My dad drove me to the airport and sat through classes with me but he did not say very much in class and he did

not do any of the work for me. It kind of bugged me that he did not help me out more but I understand now that I needed to learn the material and that when I am in the plane by myself I have to know what I am doing. While I was in ground school, I also passed my radio licence. I thought that it would be more difficult but it was actually pretty simple. I think being around airplanes and pilots so much helped me out.

To fly a power plane solo I needed to pass a PSTAR exam. For those who do not know, the PSTAR is fifty multiple choice questions and you have to get at least 90% to pass. I took my *From The Ground Up* book to school and read through it during free reading time. The exam was much tougher than I expected but I eventually passed it.

I am not really sure when I started to get serious about flight training in a glider but once I told dad that I wanted to solo at 14, he stopped flying with me. Dad is an instructor but he thought it would be better if the other instructors flew with me. They all have different styles and they each had different things they seemed to focus on, but eventually I figured out what each one would be looking for.

After we landed and the glider was being towed back they would talk, and talk, and talk, and sometimes even wave their hands in the air to emphasize a point. The first time the instructor sat in the golf cart and I walked the wing by myself was interesting. I thought that meant I had flown pretty well. My dad said I had screwed up so bad the instructor didn't know what to say. I hope my dad was joking.

The powered flying was a little more complicated. I wanted to solo in a taildragger. My dad owns a Piper Cub and he has a share in a Citabria with some other people in the gliding club. We even have a class 1 aerobatic instructor with thousands of hours of experience who is on the Citabria insurance. It turns out that insurance companies do not like to insure ab inito pilots in taildraggers. I was disappointed when dad made the decision to pay for my lessons in a Cessna 172. A 172? Everyone learns to fly in a 172. I wanted to be different. My new plan is to get my recreational licence at 16 and fly the Cub until I am 17. At that point I hope to have 100 hours of Pilot-in-Command (PiC) time and then I can start towing for the club.

Once July arrived, I started power flight training at the Red Deer airport. I flew every chance I could but it was a problem sometimes because of weather, mechanical breakdowns, and instructor availability. I could have flown more if I did not care which instructor I flew with but my dad figured that would cost more money because the first flights with a different instructor would be "instructor orientation flights". It worked out pretty good because my ground school instructors were also the flight instructors. I got to know them and I liked all of them but I felt a bit better with Marshall so I just flew with him when he was available.

When my birthday finally arrived, Marshall came in on his day off and flew two circuits with me and then I taxied back to the hangar and he got out. I flew one circuit, landed and taxied back. The Air Cadets who were doing their flight training met me with a bucket of water.

My parents then drove me to the Innisfail airport and the gliding club CFI flew with me once and then sent me solo. This time there was no bucket of water or anything. I knew something was up, I just could not figure out what. Later in the day, the Bergfalke was available so the CFI said to take it up again. I found a little bit of lift and managed to stay up for about half an hour. One of the other gliders joined me in a thermal and then I left to go try somewhere else. I found out later that the pilot joined me in the thermal because he saw that I was climbing better and he assumed it was the CFI flying. He later joked that it should have been him leading the parade, not the other way around.

My mom brought out food and a birthday cake. While we were getting ready for supper I kept running into people who were carrying buckets of water. They all had some lame story about why they needed the water. I knew something was about to happen when the people sitting beside me began to move away. Drew came around one of the campers with a bucket and he was on the other side of the picnic table carrying the bucket down low so that I would not notice. It was totally obvious. What was not so obvious was that Carol also had a bucket of water and she was behind me …

As I write this article in September, I have not flown the 172 again. Once gliding is finished for the season, I will have lots of time over the winter to fly it. I fly gliders every chance I get. Every weekend I have at least one check flight but then I can fly on my own after that. I have even taken my dad up for a couple of flights.

Since Canada is one of the few places in the world where you can solo at 14, I guess I can say that for a few days at least, I was the youngest pilot in the world. It is pretty sweet that I was able to solo both a glider and a power plane and, for sure, that's not commonly done. When I get as old as my mom and dad and sitting around the campfire, I can talk about the time I was the youngest pilot in the world and maybe the kids then will be impressed – but I doubt it.

There are a few things that everyone who reads my story needs to understand: (1) I grew up in this environment. Some people ride horses, some people race cars. We fly airplanes. I have been doing this all of my life and was lucky enough to be born into an aviation family. (2) I'm surrounded every day by aviation people and not one of them said that I could not do it – instead they encouraged me and they supported my goal. (3) The flight training process is so thorough that you just do what you are trained to do. (4) I am just an average guy who is surrounded by people who have allowed my dream to become a reality. ❖

going to the desert

Tony Burton, Cu Nim

WHEN I HEARD that a couple of 13.5 metre competitions were scheduled in the States this year, I thought that competing with little gliders would be a welcome change from watching the "Sports Class" ASW-25 swoop past me in Ephrata, Washington. I had a choice between one in Kansas and one in New Mexico – you guess which scenery I chose.

The desert it was. Moriarty was holding a combined 1-26 single class Nationals and a 13.5m Super-Regional contest – the 13.5m allowing any glider with a 1.11 or lower handicap. I was hoping for other Russias to be on the scene but mine was the only one there. The others, not counting the 1-26s, were two Sparrowhawks, a PW-5, and an electric Silent. Some of the 1-26 pilots were competing in both contests and they had to obey two sets of contest rules.

Ursula and I had a leisurely 3-1/2 day, 2460 kilometre drive south. We arrived at Moriarty on Saturday 17 August and were surprised to find very little activity. I've never seen so many glider trailers at a field and so few actual pilots on hand. We dropped the trailer off on the ramp and went off to get our housekeeping in order.

The next day we did some sightseeing in Albuquerque: the natural science museum, the olde town, but especially nearby Sandia Peak (10,300 feet) via a long, high aerial tramway, followed by hiking with a view. Moriarty is at 6200 feet and the most striking feature of the area is the BIG sky full of BIG cu over the high ground. There are many small volcanic cones in the area, which is a geologically active rift, and Albuquerque is splitting apart, albeit leisurely.

Several days had northerly TPs near the south end of the Sangre de Christo Mts on the horizon. The photo was taken about 30 km NE of Moriarty looking NNE. The position here is at the eastern edge of the main valley on the edge of much rougher ground. Although showers have started, the lift under the cu deck was just great.

20 August The first practice day barely got me over 10,000 in scrappy lift, but it was good for an orientation flight to see what things looked like from the air. The contest area is the broad N-S Estancia valley that is mostly barren high desert with spiny shrubbery and cactii except for scattered irrigation circles and the odd ranch (some with airstrips). To the west 30 km is the broken string of 8-10,000 foot Sandia and Manzano mountains. To the east 20 km are low bare hills (7-8000 feet) that rise to the start of the 12,000 foot Sangre de Christo mountain range to the north. To the south these hills flatten out to a desert plain (again with only the odd ranch and scattered oil wellheads).

The main runway at Moriarty is 7700 feet and E-W with a taxiway which is also used for landing in a pinch. The launch area is a wide ramp between the two about in the middle. This allows landings of towplanes and relighting gliders to roll right up to the grid. There is also a recently built long N-S runway attached to the east end of 08/26, but it is a looong walk if you landed there. The wind was always southerly 10+ knots, so a lot of crosswind landings were made.

21 August This last practice day still did not have much good lift over the valley. A lot of the cu were disorganized and turbulent and getting a climb all the way around was uncertain. I took a long time to get to start height. After that a good line of cu developed over the high ground to the west and bases went to 14,000 and a bit. The task was a 2 hour MAT. A MAT task has you going to mandatory turnpoints, followed by your own extra ones for more distance if desired, while flying at least a minimum time. The turnpoints have a one mile radius entry ring.

The cockpit is an oven when low. Drinking is not optional – it's the law! They say if you feel thirsty, it's too late and you won't get caught up. Once under the clouds to the west, it was much better and cooler – although 14,000 is still on the low end of "normal" around here.

A lot of jet traffic is right overhead the airport descending west into Albuquerque. I saw one a thousand above and ahead of me and skimming through the cloud just above cloudbase on one of my legs.

The combined fleet have the same tasking but are being scored separately. My main competition (I thought) were the two cute little eleven metre span Sparrowhawks (we have only a point difference on the handicap), the PW-5, and the Silent. Many of the 1-26s have colourful paint jobs (example: a feather motif on the wings). It sure makes them easier to see. They have a trophy, the *Spiffy Award*, for the best looking one at their Nationals. The 1-26 Association is notable for the long list of often comical awards they present – a very strong community spirit exists in the group.

Rolf Siebert, a past Cu Nim member now in Mexico who knows Moriarty well, emailed me saying, "I've been looking at the flights out of Moriarty and see an awful lot of circling and not a lot of height! Hope the weather improves for you."

22 August – Day 1 A great flight has earned me *minus* 100 points for the day, not 609 and a fourth place (yes, all my day points plus 100 lost) because I got just over the top of the Albuquerque control zone near Sandia Peak on a north to south run down the mountains. I was above the ceiling of the zone so I didn't break FAA rules, but I broke the Regional contest rules that extends control zone cylinders to outer space. I would have been okay in a 1-26 as their contest rules allow it. My fault – I didn't pay attention – but it was so nice to be bombing along near 15,000 feet under the cloud street. Sigh – not a good start.

The task was a 3 hour, 3TP AAT (Assigned Area Task), with the turnpoints having a 25 or 23 mile radii. These big circles were really necessary because the turn points were out in the valley where the sky was completely blue and the lift poor to none. One can fly into any part of the circle to be credited with the TP. The trick is to fly as far into the circle as you can given the conditions before turning on the next leg to get as much distance and airtime as possible. Otherwise you could be stuck with having no choice but fly only a short distance into the last ring if lift is poor there and finish under the minimum time. Doing that reduces your posted speed because you are given the minimum time in the scoring calculation. Anyway, those big rings allowed us to do most of the task staying to the west over the high ground where the cumulus cooked.

The final leg back towards the field was still intended to just nip into the last TP ring about 10 km south of Moriarty. But I lost a lot of height in sink going east into the valley and was forced to head right for the airfield. Luckily I found a weak thermal at 1500 agl near the field and spent 15 minutes gaining 1500 feet to allow me to fly south into the ring and back out to land. That cost a lot of speed and potential points.

Again, it is so nice to be high here, as a lot of this high desert country is lonely and rough. However, there are lots of areas where the surface is fairly smooth with few cactus or shrubs, not lumpy and full of badger holes like Alberta rangeland. 1-26s do land on it safely, but the Russia would likely suffer with its higher landing speed and less robust structure. Thankfully, there are several airports and ranch strips as TPs and, when high above ground, a glide can get you a long way.

23 August – Day 2 Today, the task committee was going to send us east then north on another 3TP MAT but by the time we were lined up for launch, there was a lot of overdevelopment building to the south and upwind. The usual pre-start delays only got half the pilots in the air before the increasing ugliness aloft resulted in a "contest cancelled" call from the ground. So I got a tow, a climb in one thermal to 10,700 (6500 agl), and back to land. It did give Ursula and me a chance to do a bit more sightseeing on Sandia Peak after driving up to the top from the east ski-run side.

24 Aug – Day 2 again The morning forecast wasn't promising with overdevelopment and showers predicted by noon. Also the high was only 81F – almost parka wear-

ing time for the locals – worse, the cloudbase was to be barely 10,000. More of the same is forecast for tomorrow. There was little enthusiasm to grid but we all did, after which the morning sky didn't look ominous at all. A 2 hour 3TP AAT task was set on the grid with the first TP having a big 25 mile ring and the last two TPs fairly close to home for the 1-26s. We launched and the start time was finally announced for 1330. I got going asap with climbs to 12,000 feet going northeast into the first ring.

Quickly though, the overdevelopment got going also. I soon had the first showers and shadow filling in ahead and had to turn back sooner than I had hoped. Each time I turned the shadow got closer, so I stopped turning. That was the situation for all of us, with either shade or shower driving where you could fly as the day got darker and darker. There was enough sunny ground to get my flight in. I came home 9-1/2 minutes early – and I won the day with 892 points!

The window for actual flight during a day is somewhat short. The grid time is noon, the task is handed out at 1210, first launch (hopefully) at 1230 – last about 1315, and start about 1330. Some days the start has been after two. Typically, the day begins dying at 5-6 pm. This is partly due to being two months past the solstice and to our position in the time zone – Moriarty is six degrees further east than Calgary and still on MDT – that's 24 minutes of sun time. The other reason is that the desert radiates heat faster so cools quicker as the sun angle drops. The locals warned us of the potential for serious hypothermia at night if you are lightly dressed while waiting for your crew in the dark.

Ursula: *Most crew (wives or good friends) try to enjoy the shade near the briefing shed; out come tablets, microcomputers and the like, and the general conversation is also about flying and some interesting retrieves. Most stories go at least 30 years back, the times before technology – and they all thought that they were better times then, no motorhomes anywhere; it's like yesteryear when friends would gather together more in common interest. Also, the dreaded anticipated heat has not materialized – another 10% less humidity than back home makes a difference also.*

My great friend here is Joan Moos, who wrote her book of poetry, "To Soar – Life is an Attitude". Joan is in her eighties crewing for husband Milt. So we reminisce about other achievements and find just about everything of equal interest. Her parents came from Germany too. It's like talking with an old friend where I can fill in some blanks.

Bob Whelan of "Exploring the Monster" fame (his book on the Sierra Wave) and I sat on a tailgate until the start gate opening, talking about our most interesting flights and retrieves, watching the activity and wonder why some of the poor ground operations we are seeing, like vehicles on active taxiways, are "not seen". Oh well, a crew's observation is probably not well received, but it could be better for all. Sometimes I think, NOT seeing makes life calmer.

25 Aug – Day 3 is done. The weather, lift and cloudbase were much like yesterday, the difference being the air is starting to dry out. That gave another 1000 feet of base to 13,000 and much less rain coming out of the big cu. The wetter airmass we had been in stayed just to the west and the difference was very evident with massive cu and then solid rain underneath by grid time. It was a slowish Day 3 for me but I did come in fourth with 791 points.

It was a much less stressful day. The task was a 2-1/2 hour, 3TP AAT, generally giving us a N-S flight track over the hills to the east. I had trouble connecting good thermals on the short first leg going east and the early part of the second northerly leg, then got going under fine thick streets. Turning around and flying south into a 15+ knot headwind I was still able to average 75 km/h ground speed. I went as far south into the last ring as I could till I was at 12,500 and about 45 km from the finish with 14 minutes to go. Stick forward – I flew back in the yellow airspeed arc (OLC gave me 194 km/h!) and finished 50 seconds over the minimum.

The amazing flight was by the day winner, François Pin, who flew his Silent around the task at 127.6 km/h, barely turning the whole way and was over 16 km/h faster than the second place pilot who did "only" 111.7 km/h. A 127 point spread in the scores of the top two finishers is rare.

Halfway into the flight I decided to use some O_2 and discovered the bottle was empty – there is a big leak somewhere as it was at 1200 psi when I took off. I suspect the regulator – if it is, a pilot here has a backup EDS system he can lend me.

(Awake at 4 am in bed that night I solved the problem – I hadn't turned on the oxygen! The pressure drop that focused my attention so much was just the residual air in the plumbing leaking out after checking the pressure in the morning. The thing is, I had intentionally left the O_2 off with the plan to turn it back on in flight if the actual heights called for it that day. That was a 'change of routine' that is always dangerous. Why do you suppose I might have forgotten to actually do what I had planned to do after flying for over an hour at 12,000 feet? As the famous Belgian detective Hercule Poirot says, "Ahh, but the little grey cells, they are sleeping.")

Day 4 Today the weather was a bit less favourable than yesterday, same 82F and 13,000 cloudbase, but the air mass was more humid with poorer visibility. This is not what I came to New Mexico for! As a result, many clouds were ratty and promised much less than they advertised. The task was a shorter 2 hour 2TP north-south AAT with big 25 mile circles to allow pilots to avoid potential overdeveloped areas. Some streeting did get organized during the task which did help on the last two legs. However, I was turning in junk way too much trying to find the good bits, and it was reflected in an eighth place score of 575 points.

I dropped to last place overall – that's a humbling experience after a day win – I don't recall ever being in the basement in the many contests I have flown.

I am finding that the relatively low agl flying and the poor landout terrain is hampering my style and tactical competitive flying. The retrieve stories here are quite

interesting – lots of dirt roads going nowhere, branching off others, and it's getting dark at 8 pm and black out there in the desert night. I don't want to inflict "interesting" on my lovely crew and have a repeat of the all-night retrieve tale with tarantulas and poisonous "wiggly sticks" that Sonia Hildesheim wrote about in *free flight*. So I'll do the best I can while staying conservative (I'm being beaten by some of the 1-26 pilots, even in the raw, unhandicapped speed). Later, when I was describing how a gliding competition works to my next door neighbour, he said, "… and you do this for fun, right?"

Day 5 It was a nice day today – better visibility, drier air has eliminated the overdevelopment, and bases went up another 1000 feet to 14,000. A 3 hour, 3TP AAT task was set, again a short leg to the east then north and south, much like on Day 3. I'm still way too slow at 87.9 mi/h over 262 km (the second place finisher, a PW-5, did 109.5 km/h over 377 km). I got 731 points for sixth, and lifted myself off the bottom to eighth place overall.

Day 6 Today, a task was uncertain. There was the usual great line of cumulus over the mountains to the west but a late start to convection overhead and a visible and approached deck of cirrus coming from the south. Finally the alternate B task was called on the grid, a 2 hour, 2TP AAT with the first TP southwest over to the good stuff and the second TP southeast back over the valley.

I got a really good start height of 13,000 and headed off as soon as the gate opened as the cirrus was now very thick and getting closer. Once under the cloud street over the mountains there was a wonderful twenty minutes of zooming south towards the TP ring right at cloudbase. When it ended, the only choice was to turn east into a dying sky. I had to move a bit north to stay close to the edge of the sunlit ground but there was not much worth attempting a turn in, and when I did it was a waste of time and altitude.

It was only an hour into the flight by now and the only sunshine to be had after going 35 km into the middle of the valley was by flying northeast almost directly back to the field. About 13 km later and now only 10 km from Moriarty, I finally got some weak lift to 10,000 feet and stopped giving up on the day as some new little cu were making an appearance to the east but still north of the second turnpoint ring. The ring was 24 miles (38.6 km) in radius. Although my flight recorder showed the distance to the ring slowly decreasing, I kept losing height overall going south, and when I got to 46 km from home but with still eight kilometres from the ring, I had to turn home or risk a landout if I didn't connect to the next bit of lift. Not completing the task by that eight kilometres – frustrating.

As soon as I landed at about 4 pm and got tied down, a lady drove up in a van and asked if I would help retrieve her 1-26 pilot who landed in a difficult place in the hilly country near the first TP. Ten people in three cars eventually found him and we got back to the motel after 9 pm (dinner included for the whole troupe). Those 1-26s can drop into almost any clearing! It was a very interesting retrieve; the pilot said it was the second-most interesting in his career – better Ursula and I did it for him rather than for me. My distance-only score was only 275 points of 788 and gave me eighth place.

Day 7 The forecast was like yesterday but with only a 10,000 cloudbase – the top of Sandia Peak was hidden – not so good. We had one more day to go in 13.5m and the weatherman thought the conditions would be better tomorrow, so the task committee gave us a rest day which was much appreciated. But this was the last day of the 1-26 contest so a task was set for them; it's a bit of a bummer and damps the enthusiasm for a wind-up banquet when there is a 'no-contest' on the last day, but I wonder how some of those 80 year old 1-26 pilots can fly 3-5 hours/day for nine days without a rest.

Ursula and I drove an hour north to Madrid, a small, once coal mining town turned ghost town then rehabilitated as a craft centre. The drive was very scenic, with impressive views of the desert valley I had been flying over.

Remember I mentioned the dangers of breaking one's routine when flying? Well, because I wasn't flying, I *did* break my routine and drank little that morning and early afternoon. While in Madrid, I suddenly felt dizzy and realized I was probably very dehydrated. We walked into the nearest tavern; I said I was in trouble, and got attention immediately from a waitress. I sat down and drank over 36 ounces of water and iced tea, and felt much better in about fifteen minutes. They don't kid around down here when they say dehydration will quickly sneak upon you in hot, dry desert air.

Day 7 again and the last, Aug 30 The morning forecast was the best we've seen – hotter at 30C, with 14 to 15,000 cloudbases, clear air, strong lift, chance of overdevelopment over the hills as usual, but tending to blue over the valley. There were only eight pilots remaining for the 13.5m contest. At the same time, there was also a special first-time mini-contest limited to all the 1-26 pilots who had been past 1-26 contest champions. They were given a free tow as part of that festivity. The trophy was a gorgeous one-off sculpture of an eagle. Five pilots flew and all landed out, the winner just short of the airport but within a mile of the finish point so he got full points and the prize.

Today's task was a 3 hour MAT with four mandatory TPs to reach, first north then south and return. It was a struggle for the 1-26 pilots because of some long blue holes that had to be crossed. I started at 1:45 and finished in 3:02 hours. I was fourth for the day with 892 points. Was it ever comforting to be at 14,200 feet (8000 agl) when faced with a 25 km hole to cross and arrive under the cu at a comfortable height. Overall, I finished sixth with 4103 points against the winner's 6109. I had 31 hours of flight time and 1660 total kilometres.

The people were wonderfully friendly, and I finally met face-to-face a few pilots that I had only emailed with before as editor. (In some contests, pilots tend to fly then disappear with their crew each day.) The 1-26 pilots are a very convivial bunch. Flying in Moriarty was quite an experience, but on the whole I'd rather be in Ephrata. It was 32C when we got home – the hottest day of the trip! ❖

the swap

Gabriel Duford

the HpH 304S Shark and LAK-17A compared

ON THE DAY BEFORE the 2013 Canadian Nationals, I had the chance to have a great flight from Pendleton in my new 304S Shark. I was very lucky to meet up with Nick Bonnière flying his LAK-17A a little south of the airport so that he could drag me around the contest area. I was also very eager to have the chance to compare the performance of my new 18m ship with one of well-known performance flown by a very experienced pilot.

The conditions were weak and not often reliable, but there were some energy lines. The first thing I noticed was that my 304S was losing to the LAK-17A when flying below 55 kts. I had to fly 55-60 kts and slalom to stay behind Nick and maintain a similar glide even considering the greater distance flown in the air. The other thing I learned was how important it is to really slow down in the bubbles of lift. In my previous ASW-20, it seemed that slowing down and accelerating in weak bubbles was not that efficient. Nick was getting better glides until I started to really follow the MacCready speed. Later in the flight, I discovered that to have the same glide as the LAK-17A below 55 kts, I could put the flaps in +1 and fly about 48 kts.

After that flight, during which I learned more in 4 hours than in the ~45 hours I had in the ship since the start of the season, I thanked Nick and offered to let him to test the Shark if we had a flyable non-contest day. He was enthusiastic.

On 8 July, CD Roger Hildesheim calls a no-contest day about 1500, but there were some shy cumulus popping closeby so I offer Nick the 304S for a test flight. He accepts and offers me his LAK-17A, which was unexpected, so I could not refuse. Roger says to me to be careful not to fall in love with the LAK-17A, but before I could reply, Nick said that the greater danger was for him to fall in love with the Shark.

After the mutual briefing on each other's ships, I watch Nick take off in front of me. It was the first time I was seeing a 304S fly. I immediately agreed with others' comments ever since the beginning of the contest – the 304S really is even more beautiful in the air than on the ground. I took my place in the LAK-17A and visualize the takeoff. The main thing I had to consider was the considerably shorter travel the controls have, and their lighter feeling.

Tom Hastie

The takeoff is uneventful. I start with the flaps at -1 to help with lateral control and slowly move to +1 to make the LAK-17A gently leave the ground. The glider immediately feels a lot lighter although the controls appear to have less authority. After release, I spot Nick in the 304S under a dying cumulus and I join him about 200 feet lower. I just fly the LAK-17A by feel and when I check the airspeed, I am at 42 kts. I was amazed because at that speed in the 304S I don't climb very well. I am happy to notice that I am slowly gaining on Nick. After a couple of weak thermals, I start to think that I should not be happy to outclimb my own glider in a type that I have never flown and with so little experience in 18m.

Soon after, I notice a change in the way Nick is flying; he banks more and flies faster and we start climbing at the same rate. He does this for the remainder of the flight and we were climbing together: me in the LAK, slow and shallow, him in the 304S faster and steeper. One thing I am missing from the 304S is its rudder efficiency. It seems that every turn into a thermal with the LAK needs rudder input with aileron follow-up, otherwise the adverse yaw is impossible to correct and the yaw string does the wiper (Nick confirmed after the flight that this is the best technique).

On every glide, I have to fly the LAK slightly slower than Nick flies the Shark to arrive in the thermal at the same altitude. Flying the same speed always get me a little lower. On one glide, Nick said he would fly faster to see how it goes. He went to 80 or 85 kts and I really saw the glide advantage of the 304S at these higher speeds.

The landing was uneventful. I expected the airbrakes to be more a little more effective. The roll rate when the flaps are in landing position is very low, as expected. Nick warned me that the wheel brake was not very efficient. Once well settled on the ground, I put the flaps in -1 to help with the lateral control of the flaperons.

Many people were interested in our impressions of each other's glider. In short, I felt that the two gliders are completely different. I quickly felt at ease in the LAK whereas it took me a few hours to get a good feel and control of the 304S. It is possible that it would have been the same if I had flown the LAK-17A before the 304S though. The flight gave me confidence in the capabilities and the performance of my 304S. I then knew that Nick would beat me in the contest because of his great experience and superior skills, not because of the glider. Nick confirmed that the 304S was a very capable ship definitely in the big leagues, with an outstanding quality and attention to details.

Thanks again to Nick for that highly interesting learning experience on that flight before the contest and for his confidence in me for offering to fly his LAK. ❖

Secret betrayals by ourselves and the air

Dr. Daniel Johnson, from *SOARING*

We call it an 'accident' because we weren't planning to have one.

JOSH SAT IN HIS SHATTERED GLIDER, and moved his legs, his arms. They worked. The pain had not yet begun, he felt uninjured. He was stunned: but emotionally, not physically. What happened? He wasn't sure. He had been low over the rocks, sure enough. But it had felt high enough and fast enough. Then a giant hand pushed a wing down; it hit a branch. Now, here he was in the mountain wilderness surrounded by composite trash that once was a beautiful glider.

He activated his emergency rescue devices, and eased himself out from beneath the fractured canopy. He picked up his water and his snack bars, tied his jacket around his belt, and began to work his way down toward a road in the distance … the next morning he was sore in places that surprised him, but the most intense pains were the humiliation and the grief of having wrecked his ship.

Why a good pilot might have an accident

Josh was a skilled pilot of long experience, an instructor and sometime racer. He'd flown in the mountains before, although this area was new to him; he felt prepared.

Why do bad accidents happen to good pilots? Because they're human. Our perceptions are approximate and prone to distortions. We believe we understand the weather and wind, but the fact that the air is either invisible or opaque means that we can rarely see what it is *actually* doing.

Spatial disorientation An incorrect perception of linear or angular position, or of motion, relative to the Earth's surface or another aircraft, sufficient to affect performance, situational awareness or workload – however slight that effect may be (USAF definition). We'll call this SDO, to save typing. By such a definition, Josh obviously crashed due to SDO. How do we know this? Because he was not incapacitated, and would have controlled his aircraft properly if he'd perceived its dynamic 3D situation accurately. (A 1999 study of French glider accidents by Frank Caron found that half of accidents and injuries and 70% of fatalities were due to SDO!)

Wait. There's another, non-obvious cause: atmospheric betrayal. Shall we call this Atmospheric Disorientation, ADO? After all, it's due to our misunderstanding of what the invisible air around the glider is doing. This is not a misperception because we can't perceive the air! However, because it's invisible, we are always flying on the presumption that we have a good-enough idea of the winds and the thermals. Many pilots have died upon the mountains after entering airflow that was totally not what they presumed, perhaps most famously Steve Fossett.

Perceptual factors

The illusions that trick pilots are not conjured by magicians. They are built in, ready for use. We defeat these illusions – automatically, most of the time – by repeatedly cross-checking what we see and feel. But our perception does have limits, and when we operate outside these limits, accuracy is degraded, though our brain is pretty confident that what's perceived is real.

What perceptual factors might put a skilled pilot into the rocks? Scientists have nicely categorized individual factors and given them names. What we have to realize is that in the real world, the distortions these represent do not come singly, but in combinations that may make our error harder to recognize. I will list a brief catalog of relevant standard illusions; you can use your experience to remember (or imagine) the effect of combinations.

Depth perception Depth perception depends, beyond about a dozen feet, on perspective. Unless there are objects of known size in our field of view, we easily misinterpret distance. From a low-flying airplane, trees, telephone and electrical poles, houses, and cars may let us judge distance. Of these, trees are the least reliable in mountains, because their size varies so much, especially with altitude.

Motion parallax (or its absence) is an adjunct to accurate depth perception, especially in circling flight. When we are high above a surface, it moves little when we circle; it shifts dramatically when we're low. This is also useful when flying straight as distant objects creep past, while near ones zoom along quickly.

Motion parallax is a depth cue that results from motion of our head or body. As we move, objects that are closer to us move farther across our field of view than those at a distance. Objects that move a lot as we circle are close.

Aerial perspective is another adjunct to depth perception, though less useful because there are so few straight lines in nature, and those created by man are not measured precisely, except in Iowa, where roads are straight, perpendicular and precisely one statute mile apart.

We also use *texture gradient, overlapping* of objects, and *shadows* or shading to judge relative distance. There are two aspects to using such cues to judge distance. First,

they are pretty good indications of *relative* distance. Second, they are all very poor measures of *actual* distance.

Constancy We are built to assume that things which look alike are the same size, that things which are nearly the same shape are possibly identical, and things move past at about the same speed. This is a help to accurate perception in familiar surroundings, where the things nearby have not changed. However, as soon as we climb that ladder in a thermal, nothing is constant anymore, and our instincts become liability.

Mountains and hills are notorious for being impossible to gauge accurately. This is a reason that photographers like to put objects of known size (spouses, children) in travel-landscape photos. We understand more clearly the monstrosity of Niagara when we see the tiny figure of 6'-5" John wrapped in mist near its base. Unhappily, when we're running the ridge in Utah, we can't toss John out and see how he stacks up against the rocks. First, we're past and gone by the time he gets there, and besides, we'd miss him. Instead, we use experience, motion parallax, and healthy self-doubt about our own perceptual accuracy to keep a big margin.

The illusion of *autokinesis* is the sense that stationary lights seen isolated against the night may seem falsely to move. Nevertheless, this is simply one type of illusory movement (or immobility) that may occur with reduced visibility. Fog, mist, and dark obviously reduce visibility; if we lock our attention onto a single spot, such as the point on the ground around which we're turning, we become blind to all else, and the spot may continue to seem still even as we spiral toward it.

The *vection illusion* is familiar in city traffic: our car is felt to creep backwards; suddenly, we realize that it's the car beside us that is creeping forwards. A moment's reflection will let us realize that this is simply a variation on the constancy illusions, only this constancy is of speed. We encounter this on every flight, for the ground hardly moves past, in turns or straight-ahead flight, when we're high; and at the same airspeed races past when we're low. I'm confident that this difference has deluded many pilots into making the ground slow down without attending to airspeed, leading to a stall or stall-spin.

This is important when turning close to the ridge: we feel a lot faster (ground speed) than we are (airspeed), especially downwind.

False horizon In mountains below the peaks, there is often no true horizon, only a collection of false horizons. Generally this is not so important in soaring because we normally don't fixate on the horizon for orientation the way an instrument airplane pilot might, but can easily cause us to incorrectly estimate the bank angle.

Gravitation and g-force illusions

There is a nice collection of illusions that exist because the proper sensations of 3D orientation (tilt, bank, rotation, and acceleration) all assume a normal gravitational force is operating on the head. These illusions may cause us to misinterpret our bank angle, and may cause a spiral, spin, or stall when turning near a ridge or in mountains.

The *G-excess illusion* occurs when the glider is in a steep turn, and the pilot looks into the turn and "up" (that is above the plane of the wings), for example, to look at the base of the cloud above or at another ship in the gaggle. This movement makes you feel as though you've lost the bank. The reflexive "correction" then produces an overbank, which can lead to a spiral.

The *somatogyral illusion* may sometimes cause sloppy thermaling in rough air. It takes only about ten seconds of smooth air in a turn to settle down the fluids of the inner ear. Then, when we enter a part of the thermal that unbanks the glider, it *feels* as if we have begun a turn in the opposite direction.

The *Coriolis illusion* can have a similar effect without being recognized. If the glider is in a stable turn to the right, and we tip our head down to check a chart – excuse me, our PDA – our semicircular canals are now lined up differently with the rotation, and there will be a sudden sense that we have *turned* and rolled left. The reflex will be to step on the right rudder and steepen the bank.

I don't think these illusions likely cause accidents, but I'm confident they often cause reflexive control movements which turn out not to fit the situation and are awkward; and I'm pretty sure that it gets blamed on turbulence, not on our perceptual limitations.

There are a number of other interesting illusions that I judge not to be likely to affect coordination and control in visual meteorological conditions (VMC), but if we enter cloud, it's been shown that even experienced pilots lose control in about fifteen seconds.

(If you're ever caught in cloud, don't try to control the aircraft. Hold the controls in the center and manage airspeed with pitch and spoiler. Or just give up; pull spoiler, drop gear and let go of everything. If your glider has a dynamically stable benign spiral mode, this may be safe, but when I'm trying that out in my own glider, I am always suspicious about how well it's going to work inside a violent thunderstorm. This isn't "safe," but is better than trying to control the ship. I've read of pilots safely spinning out of cloud, but in low-performance ships, not in modern glass.)

Normally, we are saved from disastrous illusions by the fact that in VMC, our vision is dominant and used to build perception and the sensations from the inner ear are made a secondary, modifying influence (*vestibular suppression*).

In VMC, the *Giant Hand* is not an illusion, it is due to the control forces being overwhelmed by large scale turbulence, shear, lift, or sink. If the rotor is faster than your maximum roll rate, there is indeed a Giant Hand in command, and it's no illusion. This is what likely caused Josh's sense of being brought down by a giant hand. ⇨ **p17**

the turning cone illusion

Henry Wyatt, Edmonton

A pilot practising auto launches at Cowley commented on the difficulties of low level turns. He was impressed with the urge he felt to push in much more rudder than was needed. He was alarmed at the risk of a spin off the turn to final. We looked up what information we could find about this …

The SAC *Soaring Instruction Manual,* 11 th edition, page 108 discusses the problem in this way:

… During the turn onto final approach This second case is more dangerous, and occurs if the pilot is flying too slowly near the ground, and during the final turn applies too much rudder input. This happens because the glider appears to be skidding because of drift in a strong wind, therefore the pilot tends to overuse the rudder. Or it could be that he is merely trying to tighten the turn, again by using too much rudder input. This phenomenon occurs when a pilot is low to the ground and it is a human tendency next to use too much rudder input and not enough bank for the turn.

A spin can also occur because the pilot is trying to stretch the glide and is therefore slowly losing speed by trying to raise the nose a bit; or a spin could be caused by a combination of all the above factors. The student must be taught that this final turn, of all turns, must be well coordinated and flown at an adequate approach speed. Flying too slowly low down with the wings banked across the wind gradient and applying too much rudder input will easily produce a spin, even if the glider type is difficult to spin at higher heights (where there is no wind gradient) …

Then in *free flight* 2000/2, p14, Walter Mueller wrote: "Stall/spin recovery training – one man's opinion. Optical Illusions. When you are flying a few thousand feet above ground and making a medium banked turn, look down the leading edge of the low wing – the illusion is that you are turning about one point. Now with the same banking turn at 300 feet onto final, one is surprised how big a radius the aircraft needs to make the turn and one is tempted (and some do) to "help" with the rudder… In some spring check flights with experienced pilots (including instructors), I found they were doing perfect coordinated turns at altitude, but most used too much rudder to turn to final. I am convinced that this is due to the optical illusion mentioned above."

In his Flight Training & Safety Committee blog on 24 April 2009, Dan Cook wrote: "Low altitude circling of landmark. Circling reference point at or below 300 agl, wing tip appears to move forward of reference point. Attempt is made to keep wing tip on ref point (normal view) by reducing speed and/or use of rudder."

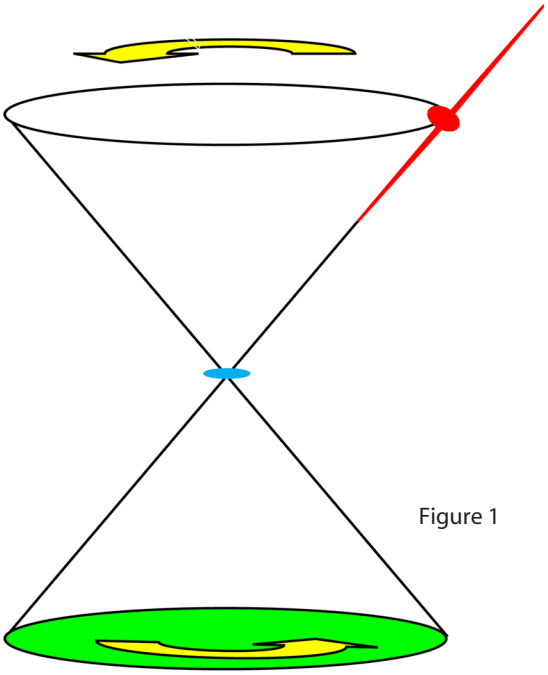

Figure 1

We were intrigued by this optical illusion and decided to examine it further. We first looked at the 'Turning Cone' which establishes the visual illusion.

Figure 1 Turning at altitude the apex of the turning cone is well above ground. Looking down the wing, the wing tip appears to be tracing a reverse circle on the ground. The apex of the cone lowers with one's height, and it will touch the ground at about 300 feet above ground. Here, the wing tip appears to point at the same place on the ground throughout the turn.

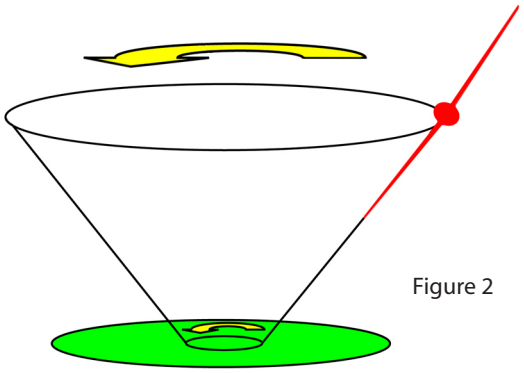

Figure 2

Figure 2 On further descent, the apex of the cone moves below ground. The wing tip now appears to be moving over the ground *with* the turn – an unfamiliar experience. Looking down the wing gives the impression of an unbalanced turn. The impulse is to add with-turn rudder to force the wing to move in a familiar way.

We then studied the relationship between bank angle, airspeed, turn radius and the depth of the turning cone. Avoiding the math here, it turns out that, at a constant speed, the cone depth is *independent of the bank angle.*

We already have one reason why there is such a strong tendency to feed in some with-turn rudder. Using the calculation above, we looked further. When the apex of the cone is below ground, raising the nose to stretch the glide slows the glider and therefore reduces the cone depth and tightens the turn.

The table below, calculated for a steady bank angle of 45°, indicates that the effect may be enough to eliminate the illusion by bringing the cone apex above ground. But the danger is that it brings the aircraft closer to a stall.

Airspeed (kt)	Turn radius (ft)	Cone depth (ft)
55	269	269
50	223	223
45	180	180

When the apex of the cone is below ground, reducing the bank angle seems to make sense because it is expected to lift the lower wing and lessen the illusion. But as the table opposite shows, lifting the lower wing while keeping the airspeed constant at 50 knots *doesn't* change the cone depth despite what you might expect. The turn radius increases and gives one a greater temptation to add rudder.

Bank angle	Cone depth (ft)	Turn radius (ft)
60°	223	128
45°	223	223
30°	223	385

We conclude that during a low final turn, especially if the pilot has misjudged height, the apex of the "turning cone" may start above ground, reach the ground, and move below the ground. The illusion develops as the aircraft is flying through this critical transition point. Pilot reflexes to correct the apparent error lead to raising the nose, lifting the lower wing, and adding rudder. All three parts of the spin from a low turn to final could be partially explained as resulting from the turning cone illusion.

What teaching principle can be derived from this? During any low level turn to final:

- use the landing reference point as the visual check - don't look down the low wing.
- keep the yaw string centred.
- check airspeed before the final turn, and if you are too fast in the final turn, adjust by raising the nose, but for no other reason.
- make any other adjustments to airspeed after the final turn. ❖

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secret betrayal from page 15

I hope that you can see from this long list of built-in tendencies to perceptual error that there are many human reasons why Josh may have ended up on the rocks in a broken ship. However, there is another reason, as well:

Wind, thermals, and turbulence are invisible

As long as the glider behaves as expected, I don't spend a lot of time worrying about whether my opinions on the behaviour of wind and thermals are correct. I'm grateful for the wind calculation of my flight computer, and actually tend to believe it because even if it's wrong, I can't know in which direction the error lies. But the "local wind" (as induced by thermal effects) may be vastly different from the gradient wind. The greatest risk of a crosswind landing, even on the prairies, is that the invisible turbulence in the friction layer near the ground may cause a stall, wingtip strike, or flip.

A few years ago, a pilot with three teens was landing in a crosswind at the prairie airport in Faribault, Minnesota. As he flared, he was observed to roll inverted, land on his canopy, and burn. Everyone died. Most of us were trained to worry about loss of directional control in a crosswind landing. That is the least of the risks.

Last September, I was landing my own glider in a crosswind at my home prairie airport. The only surprise was that no crab was needed on short final. As I leveled to flare, the ASI dropped from 55 to 35 knots smacking the ship down hard, damaging the ship but not me.

In the mountains, there are many more possibilities for invisible wrinkles and potholes and inversion-inducing turbulence. Henry Coombs nearly lost a friend in May, 1984, who was climbing along the face of a mountain in the late morning in lift of only 200 ft/min when he was thrown into the rocks by something that Henry Coombs called *"The Sinister Trap"* in a *SOARING* article that was published in September, 1984.

I was at a soaring cross-country camp at Air Sailing in 1995. A delightful professional pilot named Joe Finley gave a lecture on the invisible dangers of mountain thermals, especially outlining the powers of that trap. Ironically, Joe died in the Sierras in such a trap in 2002.

So we see that Josh may have flown awkwardly, perhaps been even "illusioned" into a stall which put him into the rocks – or he may have flown into air which was flowing entirely the wrong way at the moment he entered it. I don't know what to recommend except don't go close to the rocks. Henry Coombs and JJ Sinclair have detailed advice in their articles cited below, which are worth downloading, saving, and studying. ❖

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Caron, Frank. *Glider Accidents in France from 1989 to 1993: The Role of the Pilot.* Technical Soaring Vol XXIII, No 3, July, 1999, p. 71-75.

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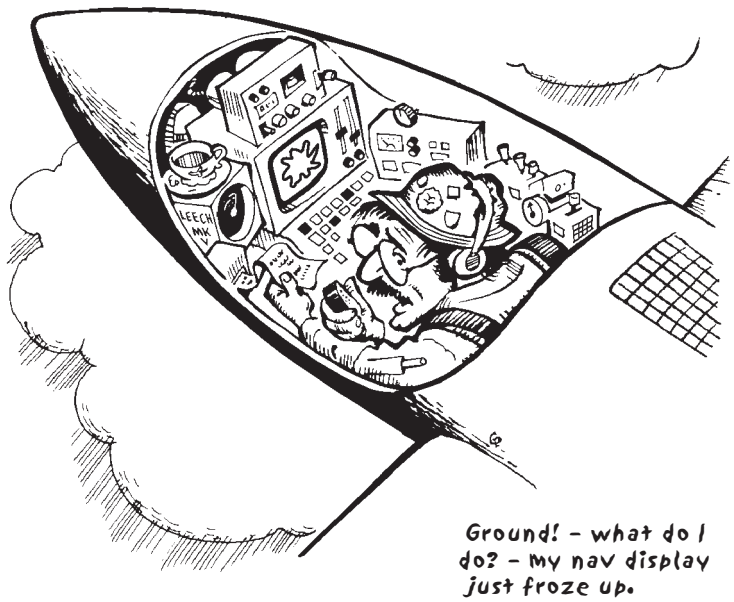
children of the *amoeba*

Thomas Johnson
SSA Soaring Safety Foundation



THIS SPORT has many clever minds. A most innovative idea from ClearNav is the "Amoeba". It is a ring that can take almost any shape, hence the name amoeba, on a navigation display that tells you where the sailplane will be when the altitude runs out. It factors in MacCready setting, wind, glider performance, etc., and gives its best prediction. As someone who grew up in aviation using "old school" methods of rough estimates that narrowed down as you got closer to your goal, the amoeba is PFM – Pure 'Fantastic' Magic.

The amoeba on the screen is a wonderful thing. The first time I saw it in flight, I was hooked. It gave me an instant, visual representation of where I was and my energy state and options. The screen showed me almost everything I needed to know. But as I flew along, I began to question whether the information was valid; it is a computer program after all. Garbage in, garbage out, and all that. How did I know to trust it? Was there an "I Believe" button somewhere on the panel? I had no real reason not to believe the information, but it still nagged at me.

I did my mental calculations, and the amoeba seemed to be correct. My WAGs (Wild Ass Guesses) were in the ballpark. I guess it was okay to trust it. (An example of a WAG skill is to ask yourself how far you can go from 3000 feet agl with a glide ratio of 30:1. How about 25:1? Or how much altitude do I need to fly 15 miles at 30:1 or 25:1, or whatever.)

When I got back, I began to talk with some pilots who were new to cross-country flying. They loved the system too. I asked them what kind of back-up WAGs they use to verify the information. They looked at me like I was from Mars. They had no reason not to trust the amoeba. It was never wrong; why should it be? I pressed them a bit, but it was evident they did not really see the need.

Do *you* trust your navigation computer without question? Do you still carry a chart to back up your system? Do you verify the information that is on the screen?

If the answer to any or all of these questions is no, you are a Child of the Amoeba. Your basic navigation and glide decision skills are eroding. Or they may not have ever developed because you always had the system to do the calculations for you. Or your instructors never exposed you to the concept because they too had pressed the "I believe" button.

As the airlines are finding out, you have to turn the magic off every once in a while and exercise your brain. It helps keep your skills at a basic level for when the inevitable happens – the dreaded system failure. Whatever causes the failure is irrelevant. What is relevant is whether or not you can navigate back to the airport and properly manage your altitude and energy on the way.

Ask yourself if this is a realistic scenario: You are on an extended cross-country flight in an unfamiliar area of the country. You have been out for 5+ hours with your navigation system, radio, and transponder using up your battery power. You forgot to hook up your battery charger the night before, and the battery did not get a full charge before takeoff. You are tired, hungry, and a little bit thirsty, and then the screen goes blank. Are you ready to get back home, or even to a suitable airport? Can you find your chart in the cockpit? What is your height above the ground? I believe that you may not be as ready as you think.

I base this on the fact that I fly with professional pilots in an aircraft with a very reliable Flight Management System, and when the magic dies, it is tantamount to an in-flight emergency. We scramble to figure our estimated fuel remaining at our destination, when we will get there, when to begin the descent, and sometimes even where we are. At three o'clock in the morning, I feel and think the way I do toward the end of a long flight, tired and unable to quickly and correctly manipulate the numbers in my head when I need it most. Try as I might, unless I practise the WAG skills, they'll erode and die.

So how do you prevent WAG skill atrophy? Do like I do and intentionally turn the magic off. Challenge yourself to make the mental glide calculations. Get the chart out and use your finger to point at the spot on the chart where you are. Or better yet, be a mentor for an aspiring cross-country pilot and teach him or her the WAG skills. Pay it forward to another pilot. Don't let yourself or anyone else become a "Child of the Amoeba". ❖

the ASG 32

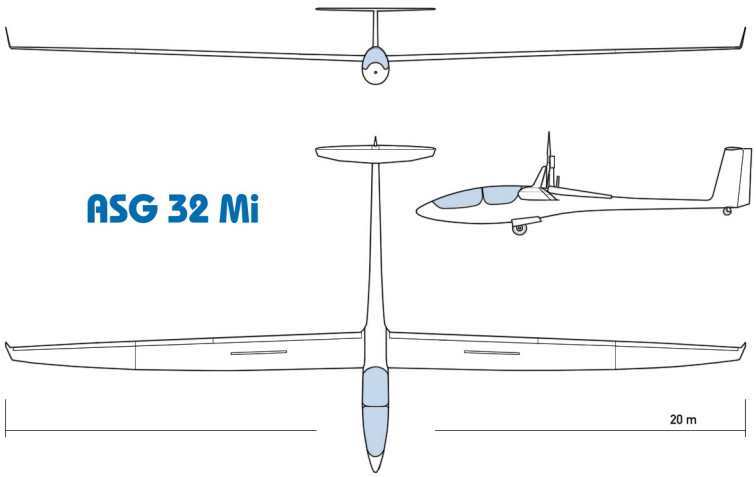
Bernard Eckey

an interview with Ulrich Kremer

EARLIER THIS YEAR Ulrich Kremer, the Managing Director of Schleicher, was interviewed at the AERO trade fair in Germany and our contacts kindly translated this interview.

What can you tell us about the ASH 32 Mi? When will this new 20 metre two-seater become available?

We have deliberately stalled any announcements on the ASG 32 until the design was fully finalized and the fuselage was able to be shown to the public. Now we are at a point where we can soon remove the prototype wing from their moulds and we still expect the maiden flight for around Christmas of 2013. Series production is scheduled to start around the end of 2014 and the first orders have already been taken for delivery in 2015.



It is now public knowledge that the ASG 32 will have an electric propulsion system. What can you tell us about that?

The ASG 32 will be available in three different versions. Next to the pure glider, we will offer the ASG 32 Mi which is the self-launching model with rotary engine technology. These two models will be built first. I might add that in future all our self-launching gliders will come with fuel injected engines and automatic altitude compensation technology. These slightly modified engines have not only proven to be more reliable but they are also more powerful.

The EL version is in the final stages of development and will come on the market in the second half of 2015. The ASG 32 EL will not be self-launching and our calculations point to a range of over 100 kilometres under power. The concept is slightly different from other electrically powered gliders as the batteries will not be carried in the wings. The entire drive unit will be located within the engine bay including the batteries. It not only solves the problem of very heavy wings but it also eliminates the big diameter cables and heavy duty power connectors between wing and fuselage. The entire drive unit can be lifted out of the fuselage for inspection and maintenance purposes in a matter of minutes.

A 100 km range under power seems more than enough but how suitable is such an aircraft for normal club use?

Right from the beginning we decided to develop a drive unit which is so easy to use that even low hour pilots without prior experience on motorgliders can handle aircraft and motor with ease. We have selected highly reputable partners for all major components and we are soon going into an extensive test phase. In any case, the ASG 32 EL will be the first powered glider that can be regarded as a true club machine. All you need is a power outlet for recharging the batteries!

What else can you tell us about the new ASG 32?

Although the ASG 32 is a brand new design, it does borrow heavily from the ASH 30. The front section of the fuselage is almost identical but the tail boom was shortened and the entire tailplane is also brand new. For the first time we can now offer a fully retractable tail wheel which operates in conjunction with the main undercarriage. It is also steerable for ease of taxiing. The retractable tail wheel even comes with a door for an undisturbed airflow around the tail section. We think that it will give the ASG 32 the edge in the upper airspeed range. ⇨ **p27**

the safety culture zoo

As part of my work on the committee I subscribe to several safety web sites. One of the better ones I have found is by a safety psychologist, David Broadbent, at <*Tansformationalsafety.com*>. He speaks about many issues with respect to human factors but, for Transformational Safety, his focus is on the importance of safety culture. I have quoted below, from one of his e-blasts, some of his descriptors about the various types of safety cultures that may exist. I have made some minor edits to frame within a club context. Read through and try to identify your club's safety culture. I feel that most of us will find that we are not where we would like to be. The next step is what do we do about it?

Dan Cook, chairman

Lethal Safety Culture
You have reason to be concerned. In a Lethal Safety Culture, there is little attention and focus on safety matters. People have a strong tendency to ignore safety issues in the club. Research has shown that behaviours that are demonstrated within a Lethal Safety Culture have significantly contributed to major workplace disasters.

If you see the safety culture of your workplace as being consistent with a diagnosis of Lethal Safety Culture, it is in your interest to contribute in any way to assist its movement toward a more positive (safer) direction. If you truly believe that cannot be done then it may be in your interest to reevaluate whether you feel "safe" functioning in such an environment.

Avoidant Safety Culture
If your result finds you in the "red zone" on the Avoidant Safety Culture dimension, then there continues to be reason to be concerned. An Avoidant Safety Culture shows a strong tendency to distance itself from any proactive actions toward safety improvement. It usually requires something to "happen" before there is any real recognition that safety is deserving of attention.

People operating within an Avoidant Safety Culture often behave in such a way that safety is not a priority at all. They will function from a reference point that safety is a bit of a game. You need to be seen "playing" only when someone is watching or you are being monitored in some other way. At other times they really just do their own thing. This is not the sort of safety culture you really want to operate within. Avoidant safety cultures are only a step away from being lethal.

Developing Safety Culture
A Developing Safety Culture is exactly as it is described. It is a long way from Best Practice, although it is also not lethal. Within a Developing Safety Culture a process of safety communication has begun, and is being recognized by the club. People are being encouraged to actually raise safety concerns – they are not necessarily being acted upon at this time. Members are also willing to help out a colleague if necessary.

This is the stage of safety culture where people, including yourself, are recognizing the value of safety within the overall work environment. It is also a time where we are seeing recognition of "risk" in the club. If you are seeing your safety culture as "developing" then it would seem that your workplace has begun the journey toward optimal safety culture. Still a long way to go – but a great start.

Functional Safety Culture
A Functional Safety Culture is indicative of a club environment that has understood the importance of safety throughout all levels of the organization. Safety performance is frequently recognized – quite a difference from what happens in the Avoidant Safety Culture described previously. There is a belief, at least expressed by you, that you can have a positive influence on the safety performance of those around you – that is no small thing. In addition, the Functional Safety Culture has a number of conversations occurring throughout the various levels within the organization that are focused upon the safe way of getting things done. This demonstrates a more proactive and interpersonal approach to safety interactions within the organization.

Transformational Safety Culture
The Transformational Safety Culture is the pinnacle of behavioural safety performance within a club. Within a Transformational Safety Culture we see recognition that the vast majority of members are working together when it comes to all matters involving safety performance. There is also a strong recognition, that is backed up by behaviour that safety is never to be compromised. Getting a job done safely surpasses getting a job done quickly every time. Within a Transformational Safety Culture there is a significant focus on learning from incidents that may have occurred within the workplace (including near misses). Organizations reaching the level of Transformational Safety Culture might also be recognized as a "learning organization". The levels of interpersonal communication when it comes to safety are very high. It is the "norm" to genuinely consult with members when there may be process changes that might impact their areas of responsibility. In business this is a key element of Transformational Safety Cultures – poor management of change is often identified within major investigations into workplace disasters. ❖

Decision "anchors"

"… human beings anchor on previous decisions. This means that, after we have made one decision, it becomes much easier for us to make the same decision in the future. If a student pilot chose to complete training at the flight school with poor safety standards, it would be easier for them to accept low levels of safety throughout their entire professional career.

Research suggests that a single decision can impact decision making years in the future. It is important that we critically evaluate our decisions and consider how our habits were formed in the first place – particularly in relation to safety.

Dr. Suzanne Kearns
University of Western Ontario
Aviation Safety Letter 4/2012

miscellany

† André Dumas

The FAI has recently lost one of its most eminent members: André Dumas, who presided over the Fédération from 1972 to 1974. He died on 17 September 2013 at the age of 90. His eventful and busy life was marked by his passion for and devotion to aviation, a world to which he rendered great services within several organizations beside the FAI.

Dumas was born in Montreal on 6 April 1923. He was introduced to aviation by his father who brought him to the first airshow to be held in Canada in 1929. He was only 13 years old when he made his first flight. He enlisted in the RCAF during WWII, obtaining his pilot's wings in 1943. He then got transferred to the Royal Navy Fleet Air Arm, where he flew Fireflys and Seafires. After the war he became a flight instructor and strove to promote aviation within the Air Cadet League, where he was active for fifty years.

In 1963, Dumas got first involved in the FAI when he was chosen by the RCFCA (now the Aero Club of Canada) to represent Canada. In 1967 he was awarded the *Tissandier Diploma* for his service to international aviation. He became FAI First Vice-President in 1970, and in 1972 was elected President of the FAI. During his presidency, he succeeded in visiting the countries behind the Iron Curtain in spite of the Cold War. On completion of his term of office, he was appointed an Honorary President, remaining so to his death.

After retiring from the post of FAI President, he was named by the Fédération as delegate to the International Civil Aviation Organization (ICAO) in 1987. Thanks to his efforts, FAI retained a prominent place in the minds of the President and leading officials of ICAO, to the benefit of sporting aviators throughout the world. At the General Conference of the FAI in South Africa, in 1995, he received the coveted FAI *Bronze Medal*, the highest award for achievements as an administrator, and for his devotion to aviation.

He will be remembered very keenly by all those who have known him within the FAI and its countries.

FAI news release

an early, dramatic memory of André

The first contact that André had with gliding was at Trois-Rivières, in 1956. He was still active in the RCAF and the airfield at Cap-de-la-Madeleine came under his jurisdiction. Even though the field had been declared open for public use, RCAF still had equipment and hangars on the field.

The group of us, including Oscar Estebany, myself, Dave Webb, Ben Price and Jacques Coderre from Sherbrooke had a meeting with André and he specified certain rules which we were to follow, including "no sleeping in the hangars and definitely no women on premises". We ended up tenting on the field.

André became gradually more involved with gliding and did some towing with the club Tiger Moths. He rightfully complained about the lack of climb with the 2-22 on tow and finally arranged for a Piper Super Cub which had just been acquired by a friend for some transmission line inspection work.

The rate of climb was absolutely 'super' with the Cub towing the 2-22. André took over most of the towing with the new towplane and obviously enjoyed it immensely. Unfortunately, he also started to develop new towing procedures. First, he looked into more "efficient" ways of towing by letting down with full flaps and landing short by the use of a low and slow approach, ready for the next tow. He started coming in downwind and dropping the rope along the runway, with the towplane end ring very close to the waiting glider.

We were not happy with this and pointed out the potential dangers after the rope almost hit a glider. He was not an easy man to talk to as he wanted to maximize the income to his friend. Since the money depended on the number of tows, it was his intention to return as quickly as possible. The downwind tow rope drop continued and if anything, got more acrobatic. Finally, we called a meeting amongst "us gliding types" in an old office attached to the hangar.

We had just reached an agreement to send a delegation to André to lay down the rule for safety's sake, when we heard him returning from a tow, dropping the rope and then pulling into a very steep stall turn, going beyond the vertical at about 300 feet and rotating for landing direction. At the top of the turn the engine sputtered, all went quiet and then the engine caught again. But it was too late! By the time the Cub regained enough speed, it pancaked onto the grass of the runway.

We were all stunned at the sight of the collapsed plane, wingtips on the ground and the fuselage bent. Dave Webb was the first to rush out. André was in the plane, not moving. The fuel tank was ruptured and dripping down on André. Fortunately, since the plane was in the horizontal position, the fuel was not hitting the hot engine, but it was quite a dangerous situation. Dave got the doors open and undid the belts. Someone got a fire extinguisher while we carefully lifted André out of the plane and lay him down on the grass.

We were very concerned for his survivability while we waited for the ambulance which was not certain where to go, the old airport being an unusual place.

André did survive but had balance problems for several years after his recovery. I talked to him about "that" accident much later, but he said he could hardly remember it. However, he did retain his interest in gliding.

Hillar Kurlents, MSC

… and knowing André helps

One of my fondest memories of André was from many years ago when I visited the DoT office in Montreal to hand in forms for some of the MSC gliders for C of A renewal. When I asked the clerk at the desk how long it would take to get the renewals she said, "About two weeks." This was okay as none of them would expire prior to that date. I then asked her if Mr. Dumas was in, she confirmed that he was, so I asked if I could see him as I knew him personally, she phoned his office and I heard him reply to say send him right up.

We had a chat about SAC and MSC and he was obviously still very interested in our branch of sporting aviation and he said he would try and visit soon. When I left his office I had to go through the general office to exit the building. The clerk who had accepted my C of A forms called me over and said, "Here are your C of A's!" That shows who you know can be more important than what you know!

Terry Beasley

2013 Nationals trophy winners

CALPA – not awarded, no Club class contest
Carling – not awarded, no team entry
Wolf Mix – Jörg Stieber, Day 3
224 km @67.65 kph – 1000 pts
SOSA – Martin Lacasse, Day 2,
195 km @ 62.2 kph (hcp) – 975 pts
Dow (FAI) – Jörg Stieber
Dow (Club) – Pierre Cypihot

SAC funding statement for the 2013 World Junior Gliding Contest

The following is a summary of the money raised by fund raising efforts of the Junior team composed of Emmanuel Cadieux, assisted by his crew, Robert Cadieux and Jean Richard, and SAC members-at-large.

Fund raising by team	
• Raffle – WestJet tickets	$5,405
• Fund raising dinners (3)	$800
• Fondation CEGEP de Chicoutimi	$200
• Conseil de vie étudiante du CEGEP de Chicoutimi	$40
• Support, county deputy	$100
• Single contributions (8 persons)	$675
total raised	$7,220
total team expenses	$14,227
JWGC funding support from SAC	$7,007
Canadian Nationals Junior entry fee support to Emmanuel Cadieux	$200

The funding support provided by SAC members is based on an amount matching the funds raised by the team to a maximum of $10,000 with a formula of $10 per paid SAC member. Emmanuel and his team have expressed their appreciation for all the support they received and asked that it be conveyed to all the SAC members.

David Collard
SAC Treasurer & Pacific Zone Director

Contest letters

Here are a couple of notes about the Contest Letter database I would like to pass along:

• The contest letter database is primarily used by the Sporting committee to ensure two contest letters are not used at the same SAC-sanctioned contest. If this happens it is the pilot without the reserved letters responsibility to make a change. Usually this is done by temporarily adding a 1 to the letters or changing one of the letters using tape. For example, 44 could be changed to 441 or possibly A4. It would not be advisable to have two gliders in the same area with the same letters but if there is a glider on the other side of the country using the same letters and one of the gliders does not fly contests, there should be no conflict.

• If you reserve a contest letter without an associated glider, the reservation is only good for one year. I have not been actively deleting old reservations so if you are interested in a letter that is reserved send me an email and I will let you know if it has expired or when it will expire.

• The Contest Letter database could use an update. If you sold a glider or know of someone on the list who has, please send me a message. Also, if you have reserved letters and have not passed on the registration or associated club please send me a message. It is best to use the form that is linked at the bottom of the contest letters page on the SAC web site as it is sent to my in-box with a contest letters marking and not my spam. You can also email me at <*christophermgough@gmail.com*>.

Chris Gough

SAC AGM
Ottawa

Saturday, 1 March

10am to 5pm

Location and detailed agenda to be announced on the SAC website when finalized.

2014 Canadian Team in Leszno

The 2014 World Gliding Championship in the 15m, 18m and Open classes is scheduled for 21 July – 10 August in Leszno, Poland. Based on the 2013 seeding list, Jerzy Szemplinski will represent Canada in the 18m class with an ASG-29 and Dave Springford will fly an ASW-27 in the 15m class. Our Team Captain will be Jarek Twardowski from Gatineau Gliding Club. Jarek is a native of Poland and his knowledge of the culture and language will be invaluable. He is also well versed in computer technology and will be able to provide us with important weather updates while we are on course.

Leszno became the Polish National Soaring Center in 1952 and is the only soaring site to have hosted three World Gliding Championships (1958, 1968 and 2003). Leszno is known for great soaring conditions due to sandy soil and forested areas that are good thermal generators. Leszno is also known for long distance flights (700-900 km) during contests not only during the Worlds, but also during the Polish Nationals.

As the team prepares for this contest, both Jerzy and Dave have arranged a rental glider and tow vehicle for the contest. They have accommodations at a nearby B&B and tickets have been booked thanks to the Aeroplan Donation campaign. With the contacts and experience gained over the last few WGC's planning is well ahead of schedule.

For European contests, airfare is one of the largest expenses for the team and the donation of Aeroplan Miles into the charitable account is an important fund raising initiative. Aeroplan's parent company, Aimia, has changed how these campaigns take place. Instead of one 30 day period per year, Miles may now be donated all year long through the on-line portal at <*http://beyond miles.aeroplan.com/eng/charity/550*>.

Typical contest expenses are about $15K per pilot and the team will be actively fund raising until the contest. We are seeking assistance from clubs across the country to help with fund raising. Events such as BBQ dinners or 50/50 draws can be held at your club with the proceeds added to the SAC World Contest Fund. Use your imagination and plan some fun fund raising events. Individuals who want to help can also donate to this SAC Fund and receive a charitable receipt for the amount of their donation.

Polish-speaking Canadian glider pilots would be a great asset and are welcome to join us in Leszno. Having extra people to help take the load off the pilots significantly reduces the fatigue factor during the contest. (Extra crew will have to cover their own expenses.) The B&B has two rooms left and based on double occupancy – the room and breakfast is only $25 per night per person. If you are interested in helping the team in Poland, please contact either Jerzy or Dave. As in past years the team web site is located at <*www.sac.ca/team*> and there is an email link to make contact.

The team will maintain a blog at <*teamcanadawgc.blogspot.com*> and will post updates as they prepare for the World Championships and daily updates throughout the summer contest season. The blog is also accessible through the team web page.

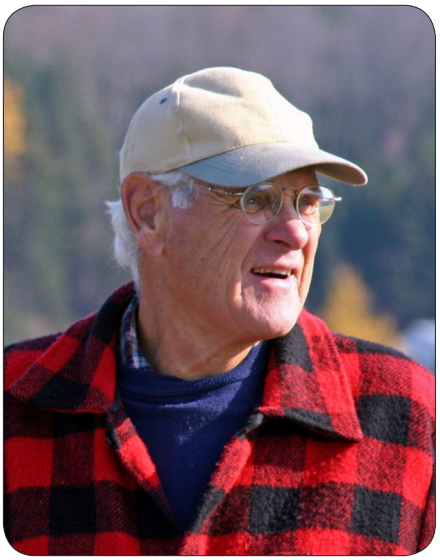
In preparation for Leszno, Dave and Jerzy will fly the Region 5 North contest in Perry, SC and Dave will also fly the Region 5 South contest in Cordele, GA. Both of these sites feature similar sandy and forested terrain as is found in Leszno. Jerzy also plans to fly the Region 2 contest in Mifflin, PA. Both will also be racing in the Canadian Nationals at their home club, SOSA, from 25 June to 4 July. This will leave a two week rest period before travelling to Poland.

Dave Springford

Claude, why do you fly?

Le samedi 7 septembre 2013, le Club de Vol à Voile de Québec perdait un de ses piliers. À l'âge de 83 ans, Claude Rousseau entreprenait son dernier envol. Un an de plus et il avait le bonheur d'assister au 60ème anniversaire du club dont il est cofondateur.

Voici le portrait que j'avais brossé de lui en 2008 pour notre journal *LE PINGOUIN*, baptisé ainsi justement parce que dans les débuts du club, aux dires de Claude, les avions étaient au sol plus souvent qu'autrement.



Claude, POURQUOI VOLER ?
« Parce que… j'ai ça dans l'sang ! »

Claude croit vraiment que c'est inné chez lui. Déjà, à l'âge de 7 ou 8 ans, il est impressionné par un avion qui traverse le ciel. À l'âge de 18 ans, c'est donc normal pour lui d'avoir sa licence de pilote. Pendant la guerre il s'abonne à des revues d'aviation et s'enthousiasme pour les multiples modèles d'engins « volants ».

Il fait son solo sur avion en 1948. Il adore voler mais faute d'argent, il doit ralentir ses activités quelque temps.

Le hasard lui donnera le bonheur de deux importantes rencontres… Vers 1953 il met la main sur un article de L'association américaine de vol à voile; il est subjugué ! Le vol à voile l'intrigue dès lors. Mais épris de « fabrication » déjà, il souhaite même construire (et c'est là que la maladie s'empare de Claude…) un « gyrocoptère ».

L'autre rencontre, c'est avec Paul Morin qui travaille chez Laurentide Automobile, commerce voisin de celui de Claude qui exploitait une usine de meubles. « Viens donc avec nous, on voudrait former un club de vol à voile! » Le Club achète un planeur à remettre en forme et un avionet, du coup, le Club de Vol à Voile de Québec est né! Nous sommes en 1953.

Lors des 12 premières années, le club a utilisé les trois vénérables planeurs suivants :

- Le Pratt-Reid, CF-ZAN. Utilisé de 1955 à 1957. On l'avait baptisé "La Baleine".
- Le Laister-Kauffman LK-10, CF-ZBI. Utilisé de 1955 à 1973, a été l'épine dorsale du club.
- Le Grunau Baby II, CF-ZBD. En service de 1957 à 1964 était un symbole historique.

Construit en Allemagne avant la guerre 39-45, le Grunau Baby a servi à l'entraînement des futurs pilotes de la Luftwaffe. Il avait été importé (saisi/volé ?) avec deux autres Grunau et un biplace "Cinema" par de futurs vélivoles canadiens qui ont utilisé le pont d'un destroyer canadien qui rentrait au pays après la guerre en 1946. Le Grunau a été le premier monoplace au club.

Installé à l'aéroport de Québec, le club a le privilège d'avoir des membres fondateurs solides tels Alex Krieger, et Keith Park dont Claude dit qu'il est un pilier capital. Keith est célibataire et passionné, pour lui, le club passe scrupuleusement… avant tout ! Il a le goût du travail bien fait.

De ces précieux piliers… Claude et son indéfectible passion partagée entre le vol et la mécanique. Il avoue qu'il a été heureux de se priver de voler en planeur assez souvent, dans le passé surtout, pour veiller aux besoins d'entretiens des appareils qui, au fond, sont peut-être devenus, ses meilleurs amis.

Depuis 1966, le club est installé à St-Raymond de Portneuf, dans un endroit de rêve choisi par Claude et son ami agronome Lionel Langlois qui ont d'ailleurs construit et volé ensemble le petit avion Jodel.

Claude Rousseau, c'est plus qu'un homme habile de ses mains, coloré et passionné, c'est une tonne de statistiques !

- Il a assuré la présidence du club en 1964, 1965, et 1966,
- Il a réussi son insigne C en 1955, son insigne Argent en 1970,
- Il a aussi été Observateur Officiel de nos plus belles performances en vol.

Et que dire du nombre incalculable de remorquages qu'il effectuait inlassablement pour nous propulser dans les airs. Uniquement à partir de 1993, ça représente plus de 7 000 vols !

De l'histoire du CVVQ Claude représente bien plus qu'un chapitre, qu'un tome, qu'une encyclopédie, il a été notre mémoire, notre ami, notre machiniste, notre mentor.

Nous ne le remercierons jamais assez pour tout le temps qu'il a consacré au Club, pour sa générosité, son infatigable vigilance à son égard. Il nous a bâti un des plus beaux clubs au pays, où on peut voler à peu de frais, grâce à son esprit économe et de débrouillardise qu'il a su nous inculquer. De plus, nous avons pu compter sur lui jusqu'à la toute fin de sa vie. Il sera toujours des nôtres et son souvenir planera à jamais sur le CVVQ car, où que se porte notre regard, il y a un objet fabriqué ou, comme on dit chez nous « patenté » par Claude !

Claude a donné sa vie au CVVQ. À nous tous maintenant, membres du Club, de perpétuer ce qui aura sans doute été son vœu le plus cher dans le monde de l'aviation : veiller sur le Club et en assurer la pérennité.

Et une chose est certaine, quand ce sera à notre tour de rejoindre Claude dans son nouvel atelier là-haut, on saura où trouver les outils, parce que lui, il les remettait toujours à leur place !

On Saturday, 7 September 2013, the Quebec City Gliding Club lost one of its pillars. At the age of 83, Claude Rousseau took his last flight. Had he lived one more year he would have had the pleasure of participating in the 60th anniversary celebrations of the club for which he was a cofounder.

Here is a portrait that I prepared of him back in 2008 for our club newspaper, *Le Pingouin*, named as such to reflect the starting days of the club when the aircraft were more often on the ground than in the air:

Claude, why do you fly?
Because it's in my blood!

Claude truly believed that he was born with the will to fly. At the age of seven or eight he was impressed with the aircraft he saw

in the sky above him. So it was natural that by the age of 18, he had already earned his pilot licence. During the war, he had subscriptions to various flying magazines and an enthusiasm for flying model aircraft.

Having done his first solo in 1948, financial constraints forced him to temporarily withdraw from flying. Two chance encounters renewed his flying interest. In 1953 he read an article about the Soaring Society of America: he was captivated and left with a strong interest in the sport of gliding. But he was already into building aircraft, even working on a gyrocopter!

The other encounter was with Paul Morin who worked at that time at Laurentide Automobile, a neighbouring enterprise to Claude's furniture factory. Paul proposed that they form a gliding club in Quebec City. The club bought a glider requiring rebuild and an airplane, and so the "Club de Vol à Voile de Québec" was born in 1953.

During the first twelve years, the club used three memorable gliders:

- The Pratt-Reid, CF-ZAN. In service from 1955 to 1957, it was called "The Whale".
- The Laister-Kauffman LK-10, CF-ZBI, used from 1955 to 1973, became the backbone of the club.
- The Grunau Baby II, CF-ZBD. In service from 1957 to 1964, it was a machine of historical significance.

Constructed in Germany before the Second World War, the Grunau Baby was the initial training aircraft for many eventual Luftwaffe pilots. Most likely our glider had been one of the many seized by Allied forces as war prizes at the end of hostilities, and it was brought to Canada along with another Grunau Baby and a two-seater Cinema aboard a Canadian navy destroyer in 1946. The Grunau Baby was the first single-seater in the club.

Initially the club operated from the Quebec airport, along with other founding members including Alex Krieger and Keith Park who Claude identified as a key player in the early days of the club. Keith was single and a passionate person, for whom the club was his top priority! He had the will to do good work.

Along with these fellow founders, Claude's passion was shared between flying and aircraft maintenance. He admitted that he was at times even happy to miss out on flying opportunities in order to plunge into various aircraft maintenance tasks with the machines that he considered as his best friends.

From 1966, the club operated out of St-Raymond de Portneuf, an ideal place for gliding operations chosen by Claude and his farming friend Lionel Langlois, who also built a Jodel aircraft with him. Claude was president of the club in 1964, 1965 and 1966. He obtained his C badge in 1955 and his Silver badge in 1970, and he was an Official Observer for many of our best flights. In the last several decades, he flew many aerotows: since 1993 alone he recorded over 7000.

In the history of the club, Claude represents so much more than a chapter, a volume, an encyclopaedia, rather he is our memory, our friend, our mechanic, and our mentor. We can't thank him enough for all the time he contributed to the club, for his generosity and his vigilance. He built a club which is among the finest in the country, where one can fly at a reasonable cost thanks to his spirit of economy and self-reliance that he developed in all of us. Also, we could count on his contributions to the end of his days. He will remain part of the fabric of our club forever, as we see the multitude of objects around the club grounds that were "fixed or created" by Claude in some unique manner, bearing his mark forever.

Claude dedicated his life to the club. It falls to us, the members of the CVVQ, to perpetuate his deepest desire for the world of aviation – support of the club and ensure its future. ❖

Claudine Dorval & Francis O'Brien

How the SAC bursary will help my soaring ability

A submission to free flight from one of the three SAC/Club bursary recipients at Rideau Valley Soaring, a young lady named Bailey Whitehouse, who is brand new to the club and to flying.

My name is Bailey Whitehouse. I am seventeen years old. I joined Rideau Valley Soaring on 27 June with the hope of completing my glider pilot licence. The soaring club came recommended by Mr. Wallas, my instructor at Cadet Ground School.

Rideau Valley Soaring has a very welcoming environment. Pilots, instructors, club members are always willing to teach you something new or laugh at your mistake. Neil and Paul are always willing to search for any information I need to move to the next level. I would recommend this club to anyone who has a passion for flight.

As I quickly learned, I had a great deal of work ahead of me but I was determined to work hard to meet my goal of one day becoming a glider pilot. My longer term goals are to become a power pilot and then to return to the club to become a gliding instructor.

Each instructor has different ways of teaching and, to date, I have had three main instructors, Vince, George and Tom. They are all amazing instructors – I learn something new each flight. I am now on flight 26, getting closer to solo flight in less than two months being at the club. As I only have weekends to fly until Cadet Camp is over, I am looking forward to spending more time at the club in August and hope to get my licence before I head back to school.

I am a full time student and belong to Girl Guides and Air Cadets, so I have spent a lot of time, over 1500 hours, volunteering. I see the need to support others as they have supported me in my needs. The satisfaction of helping others has inspired me to volunteer more. I like being very independent so I went out at 11 years old and found a paper route. Living in a rural area, this wasn't easy. I started with eleven papers and grew to over 200 today. This is my only means of income. As gliding is expensive for a 17 year old student, I knew I would need financial help if I wanted to proceed. I noticed that the club and SAC offered bursaries so I decided to apply. The award helped to ease the financial burden that I put upon myself and my parents. I intend to continue to fly until I fulfill my dreams of becoming a glider pilot, then power pilot and still be an active volunteer, supporting my community. ❖

Mike Clark (l), a paraplegic glider instructor, with M/Cpl Paul Franklin, participating in the "Soldier On" program.

Freedom's Wings Canada at the Gatineau Gliding Club

The Freedom's Wings Canada (FWC) program, funded by a charity, provides free, therapeutic flights for people with physical disabilities, and was founded in Canada, at York Soaring, by Charles Petersen.

The Ottawa area Chapter of FWC has been in operation at the Gatineau Gliding Club (GGC) for the past nine years, since 2004, and flown some 460 people with physical disabilities, mainly partnered with the Ottawa Rehabilitation Centre and Spinal Cord Injury (SCI) Ontario (formerly Canadian Paraplegic Association Ontario).

During the five year period from 2007 until 2011, GGC has flown prominent persons with disabilities as part of the Canada Day celebrations at the Rockliffe Airport in collaboration with the Canadian Aviation and Space Museum (CASM). The following personalities were flown: Rebecca Kadloo (2007) from Baffin Island, MCpl Paul Franklin (2008) who lost both legs to an IED in Afghanistan, Todd Nicholson (2009) the Captain of the 2008 Gold Medalist Canadian Paralympic Sledge Hockey Team, Justin Hines (2010) singer/songwriter and, in 2011, six Canadian Forces veterans with physical disabilities, in collaboration with the 'Soldier On' program *<http.//www.youtube.com/watch?v=oTuf0WGG0sw>*.

In 2009, the FWC Program at the Gatineau Gliding Club was featured in the Radio Canada/TV prime time program *C'est la Vie*, and later in 2011, the Gatineau Gliding Club FWC program was nominated by the Canadian Aviation and Space Museum for the 'Champions of Change' program run by CBC under the Health and Wellness category, and finished in the top fifty out of 1370 applicants.

The FWC program, in addition to being a good community outreach program that shares our sport with those who have physical disabilities, has a powerful therapeutic effect, not only upon those affected by disabilities, but also for the volunteer gliding club members who make it possible. It is also an excellent vehicle for spreading awareness of the sport of gliding to the general public.

Doug Laurie-Lean,
GGC president

SAC Youth Bursary Program

The 2013 soaring season has proven to be another successful year in our organization's efforts to support those SAC clubs that are participating in the SAC Youth Bursary Program. The ten clubs with the 26 gliding students are listed below.

Alberni Valley Soaring Association
Daniel Alex Steeves

Canadian Rockies Soaring Club
Cameron Walters

Cu Nim Gliding Club — Dawson Hogg

Edmonton Soaring Club – Gliding Camp
Tegen Dunnill Jones — Eam Ferre
Joshua Hubbs — Dylan Mckenzie
Mathew Pletts

Winnipeg Gliding Club
Jesse Mack – Youth

Great Lakes Gliding Club
Brad Wood
Jade Lacoste

Rideau Valley Soaring School
Bailey Whitehouse — Thomas Stieber
Faizan Haq

York Soaring Association
Rebecca Kingdon — Daniel Levinter
Alex Austin — Anushka Fernandes
Timothy Belchior

Gatineau Gliding Club — Evan Dewe

Club de Vol à Voile Champlain
Antoine Latulippe
Charles-Eliot Decambre-Audet
Pier-Alexandre Guimond
Yannick Cote-Prudhomme – Youth

Club de Vol à Voile de Quebec
Jean-Philippe Carmel
Felix Hurtubise

The matching financial assistance that SAC gave to the clubs for the participants varied from $250 to $499, after consultating how the club wished to sponsor their applicant(s). $10,232 was provided from SAC. I would like to thank clubs and all the members involved in 2013 and look forward to a successful year in 2014.

David Collard
SAC Treasurer & Pacific Zone Director

an electronic presence from page 5

it would often take weeks just to know that a new recruit had joined. In the meantime, they missed mid-week flying opportunities announced on our mailing list and were locked-out of the members' section of our web site where much useful information is located. With no formal system to simultaneously notify the treasurer, CFI, and webmaster of a new arrival, it was easy for the newbie to fall through one of several cracks. This was frustrating for everyone, and resolving the matter required a flurry of email exchanges or phone calls.

The solution was to redesign our membership application process. We use a very basic paper form to record some details by pen. A tear-off section featuring a unique ID and web page reference is given to the new member who must later create an account on our web-based system. The administrator is automatically notified of the new account and the member's unique code is validated. The account is activated and the member is subscribed to the club email list in one easy step. The member section of the web site is instantly available and email from other club members will begin to flow.

All members can update personal information. Email addresses may be changed and passwords updated without involvement of the administrator. Members with Gmail accounts can authenticate on our site with those credentials.

Everything is central, including safety

The benefit to members of the new web site is that information is centralized and conveniently accessible. Members can review airspace, read operating manuals for radios, examine a catalogue of recommended badge tasks, and many other things.

To ensure all members receive our Safety Officers reports, the Safety Area in our members section is the log-in "landing" page where a table of all incidents is displayed. The most recent incident is listed first, so a quick glance is all it takes to know that there is something new to read. The system allows the club Safety Officer to compose and publish his reports. Cataloguing the reports on our site lets members easily search the archives by keyword. The search box used by the general public is reused for this purpose, but members have the additional privilege to find restricted content.

Instructor and towpilot notification

Some clubs are so well equipped with qualified towpilots and instructors that they have no need for the formality of a schedule. We are less fortunate and rely on a schedule constructed twice per season by one of our senior instructors. At 5 am each Thursday, an automatic email notice is distributed to our club members announcing the duty pilots for the weekend. Occasionally these messages provoke a flurry of replies to arrange a replacement or swap. This system raises awareness of the approaching weekend for all members and ensures that our volunteer labour is present for lessons and launches.

An easier way to manage email lists?

While providing a wonderful service, external group mail services like YahooGroups can become difficult to manage. Administrators often have to explain the need to subscribe to a list, then issue an invitation, then hope that the member accepts the invitation and possibly remove lurkers who do not return to the club in future years. The five lists used in our club are convenient and helpful to the groups they represent, but cooperatively managing the subscriptions is a frustrating experience.

This annoyance was virtually eliminated the moment we added a mailing list extension to our site. The administrator can see, for any member, which lists he belongs to, adding or deleting subscriptions with a single click. No discussion is required and the changes are instantaneous. All messages originating from our lists provide an unsubscribe link, permitting members to remove themselves from any list.

Deleting a member account automatically removes all associated mailing list subscriptions, eliminating any need to visit external sites and delete multiple subscriptions.

Google Analytics – what you discover can help you

Traffic to our site is recorded by Google Analytics – the design of our site is compatible with this service and therefore integration was possible. The analytics service reveals many interesting statistics that can be used to hone an effective site design.

In our case, we learned that there is considerable traffic from communities nearby to Ottawa and not just the city itself. We note that visitors commonly use tablets and smart phones, so are happy that our site automatically adapts to the small screens of those devices. We know the number of minutes visitors spend looking at our site and can follow the pattern of pages that they navigate, knowing such things as the landing and exit pages. We can use this knowledge to ensure that information is strategically placed, allowing visitors to find the nuggets they are looking for and perhaps draw their attention to something new. Search engine queries used to locate our site are shown too, telling us exactly how searchers discover our pages.

Free and low-cost technology

A number of technologies are employed, but central is the Joomla Content Management System running on a Linux operating system. These two core components are Open Source and available at no cost. There are other legitimate choices such as Drupal and Wordpress. Third party hosting is an option but the *rvss.ca* system is on a reconditioned personal computer accessed via a standard Internet residential service at no cost to the club. The web site is somewhat sluggish for that reason; a faster connection at additional cost would instantly improve response.

A content management system brings together many of the tools and tasks needed to build a modern web "place". Your members need accounts, your authors need to write and arrange their articles, a designer needs to adopt and customize design templates and incorporate third-party extensions, the webmaster needs to keep the system updated. All these jobs are accomplished with a standard browser through the Internet, so your contributors can work at their preferred location and times.

A CMS can deliver a very polished and comprehensive product. The initial setup can be complex and developing a site from scratch might require professional assistance or guidance. As we discovered, the help of professionals and the small investment in commercial extensions saves countless hours of work. The final product can be managed, modified and extended by a club if members learn some basic skills, or professionals can provide this service.

More information

Those are just some examples of changes made at our club that have yielded good results. The technology permits the trial of ideas for a period and quick changes when necessary. We have further plans, and technology quickly evolves providing new opportunities and possibilities. The web site is possibly our most important promotional tool and a contributor to club health and vibrancy. Further information is available from the RVSS webmaster at <*webmaster@rvss.ca*>. This article has been abbreviated for *free flight*. If a club considers using a similar system, I recommmend reading the full version at <*http://rvss.ca/ff-internet*>. ❖

the ASG 32 from page 19

And what can you tell us about the wing?

Of course, we had to start from scratch here. Designer Michael Greiner employed the same design principles that he used on the ASG 29 with considerable success. We were also able to take advantage of experience gained with the ASH 30 but the design brief was for a clean wing without kinks and a minimum of corners along the leading edge. Michael managed to achieve that even without resorting to a little nose wheel. Wind tunnel tests and comparison calculations with other gliders make us confident that the ASG 32 can more than match it with similar gliders on the market.

Coming back to the engine of the self launching version, why are you now fitting fuel injected engines?

To avoid any confusion, gliders ordered with sustainer engines – such as the ASG 29E – are still equipped with a conventional Solo two-stroke engine. However, all self-launching gliders come with fuel injected rotary engines built by Austro Engines. Previous versions of this power plant have already been installed in close to 500 of our gliders. The new fuel injected engine is even more user friendly and the automatic altitude compensation system ensures that the nominal power output of 41 kW (56 hp) is hardly compromised at altitude. When these engines are tested we often find that the real power output is around 60 hp which is more than enough for even the biggest of gliders. But rotary engines offer many other advantages over conventional two-stroke technology. Their power to weight ratio is superior, they are more reliable and they don't require special fuel such as avgas or two-stroke mixture. Their vibration free running, their low noise level, low fuel consumption, and the absence of regular maintenance requirements have made them ideal for aircraft of this size. They also feature a very simple engine management system and a mechanical propeller stop which eliminates the need for sensitive electronics, sensors and switches. All in all they are a big step ahead of the two-stroke technology of yesteryear.

But there must be disadvantages along with such a list of positives. What are they?

Of course, there are other points to consider as well. Like every other aircraft engine, the rotary engine doesn't like long periods of inactivity – especially not in a wet or overly humid environment. Under such conditions the oil film can break down and corrosion can occur. Therefore we now advise our customers to run the engine at least every month or preserve it strictly in accordance with our manual. This engine preservation is easy – it only takes a minute or two.

Ulli, what can you tell us about Schleicher's plans for the future? Are there further developments in the pipeline?

That's a frequently asked question and when it comes up I always ask people to keep in mind that we have released three new models in a relatively short period of time. The fourth one is the ASG 32 and the electric drive unit is another significant new development. It shows that we have invested heavily in new models but that doesn't stop us from constantly thinking about our production program a few years down the track. Schleicher will continue offering highly competitive aircraft for all FAI competition classes [except the new 13.5m Class].

Thank you for sharing your thoughts with us. We look forward to talking to you again. ❖

That is why the Board will establish a web site committee to investigate hiring a firm to manage the site. The first order of business would be to revitalize and modernize the existing web site. After this project is completed, the firm would then be responsible for managing the web site. This would entail supporting the web site by updating it as needed, fixing issues when they arise and ensuring the software is up to date. The Board feels by taking this step that this will result in a stable, modern web site for all members to enjoy. Over the next couple months, Jay Allardyce will be taking the lead on this project and establishing a committee to explore this matter.

New SAC officers As mentioned in Priorities in the previous issue of *free flight*, John Mulder will be stepping down from the Board after many years of service to SAC and its members. John held several positions on the Board including Vice-president and Secretary so with John leaving, we need to fill this vacancy. Going forward, Jay will be the Secretary and Stephen will be the Vice-president. The Board thanks John for his dedication during his many years on the Board and wish him well in his future endeavours.

John officially stepped down at the conclusion of the Board meeting and Al Hoar from Cu Nim was appointed to fill out the remainder of John's term as Alberta Zone Director. We welcome Al to the Board and look forward to working closely with him in the future.

Club marketing Only six clubs took advantage of SAC 50/50 co-funding support! Are you looking for ideas on how you might improve your results at your club? Then I would suggest a very good source of information is the European Gliding Union web site and the following study which is a continuation of the work the EGU membership group started in 2012:

> *Club Development – Nov 20th, 2013. The proceeding from the 2nd EGU workshop on Club Development held in February 2013 in Strasbourg (2013-02-22).*

The various factors in comparing successes at commercial sport clubs versus community sport clubs would make a good topic for discussion at your club. One thing not mentioned and I believe it can be a major factor, is that in a commercial operation someone has a profit incentive – skin in the game. Good people skills are also a major factor in any successful "people business" or you will have a big turnover in staff and a revolving door with your customers.

In the case of gliding clubs, new members on average last three years. I ask the following question, "is the present model of SAC clubs operating on the basis of volunteers heading for eventual extinction?" Are the "givers" wearing out and at the same time the current generation of potential members, who are cash strapped, time limited, and have too many equally appealing alternatives?

I read recently that in major cities, 70% of those surveyed mentioned loneliness as a factor in their being unhappy. It might not just take the fancy new glider to attract and retain new members, perhaps a strong social network among its current members might be one of the answers. A good topic for a break-out session at the next AGM? See you in Ottawa in March 2014.

The Board would like to thank every volunteer who keep our sport alive; without you, the clubs and our organization called SAC would become extinct. All the best in 2014.

Sylvain Bourque, Jay Allardyce,
David Collard, Stephen Szikora,
& Al Hoar

CANADIAN RECORDS (as of 12 Nov 2013)

T A record set entirely within Canada – listed only if a "C" record is flown.
C indicates a record by a Canadian citizen originating outside the country.
(These are awarded only if a greater "Territorial" record does not exist.)

RECORD	OPEN	15 METRE	CLUB	FEMALE	MULTIPLACE
DISTANCE (km)					
3.1.4a Free distance	Marsden / Apps 1093.0 1984	Mike Apps 1093.0 1984	Mike Glatiotis 480.6 2002	Ursula Wiese 607.0 1986	Chester Zwarych (R Adam) 495.0 1986
3.1.4b Free out & return	Tim Wood 690.2 T 2010	Tim Wood 612.6 T 2011	Tim Wood 628.1 T 2010	not claimed	T Florence (C Hildebrandt) 572.9 T 2013
	Adam Zieba 1252.3 C 2013	Adam Zieba 1016.4 C 2010	Adam Zieba 1089.5 C 2013	Tracie Wark 750.2 C 2003	Charles Yeates (Kris Yeates) 464.8 C 2008
3.1.4c Free 3 TP dist.	Tim Wood 1002.4 T 2008	Tim Wood 1002.4 T 2008	Tim Wood 882.1 T 2008	Sue Eaves 508.7 T 1995	T Florence (C Hildebrandt) 847.1 2013
	Adam Zieba 1474.1 C 2010	Adam Zieba 1474.1 C 2010	Adam Zieba 1387.1 C 2010	Tracie Wark 592.6 C 2000	
3.1.4d Free triangle dist.	Nick Bonnière 630.8 2012	Nick Bonnière 630.8 2012	Bruce Friesen 609.5 2011	Tracie Wark 523.2 C 2007	Charles Yeates (Kris Yeates) 590.0 C 2008
3.1.4e Distance to goal	Marsden /Apps 707 1984	Mike Apps 707 1984	Tim Wood 412.8 T 2010	Antonia Williams 305.0 C 1975	C Zwarych (H McColeman) 310.0 T 1984
			Adam Zieba 557.7 C 2010		
3.1.4f 3 TP distance	Nick Bonnière 818.1 T 2010	Tim Wood 642.7 T 2007	Nick Bonnière 719.9 T 2010	not claimed	Charles Yeates (Kris Yeates) 406.5 C 2009
	Adam Zieba 1474.1 C 2010	Adam Zieba 1474.1 C 2010	Adam Zieba 1387.1 C 2010		
3.1.4g Out & return dist.	Tim Wood 690.2 T 2010	Tony Burton 652.3 T 1993	Tim Wood 628.1 T 2010	Ursula Wiese 328.0 1984	Dave Marsden (Ed Dumas) 421.5 T 1979
	Brian Milner 1128.9 C 1999	Walter Weir 1032.1 C 1993		Tracie Wark 510.3 C 2002	Charles Yeates (Kris Yeates) 506.9 C 2007
3.1.4h Triangle distance	Hal Werneburg 803.7 T 1982	Hal Wernburg 803.7 T 1982	Bruce Friesen 599.2 2011	Jane Midwinter 317.6 T 1988	John Firth (Dan Webber) 510.4 T 1986
	Peter Masak 1007.0 C 1987	Peter Masak 1007.0 C 1987	Spencer Robinson 655.9 C 2003	Tracie Wark 502.9 C 2006	
ALTITUDE (m)					
3.1.4k Absolute Altitude	Bruce Hea 10485 T 1981	15m records began in 2007, earlier times shown are "starter" values		Deirdre Duffy 8986 T 1991	Bob Shirley (P Campbell) 9083 T 1961
	Walter Chmela 12449 C 1974			A Cservenka 9772 C 1969	Walter Chmela (VanMaurik) 10390 C 1975
3.1.4m Gain of Height	Dave Mercer 8458 1995			Deirdre Duffy 6575 1991	Bob Shirley (P Campbell) 7102 1961
SPEED, ▲ (km/h)					
3.1.4j 100 km	Tim Wood 183.3 2012	Tim Wood 183.3 2012	Tim Wood 172.3 2012	Tracie Wark 105.0 C 2003	Dave Marsden (M Jones) 98.1 T 1975
					Charles Yeates (Kris Yeates) 125.6 C 2006
SAC 200 km	John Firth 110.6 T 1984	Tim Wood 95.2 2007	Tony Burton 99.0 2003	Tracie Wark 99.9 C 2002	Lloyd Bungey (Tony Burton) 76.0 T 1983
	Charles Yeates 116.3 C 1994				D Springford (P Templeton) 108.5 C 2002
3.1.4j 300 km	Kevin Bennett 113.1 T 1988	Kevin Bennett 113.1 1988	Tony Burton 101.4 T 2008	Tracie Wark 99.1 2001	A Kawzowicz (John Brennan) 87.1 T 2006
	Peter Masak 148.9 C 1985		Dave Springford 108.0 C 2006		Ian Spence (J-R Faliu) 128.5 C 1991
SAC 400 km	Jerzy Szemplinski 102.7 T 2013	Luke Szczepaniak 97.3 T 2013	Tony Burton 103.3 T 2003	Tracie Wark 95.0 C 2002	A Kawzowicz (A Marcelissen) 85.0 T 2007
	Rolf Siebert 140.1 C 2004	Walter Weir 111.8 C 1990	Rolf Siebert 128.9 C 2004		Charles Yeates (Kris Yeates) 111.7 C 2009
3.1.4j 500 km	Walter Weir 105.7 T 1991	Walter Weir 105.7 1991	Bruce Friesen 85.1 T 2011	Tracie Wark 112.9 C 2006	John Firth (Dan Webber) 88.8 C 1986
	Peter Masak 151.2 C 1985		Tracie Wark 97.4 C 2006		
3.1.4j 750 km	Willi Krug 108.8 T 1982	Willi Krug 108.8 1982	Spencer Robinson 103.6 C 2003	not claimed	not claimed
	Spencer Robinson 118.7 C 2003				
3.1.4j 1000 km	Peter Masak 106.5 C 1987	Peter Masak 106.5 C 1987	not claimed	not claimed	not claimed
SPEED, O&R (km/h)					
SAC 300 km	Tim Wood 124.8 T 2010	Hal Werneburg 115.2 1983	Bruce Friesen 113.6 T 2002	Ursula Wiese 59.6 T 1984	Ernst Schneider (D Smith) 112.7 2008
	Walter Weir 191.3 C 1989	Walter Weir 191.3 C 1989	Jerzy Szemplinski 125.4 C 2007	Tracie Wark 132.3 C 2000	
3.1.4i 500 km	Kevin Bennett 126.3 T 1992	Kevin Bennett 126.3 T 1992	Tim Wood 98.1 T 2008		
	Walter Weir 150.9 C 1996	Walter Weir 150.9 C 1996	Jerzy Szemplinski 125.4 C 2007	Tracie Wark 99.6 C 2002	Charles Yeates (Kris Yeates) 79.2 C 2007
SAC 750 km	Walter Weir 145.0 C 1994	Walter Weir 145.0 C 1994	not claimed	not claimed	not claimed
3.1.4i 1000 km	Brian Milner 147.0 C 1999	Walter Weir 142.6 C 1993	not claimed	not claimed	not claimed
SPEED, GOAL (km/h)					
SAC 100 km	Tim Wood 180.3 T 2012	Tim Wood 180.3 2012	Tim Wood 169.5 T 2012	Tracie Wark 106.4 C 2002	Trevor Florence (N Marsh) 105.1 T 2000
	Rolf Siebert 183.7 C 2004				Charles Yeates (Kris Yeates) 127.0 C 2009
SAC 200 km	Nick Bonnière 131.2 T 2010	Tim Wood 128.2 T 2008	Nick Bonnière 115.4 T 2010	Tracie Wark 129.1 C 2000	Trevor Florence (J King) 91.5 2002
	Adam Zieba 151.7 C 2010	Adam Zieba 151.7 C 2010	Adam Zieba 142.5 C 2010		
SAC 300 km	Tim Wood 128.2 T 2008	Tim Wood 128.2 T 2008	Tim Wood 112.8 T 2008	not claimed	Jock Proudfoot (G Fitzhugh) 70.2 C 1981
	Adam Zieba 151.7 C 2010	Adam Zieba 151.7 C 2010	Adam Zieba 142.5 C 2010		
SAC 400 km	Tim Wood 92.7 2010	Tony Burton 81.5 T 1990	(starter) 85.6 T	not claimed	not claimed
	Adam Zieba 151.7 C 2010	Adam Zieba 151.7 C 2010	Adam Zieba 142.5 C 2010		
SAC 500 km	Dave Marsden 97.1 T 1970	Charles Yeates 77.1 T 1966	(starter) 100.4 T	not claimed	not claimed
	Adam Zieba 151.7 C 2010	Adam Zieba 151.7 C 2010	Adam Zieba 142.5 C 2010		

FAI badges

Walter Weir

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These badges & badge legs were recorded in the Canadian Soaring Register during the period 15 September to 15 November 2013.

GOLD BADGE

336	John Brake	York

SILVER BADGE

1076	Stanislaw Maj	Toronto
1077	Tim Forbes	Rideau Valley
1078	David Connolly	York

DIAMOND DISTANCE (500 km flight)

	Stanislaw Maj	Toronto	504.5	SZD-55	Conn, ON

DIAMOND ALTITUDE (5000 m gain of height)

	Gary Hill	Edmonton	6100	SZD-50-3	Cowley, AB
	Conrad Lamoureux	Cu Nim	5310	O. Cirrus	Cowley, AB

GOLD DISTANCE (300 km flight)

	Tim Forbes	Rideau Valley	314.1	LS-1c	Kars, ON
	Robert Zachemski	SOSA	317.1	SZD-55	Rockton, ON

GOLD ALTITUDE (3000 m gain of height)

	Conrad Lamoureux	Cu Nim	5310	O. Cirrus	Cowley, AB
	John Brake	York	4650	Kestrel 19	Sugarbush, VT
	Stan Martin	York	4300	Mini Nimb.	Sugarbush, VT

SILVER DISTANCE (50 km flight)

	Tim Forbes	Rideau Valley	153.2	LS-1c	Kars, ON
	David Connolly	York	63.4	1-34	Arthur, ON

SILVER/GOLD DURATION (5 hour flight)

	Tim Forbes	Rideau Valley	5:16	LS-1c	Kars, ON
	Chris Kingdon	York	5:37	Grob 103	Arthur, ON
	David Connolly	York	5:54	PW-5	Arthur, ON
	James Balasch	SOSA	5:01	SZD-51-1	Rockton, ON
	David Philip	Great Lakes	5:38	Ka6CR	Cogan, ON

SILVER ALTITUDE (1000 m height gain)

	Tim Forbes	Rideau Valley	1353	LS-1c	Kars, ON
	David Connolly	York	1024	PW-5	Arthur, ON
	Conrad Lamoureux	Cu Nim	5310	O. Cirrus	Cowley, AB

C BADGE (1 hour flight)

3013	Stanislaw Maj	Toronto	based on Polish gliding certificate		
3014	Tim Forbes	Rideau Valley	4:27	LS-1c	Kars, ON
3015	Chris Kingdon	York	5:37	Grob 103	Arthur, ON
3016	David Connolly	York	5:54	PW-5	Arthur, ON
3017	Ray Troppmann	Edmonton	1:31	PW-5	Chipman, AB
3018	Lauren Ryan	Edmonton	1:18	L-23	Chipman, AB
3019	James Balasch	SOSA	5:01	SZD-51-1	Rockton, ON
3020	Tegen Dunnill Jones	Edmonton	1:20	L-23	Chipman, AB
3021	Conrad Lamoureux	Cu Nim	4:37	O. Cirrus	Cowley, AB
3022	Daniel Pelton	Vancouver	3:42	L-23	Hope, BC
3023	Guy Thériault	Champlain	1:13	ASK-21	St Dominique, QC
3024	Stan Martin	York	2:20	Mini Nimb.	Sugarbush, VT

Badge & badge leg statistics, 2004–2013

	04	05	06	07	08	09	10	11	12	**13**	5 yr avg	% of avg
1000 km	0	0	0	0	1	0	1	1	0	**1**	0.6	167
750 km	-	1	1	2	1	0	2	1	0	**0**	0.6	–
Diamond	1	1	0	1	0	0	1	0	0	**1**	0.4	250
Gold	2	5	1	2	3	4	2	2	3	**2**	2.6	77
Silver	17	7	13	16	9	10	9	11	9	**7**	9.2	76
C Badges	18	33	19	27	21	23	19	27	38	**17**	24.8	69
Badge legs	51	47	60	90	40	55	58	36	58	**42**	49.8	84

58 badge legs – 7 Diamond, 10 Gold, 41 Silver

FAI records

Roger Hildesheim

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The following record claim has been approved:

Pilot	**Luke Szczepaniak**
Date/place	18 August, Rockton, ON
Record type	400 km speed triangle, Territorial, 15m
FAI category	SAC
Sailplane	ASW-27 (C-GJSJ)
Speed	97.3 km/h
Task	start/fin at SOSA, TPs Markdale & Strathroy a/p
Previous record	2009, Jerzy Szemplinski, 94.8 km/h

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 email <*willem@langelaan.com*>.

MZ Supplies Canadian dealer for Schleicher sailplanes, and Cambridge and Borgelt instruments. Ulli Werneburg <*www.mzsupplies.com*>, <*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 email 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.

magazines

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

GLIDING INTERNATIONAL – the monthly world gliding publication by John Roake. Read worldwide, with a great reputation for being the first with the latest news. US$64/120, 1/2 yrs airmail. Personal check or credit cards accepted. <*office@glidinginternational.com*>. Register on-line: <*www.glidinginternational.com*>.

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*>.

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www.YorkSoaring.com

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SASKATOON SOARING CLUB
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Alberta Zone

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

CENTRAL ALBERTA GLIDING CLUB
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