

FREE FLIGHT

2020 Issue 1





- Glider maintenance
- Major structure repair
- 20 years composite experience
- Annual inspection

- Maintenance de planeurs
- Réparation structurale majeure
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The journal of the Soaring Association of Canada
Le journal de l'Association Canadienne de Vol à Voile

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FREE FLIGHT

The Soaring Association of Canada (SAC)

The Soaring Association of Canada (SAC) is the governing body for the sport of gliding in Canada. Mandated to safeguard and promote our sport, we render support and representation to glider pilots and gliding clubs across the nation through a variety of committees. On a national level, we represent our affiliated clubs and members on issues related to licensing, medical requirements, airspace and regulation. Internationally, we maintain representation within the Fédération Aéronautique Internationale and the International Gliding Commission. We invest in the renewal and expansion of our sport by offering bursaries for young pilots, financial support for contenders representing Canada in international competitions, and financial aid for clubs carrying out marketing and publicity initiatives. Additionally, we publish **Free Flight**, SAC's quarterly magazine. Finally, we keep our sport safe by providing extensive training and

development programs for instructors, safety seminars, and maintaining safety programs.

SAC maintains a head office in Ottawa. A volunteer Board of Directors comprised of representatives from all regions of the country steers the organization. SAC is registered as a Canadian amateur athletic association with the CRA, an agency of the Government of Canada.

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VOL LIBRE

L'Association canadienne de vol à voile (ACVV)

L'Association canadienne de vol à voile (ACVV) est l'instance dirigeante pour la pratique du vol à voile au Canada. L'ACVV a pour mandat de préserver et promouvoir notre sport. À travers différents comités, elle représente et soutient les pilotes de planeur et les clubs de vol à voile partout au Canada.

Au niveau national, nous représentons nos clubs affiliés et nos membres pour les questions relatives aux licences, aux exigences médicales, à l'espace aérien et à la réglementation. Au niveau international, nous sommes représentés au sein de la Fédération aéronautique internationale et de la Commission internationale de vol à voile (IGC). Nous investissons dans la relève et l'expansion de notre sport en offrant des bourses à de jeunes pilotes, en fournissant un support financier à ceux qui nous représentent dans les compétitions internationales et en fournissant une aide financière aux clubs qui réalisent des initiatives de marketing et de publicité. Nous publions également la revue trimestrielle de l'ACVV : Vol libre / Free flight. Finalement, nous prenons à coeur la sécurité dans notre sport,

en fournissant des programmes élaborés de formation et de perfectionnement pour les instructeurs, des séminaires sur la sécurité et des plans de maintenance de la sécurité.

Pour avoir plus d'information à propos de l'ACVV, veuillez nous contacter via l'un des liens ci-dessous.

Enregistrée comme une Association canadienne de sport amateur auprès de l'Agence de revenu du Canada, l'ACVV a son siège social à Ottawa et est gérée par un conseil d'administration bénévole constitué de représentants de toutes les régions du Canada.

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Our pre-solstice 1000 km

Marta Wojnarowska, Cu Nim

Five days before my return from Poland, Chester announced over the phone “Sunday, Monday, Tuesday, and Thursday” look good for flying. Surprisingly, and luckily for me, this long-term forecast held. On Thursday, 20 December 2018, the day before the winter solstice, with less than 8 hours of daylight, Chester and I flew 1,050.84 km for 7.3 hours in our Arcus M. This was a record flight for me (by far), and is my recounting of the day.

We arose at 5 AM, Chester immediately checking the forecast skew-T's wind speed, direction, humidity, altitude of forming clouds... at different locations, every hour of the day. Verdict—green light—we were going. Time to put on a diaper...actually a double diaper—this is the ticket to fly.

We reached Cu Nim still in darkness. While Chester opened the hangar and started gassing up the Arcus, I was adding more clothes layers, putting a parachute on, getting familiar with the flight computer, and straps—making sure I can get into the glider quickly. At -7C outside, we needed to minimize time between taking the glider out of the hangar and the takeoff to reduce icing of the glider's wings (due to temperature difference between the hangar and outdoors). I certainly was not going to be a bottleneck—familiarity and readiness were the key.

Twilight arrived, and at 8:06 am we were in the glider taking off. It was my third time in Arcus-M—I like taking off in it—it is such a freeing experience. Unlike a classic glider there is no towplane to follow, and despite the frozen ground, the Arcus rose up gently. However, I was thankful for the ear muffs—motorgliders are so much louder during take-off.

With the sun rising behind us we headed west to the mountains to meet the legendary

What a luxury to be in a modern high performance glider with a terrific glide ratio, an amazing moving map display showing our destination with needed gliding ratio, and having ATC clearance.

Rocky Mountains wave. This is the beauty of the Arcus—it can reach places a towplane could not without much difficulty. By the time Chester turned off the engine and retracted the propeller, we were over 11,000 feet.

I'm sitting comfortably in the back seat of the Arcus, in my Polish winter down parka, which I use in the mountains when it gets below -20°C. I'm happy to wear an extra pair of long johns below my warmest ski pants, and two sets of Hot Paws in my winter boots. I am waiting to get cold but never do, although having down pants and a bit warmer feet would have made it just perfect.

The noise of the engine reminds me of a book which inspired me about a decade ago, "Cry of the Kalahari" by Mark and Delia Owens, a couple who moved to Africa and studied hyenas. Mark eventually bought a plane, and learned how to fly to follow

them. I was so impressed—how can anybody learn to fly a plane?! And here we go, my husband flying his very own motor glider, with me sitting behind, waiting for my turn to take the stick, "hunting" for something even more exotic than hyenas—the Rocky Mountain Wave.

The wall of clouds forming over the mountain range is now much closer. I look at the glider's wings and see some icing. The canopy is starting to fog up. All this make me really nervous. Time to do something about it. To contain the moisture I start directing breathing into my parka. This is the opposite of what we would do during winter camping, where the most important thing was to protect sleeping bags from getting moist by never breathing inside of them. As a result the inside tent walls would form a thick layer of hoarfrost which had to be scraped. Since scraping the canopy is not allowed, I breathe into my parka. I also open the vent—it brings in cold air, the cabin gets significantly noisier and colder, but the fog clears a moment later.

The rising sun dries out the wings, two out of three terrifying things gone, but clouds remain in sight. Chester confidently says this is great. Clouds show the wave, and it will be much easier to locate it having clouds around, rather than having a blue bird day as on our previous flight. Nevertheless I am

nervous. To occupy my thoughts, I start reflecting on my various experiences in gliding, the very first flight with Wilf, struggle to master towing, first landing with Al Hoar, a fantastic flying week with Allan Wood, first incipient spin with Ab, a rather long spin with Jean Claude, and my only flight with Phil who helped me to stop using my entire body to turn the glider. This bit of diversion made me calmer and now I can focus my attention on the flight, but not ready yet to take the stick.

Meanwhile we are in wave and much, much closer to the mountains than during our previous flight. I could easily recognize Holy Cross, Mt. Head, east side of Mt. Burns, mountains I scrambled on in the past. We crossed Highway 40 southbound with little effort. Unlike the previous flight, when it took us several tries, this time crossing was a piece of cake, as the wave was continuous at our altitude. A moment later

we said good bye to the 12,500 foot airspace restriction. What a relief, now with oxygen we could continue to climb up to 18,000 feet. We crossed the gap, reaching the influence of the Livingstone Range.

Just east of Thunder Mountain, the most northern peak of the Livingstones (which I scrambled solo in the past), the glider seemed to hang motionless. The glider was turned westward, and yet we were not moving forward although we were climbing up at 6 to 8 knots. What a bizarre feeling, just like surfing a kayak on a wave, the ground below us would not move a bit. We stayed in this 'surfing mode' for a while and this is when Chester handed the stick to me, and it was my turn to surf. Amazing, that after such long break my muscle memory was still good enough to fly! Thanks to my patient Cu Nim gliding instructors who invested 80 flights in me between 2012 and 2014! Clearly you are amazing as I still remember how to fly!

The clouds towards Waterton looked different, unfamiliar, most likely not promising. Nevertheless Chester decided to explore. He asked for clearance when over Highway 3. What a great feeling not to be required to lose hard-gained elevation. Once the air traffic controller gave us a transponder code, we were set and proceeded south. On the south side of Hwy 3 conditions were not nearly as strong. "To be expected", Chester explained, "lots of energy is lost here—hence the windmills in the area. However"—Chester pointed out a cloud in the distance—"let's head in this direction, we will catch lift just west of the cloud." This happened several times during our flight, we would be losing altitude and Chester would say—"we will catch a lift in a moment," and sure enough, the lift would magically appear.

We were flying over the Castle area, and I recognized Cloudy Ridge Junior that I climbed solo last August. Soon Waterton Lakes came into view, Sofa Mountain, and the US border. We made sure we did not cross 49° into the States. Then one turn and we headed northbound. The wave shifted significantly to the east. Once we crossed Hwy 3, flying north seemed much faster. To the north, there were much fewer clouds than in the morning. The plan now was to reach Moose Mountain (north of Bragg Creek), but north of Longview the wave became scrappy, and we abandoned the plan north of the Sheep River and turned back south. Chester did not want to overwhelm me with nasty stuff.

The clouds over Waterton looked even

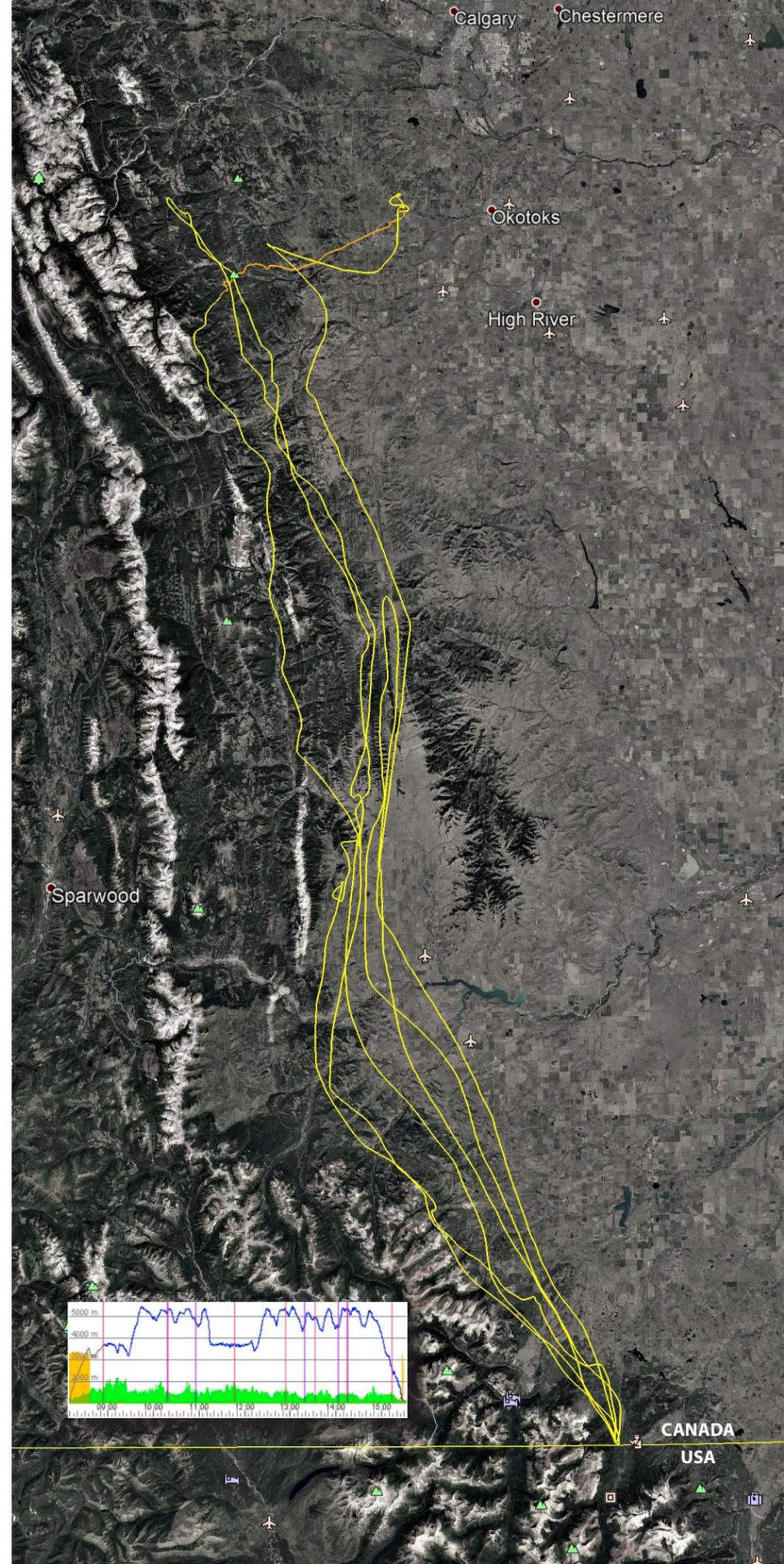
weirder this time, nevertheless Chester requested clearance to cross the airway over the Crowsnest Pass and we tried our luck once more. Surprisingly, this time the wave was much stronger and we started seeing mountains in Glacier National Park with Chief and Divide Mountain dominating the horizon. I texted Sonny, a friend of mine with whom we scrambled on Divide Mountain last May. He knew we started our flight around eight am, and responded surprised, "How do you go to the washroom up there?" "You don't," was my response, and "... you can watch FZWW soaring on www.flightradar.com". Sonny said, "This is so cool—I see you over Pincher Creek!"

We repeated the journey north-south-north one more time. North of Chain Lakes, the sky was completely blue, shortening our third leg to the north by almost 100 km. Around 3 pm, with the day being so short, the wave petering out to the north, and the fact that we were heading to Las Vegas the next morning and we could not risk out-landing, it was time to return. I am amazed how the wave shifted. In the morning lift was over Livingstone Range/Centre Peak—Cowley was visible from afar. On our final leg home the wave was just above the Cowley airstrip!

Flying over Chain Lakes, Chester obtained clearance to descend northbound through Calgary's Control Area, but preferred to lower the sailplane to 15,000 feet. "Let's not overuse the hospitality of ATC." Full spoilers, wow! Rather exciting experience—the Arcus drops down at an incredible rate, reaching quickly the desired altitude of 15,000, good enough to comfortably reach Cu Nim. What a luxury to be in a modern high performance glider with a terrific glide ratio, an amazing moving map display showing our destination with needed gliding ratio, and having ATC clearance.

When flying back to Black Diamond we hit strong winds, and reaching Cu Nim was rather rough. The glider felt like a paper airplane thrown about easily in the wind. With the pressure change, the altimeter shifted on us significantly by 400 feet since the morning. Chester disregarded the instrument readings and landed visually. It was good to be on the ground after 7.3 hours in the air.

Matt and his dog Yukon showed up with perfect timing to help us get the Arcus into the hangar. At 1,050.84 kilometres it was the 7th longest flight of the day in the world, longest in North America, and who knows—maybe the longest ever flight by a couple :-)—still to be confirmed.





Winnipeg Gliding club



PW6 First Impressions

Jay Allardyce

2019 was our first season with two new PW6s and everyone was very excited by the novelty of having two new brand gliders. The PW6 is certainly aesthetically pleasing and seems to be well built. Both of our gliders have just over 100 hours each on them now. The cockpits are showing some wear and tear from the high cycle club operation. Time will tell how they hold up durability-wise in the club environment. We've had good success reteaching everyone how to open and close canopies so fingers cross that the canopies will remain crack-free for a long time.

Flying wise, the PW6 flies very nicely. Both new and experienced pilots seem to adapt to the glider very quickly. The biggest thing pilots remark when flying it for the first time is

how easy it is to coordinate the glider in the turn. The glider thermals nicely in tight, high bank turns, spins well with some coaxing and gives lots of notice prior to entering the spin. Given the higher performance relative to our old trainer, the Krosno, it has taken pilots a bit of time to adapt to flying a wider circuit. The airbrakes also aren't quite as effective as the Krosno but are certainly very adequate. Speed control can be a bit of a problem for those not accustomed to slipperier gliders but after a bit of practice, most pilots fix this issue on their own. It does take pilots a bit of time to get used to the flare and landing attitude given the need to flare at just the right point to avoid touching the tail while also keep the nose wheel off the ground, but the glider is very forgiving and stands up well

to 'positive arrivals'. It tends to float in the flare if you carry a bit of extra speed so pilots need to practice good disciplined speed control to make precise landings. The slow but steady application of airbrake in the flare also helps to get the glider to settle down on the runway.

Overall, the PW6 seems to have been a good addition to the club and is being enjoyed by all types of pilots. The one thing we haven't really leveraged quite yet is the ability to go cross-country but I'm hopeful in 2020 that we'll have some days that will allow some moderate distance flights to be done.

Jay Allardyce, CFI
Winnipeg Gliding Club

Assis à l'arrière dans un Perkoz flam-bant neuf assemblé en 20 mètres, je m'apprête à faire un vol routinier avec une passagère non initiée au monde de l'aviation. Un simple vol plané sans complication, dans une atmosphère dépourvue d'ascendance. L'histoire dit qu'elle sortira enjouée et ravie de son expérience. Pour ma part, j'en tirerai une cinglante leçon de vol.

Nous sommes à l'aéroport de St-Raymond-de-Portneuf le 14 octobre et il est midi passé. La météo publique prévoit de la pluie continue pour la fin de l'après-midi. Déjà, les derniers bouts de ciel bleu s'estompent rapidement vers l'est. À part le pilote remorqueur du Citabria et un autre pilote de planeur, le Club est déserté de ses membres. Au sol, un vent faible de 2 à 3 kts souffle dans l'axe de la piste

en air calme. Par deux fois dans le passé, j'ai fait ce genre de vol de façon parfaitement identique. Un simple vol relaxant comme je les aime. Et comme d'habitude, je suis plutôt volubile avec ma passagère.

Mais, oh surprise ! À environ 3600 pieds indiqués, nous frappons de la turbulence significative et nous obtenons un taux de montée de 600 pieds/minute. J'ai immédiatement le réflexe de mettre la main sur la poignée de largage, mais j'hésite à larguer. Premièrement, je n'arrive pas à m'expliquer la présence de cette ascendance. Je trouve ça louche. Deuxièmement, il est entendu avec ma passagère que le remorquage aura lieu jusqu'à 5000 pieds. Si je manque mon coup, ça sera "poche" pour elle et pour moi. Je retire donc ma main de la poignée de largage.

ma marge de sécurité. (Ma marge de sécurité est de 1000 pieds). Aussi, d'un point de vue éloignement, je considère que j'ai atteint la limite de ma zone de confort. Je demande donc au pilote du remorqueur de tourner à gauche de 90 degrés afin d'y mettre fin.

L'altitude de largage prévue approche. On est à 22 km de l'aéroport. C'est loin! Nous sommes profondément enfoncés en territoire hostile et montagneux. Pour mal faire, le temps est devenu lourd et sombre et la pluie menace. Pour me convaincre du bien fondée de ma décision de larguer, je fais la règle du pouce suivante. Je suis à très exactement 22 km du champ. Je serai bientôt à plus ou moins 1.5 km d'altitude. Avec une finesse 20, je volerai pendant 30 km. J'ai un planeur dont j'estime la finesse en air calme à 38. Mon

utes de pouvoir me rendre aux premiers champs vachables disponibles. Ces champs se trouvent au bout de la vallée du bras du nord à 8 km devant moi. Une inquiétude définitivement exagérée, mais qui est un bon indicateur de mon soudain état de stress. Car la situation demeure dans mon esprit, si ce planeur ne se rendait pas à l'aéroport de Saint-Raymond ? J'aurai donc à faire une vache. Par surcroît, ce sera la première de ma vie !

(Une analyse subséquente du vol indiquera que j'ai une composante vent de face de 25 kts.)

Je vais donc vacher le joyau du Club avec une passagère dont j'aurai à gérer les émotions (en plus des miennes), sur un choix de champs très limités et vallonnés. De plus, je les atteindrai avec peu d'altitude de manœuvre. Tout ça en sachant qu'il n'y a pas assez de main-d'œuvre au club pour rapatrier le planeur. Sans parler du fait que je constate que la pluie prévue en fin d'après-midi sera forte et visiblement au rendez-vous. Diantre ! Au bout de 1200 heures de vol réparties entre monomoteurs, bimoteurs et 380 vols de planeur sans grandes histoires, je suis engagé dans un vol qui sera de loin le plus stressant de ma vie, toutes machines confondues. Ma passagère doit trouver que j'ai perdu ma jasette, car je ne dis plus un seul mot.

Malgré tout, je constate également une autre donnée de vol qui sort de l'ordinaire. Le planeur descend à un taux de chute qui se tient entre 50 et 130 pieds/minute. En air calme, selon la polaire, il devrait normalement descendre à environ 130 pieds/minute. D'un point de vue pratique, je me serais attendu à du 150 pieds/minutes. Ce faible taux de chute se maintient, minute après minute, kilomètre après kilomètre. Je n'arrive pas à m'expliquer ce qui se passe. L'aiguille de mon altimètre me confirme ce que je vois sur mon variomètre par son mouvement très lent. Mon calculateur de vol me le confirme également. D'autre part, n'ayant pas eu l'occasion de thermiquer, celui-ci ne me donne pas d'indication du vent. De plus la vitesse sol n'est pas affichée sur mon écran et je considère que le moment est mal choisi pour chercher à l'obtenir.

À la lumière du taux de chute anormalement faible, je rajoute 4 kts seulement à la vitesse de meilleure finesse en air calme. Je décide également de ne pas aller directement vers l'aéroport de St-Ramond. Alors je vire à

droite d'une dizaine de degrés et je me dirige vers le centre d'un groupe de champs, encore très loin devant moi, dans la vallée du bras du nord.

La longue et lente descente se poursuit dans une très légère turbulence. En approchant les 3400 pieds et pendant quelques secondes, j'arrive même à obtenir un positif très faible sur le variomètre malgré la constance de ma vitesse. Est-ce l'ascendance que nous avons rencontrée en montée qui attendait mon retour ? Je me garde bien d'essayer une orbite. Il y a trop de choses que je ne comprends pas dans cette atmosphère et le taux de montée est minuscule. Je préfère me concentrer sur les champs droits devant moi. Peu de temps après, j'entre dans de la turbulence, pas violente, mais vraiment présente, mon planeur veut pencher de tout bord, tout côté, ce qui me demande des mouvements amples sur les commandes de vol. Ma passagère me dit que ça doit être difficile de contrôler l'appareil dans ces conditions. Je pense sans lui exprimer : "Si vous saviez madame quel genre de problème occupe mon esprit présentement".

La turbulence cesse complètement quelques centaines de pieds plus bas. Le taux de chute du planeur est maintenant normal. Il oscille autour des 150 pieds/minute. Également le planeur semble mieux progresser.

(L'analyse du vol au sol subséquente démontrera que de 5000 pieds à 3400 pieds la composante de vent de face est passée progressivement de 25 kts à 15 kts. Puis sous les 3400 pieds à une mesure négligeable.)

Maintenant, tout est calme... Sauf moi. Nous sommes bien loin de l'aéroport et j'ai une vache à faire. Je choisis un premier champ parmi une bien petite sélection. Je le survole à une altitude de 2700 pieds indiquée (2000 pieds sol). Mon calculateur de vol indique que je suis à 11 km de notre aéroport. Il prévoit une arrivée à 140 pieds au-dessus de ma marge de sécurité. Je me considère assez haut pour laisser passer ce premier choix. Toutefois je m'assure de ne pas le perdre de vue. Je m'engage à nouveau en territoire non vachable et vire de 10 degrés vers la gauche. Cela m'amène à voler directement vers l'aéroport de Saint-Raymond. Mais ce n'est pas Saint-Raymond que je vise. C'est un champ vachable reconnu qui se situe 7 km devant moi. Un champ que je connais bien pour l'avoir arpenté au sol et observé du ciel. Ai-je assez d'altitude pour m'y rendre ? Un œil à l'avant à la recherche de ce champ, un

œil à l'arrière pour ne pas perdre de vu mon premier choix.

Bingo ! J'ai mon second choix en vue et il est à ma portée. Je juge que j'aurai une réserve d'altitude raisonnable pour y faire un circuit comprenant au moins un vent arrière. Étant en territoire connu, mon stress lié à cette première vache diminue sensiblement. La situation se présente bien. J'ai pleine confiance à nouveau.

Une fois rendu à la verticale de ce second choix, je porte mon regard vers l'avant. Je vois notre aéroport (4 km plus loin) sous un angle assez plat. Il me semble accessible. Je m'en approche tout en me posant les questions suivantes : est-ce le piège du "syndrome du retour à la base" qui se referme sur moi ? Suis-je en train de risquer nos vies afin d'éviter ma première vache ? La réponse est non. Je peux me rendre à notre piste par une base gauche, mais sans surplus d'altitude. Je procède donc vers l'aéroport. La manche à vent pend presque verticalement, le même vent que nous avions à notre départ nous y attend. L'atterrissage est sans histoire.

Deux heures plus tard, la pluie battante et le vent s'abattaient sur Saint-Raymond. Un fort vent du sud-ouest comme il se doit...

Que s'est-il passé aux altitudes supérieures à 3500 pieds ? En montée nous avons traversé un front chaud plutôt violent. Puis lors de la descente, nous l'avons traversé à nouveau. Un front chaud est sur une pente relativement douce. (Contrairement à un front froid qui est plus vertical.) La masse d'air chaud repousse la masse d'air froid sur cette pente douce et ce faisant cette masse d'air chaud s'élève le long du front. Aux altitudes supérieures à 3500 pieds, nous étions dans une masse d'air chaude qui subissait une ascendance. Ce qui explique la température agréable de l'habitacle à 5000 pieds un 14 d'octobre et les bonnes performances du Citabria lors de sa montée. Notre taux de descente exceptionnellement faible. Et surtout la composante vent de face qui semblait venir d'un autre monde. Qui en fait, provenait effectivement d'un autre monde...

Ce sont les cartes météo analysées suite au vol qui m'ont mis sur la piste des explications.

La prochaine fois il serait préférable que je les consulte avant le vol. D'autant plus que par nos temps moderne cette information est tellement facile à obtenir.

DOUBLES PERCEPTIONS POUR UN MÊME VOL

Denis Saucier

27. Je m'attends à ce qu'en altitude celui-ci vire au nord-ouest et augmente légèrement en force.

Nous décollons vers une altitude de remorquage prévue de 5000 pieds. Après un virage de 270 degrés vers la gauche, le pilote du Citabria nous amène sur une longue ligne droite au NNE comme je l'ai demandé. La stabilité de l'atmosphère me confirme qu'il n'y a aucune ascendance. Avec la couverture nuageuse qui s'épaissit et qui cache complètement le soleil, ce n'est pas surprenant. Le Citabria performe comme il se doit avec son 400 pieds/minute de montée et sa vitesse de 61 kts. Je prévois revenir sur la même ligne droite avec un taux de chute d'au plus 150 pieds minutes à la vitesse de meilleure finesse

La turbulence diminue, mais sans totalement disparaître. À cette altitude, je me demande ce qui crée cette très légère turbulence sous des nuages stratifiés. Le taux de montée revient à 400 pieds minutes ce qui demeure très surprenant considérant que l'on dépasse les 4000 pieds. Je voudrais bien mettre sur le dos de la fraîche température d'automne cette performance du Citabria, mais il s'avère que la température ambiante à l'intérieur du planeur est particulièrement douce et confortable. Bizarre...

À 4700 pieds, toujours en ligne droite vers le NNE, mon calculateur de vol m'indique que nous sommes à 20 km de l'aéroport et affiche une altitude d'arrivée à l'aéroport de Saint-Raymond de 1000 pieds au-dessus de

calculateur de vol affiche une altitude d'arrivée à l'aéroport de 1280 pieds au-dessus de ma marge de sécurité. Et en ce qui concerne le vent, je m'attends à une légère composante de vent arrière.

Je largue donc en pleine confiance à 5050 pieds. Le pilote du remorqueur étant déjà avisé par radio, je vire à gauche et prend la vitesse de meilleure finesse en air calme. Ensuite il ne me reste plus qu'à prendre ça "cool" et à regarder le paysage passer.

Et c'est justement en examinant le paysage que je me rends compte qu'il est stable... Il ne bouge presque pas ! Il passe avec une lenteur désespérante ! À un tel point que je doute pendant environ une ou deux min-

CONDOR 2

le vol en planeur virtuel, ou comment continuer à voler l'hiver au Canada

Pascal Mourgues

Avez-vous entendu parler de Condor, certainement. Ce simulateur plutôt réaliste et unique simulateur de planeur qui existe maintenant depuis une bonne décennie, devenue mature surtout avec la révolution des lunettes virtuel 3D.

Je sais j'en entend déjà dire, «<C'est quoi qui vient nous présenter, nous on est des vrais pilotes de planeur ? Que vient faire un jeu de planeur dans notre revue très belle et sérieuse de vol à voile? >> ou «< Moi je ne toucherais jamais à cette sorte de jeu, ce n'est vraiment pas réaliste...>> ...

Aussi depuis quelques mois, je peux faire tester mon simulateur portable et démontable avec lunettes 3D en réalité virtuelle, à des pilotes de vrai planeur installés dans un planeur de compétition.

Ces lunettes 3D virtuel donne à cette activité virtuel un très grand intérêt de pouvoir continuer à voler l'hiver relativement long au Québec (début Novembre à fin Avril, je le rappelle...). Pendant que la vilaine Météo canadienne se déchaine au-dessus de nos têtes, nous obligeant à laisser nos beaux oiseaux bien à l'abri dans leur remorque ou hangar en attendant les cumulus printaniers, on peut Voler...

Aussi CONDOR2 est le simulateur réaliste fait par de vrais pilotes de planeur passionnés et bénévoles, pour des pilotes de planeur.

En France la très sérieuse institutions qu'est la FFVP, notre équivalent SAC, avec un peu plus d'adhérents soit en quelques chiffres pour 2018, la FFVP a recensé 159 associations à travers la France, 11710 adhérents pour 218.336 heures de vol, à éditer un livre pédagogique sur l'instruction du vol en planeur par simulateur en 2014.

Condor est le seul simulateur reconnu et autorisé pour la formation des pilotes planeurs au sein de la FFVP. Vous pourrez télécharger ce guide pratique de l'instructeur simulateur dont je mets le lien en fin d'article.

Alors le simulateur Condor est-il un jeu ou un outil pédagogique de formation et de continuité de notre saison d'été...?

Je ne lancerais pas le débat ici, surtout que mon simulateur ne permet pas la formation, c'est la réplique d'un monoplace et permet de voler sous Condor et faire de belle balade dans les décors photoréalistes des Alpes françaises entre autres que je connais bien.

Depuis quelques mois, je voulais commencer à revoler en virtuel avec des amis francophones. Mais le décalage horaire des vols en simulateur, les fins de semaine de pluie ou neige, ne collaient pas avec les pilotes de France, et je me retrouvais alors bien seul, personne avec qui partager un vol, pour une ballade tranquille en compagnie amis virtuels.

Je ne suis pas un pilote de compétition en réel, j'aime voler à mon rythme, tranquille sans stress de la compétitivité, plus souvent en double qu'en monoplace, et là, bien souvent ce que l'on retrouve comme type de serveurs sous Condor sont souvent des vols de compétition avec des 300 ou 500km à réaliser.

Cela est bien trop long, je me vois mal assis dans mon simulateur avec les lunettes 3D pour 3 à 5h de vol virtuel...

Quand je vol en virtuel je fais des vols de 30mn à 2h maximum, et cela me permet de faire de très beau vol, et cela me convient.

Aussi en recherchant sur internet, je suis

tombé par hasard sur un site qui propose exactement ce que je cherchais, soit une équipe pour la plupart pilotes réel, qui font du planeur pour se promener. Nous avons une fréquence audio pour se parler et chacun fait son vol comme il pense le faire, sans but fixé.

Ce Team est TEAMXC.us (lien en fin d'article)

Aussi voici comment se présente cette équipe qui est américaine et dont son créateur est Bret Hess.

«<Notre team est un groupe de pilotes débutants ou avancés. Notre objectif sur Condor n'est généralement pas de se compétitionner, mais de voler en coopération au moins une fois par semaine afin que nous puissions partager des idées et des compétences et

apprendre à nous connaître, à nous amuser et à parler de ce qui a fonctionné ou non. Nous parlons via un serveur Discord. Nous volons avec des scores de type OLC et analysons les scores mais ne les stockons pas ... c'est juste pour le plaisir. Nous encourageons des marges de sécurité réalistes (voir Comment nous volons). Si vous souhaitez utiliser un téléphone ou une tablette comme ordinateur de vol (par exemple XCSOAR ou SeeYou) dans un vol réel, nous vous encourageons à prendre le temps de le lier à Condor afin qu'il vous soit très familier avant de voler dans la vraie vie. Nous pouvons vous aider à mettre les choses en place.

Nous serions heureux d'avoir d'autres groupes ou individus se joindre à nous, dans n'importe quelle langue. >>

Aussi je me suis inscrit sur TEAMXC, ceci est gratuit et me permet de voler avec plusieurs planeurs. Mais malheureusement ne parlant pas anglais, j'ai alors demandé gentiment à Bret s'il pouvait ouvrir une fréquence audio francophone, ce qui fut fait très rapidement.

Maintenant, tout est prêt pour voler en réseau avec de nombreux Nord-Américains francophones, et ainsi les vols Condor sont bien moins ennuyeux que seul, et réunis pilotes tels dans les clubs en été...

J'ai alors demandé à mon président de province du Québec de la SAC soit Sylvain Bourque, ce qu'il pensait de cette initiative de pouvoir pratiquer le vol en planeur virtuel et d'inviter à nous rejoindre sous Condor afin de pouvoir pendant la grande saison morte,

se retrouver dans un lieu de rassemblement virtuel, avoir à notre disposition pour notre plaisir, accès à un Team sympathique de pilotes planeur Américains, de voler tous ensemble et avoir notre propre fréquence de discussion francophone tels nos bonne radio VHF planeur.

Sylvain m'invita donc à faire une présentation rapide pour cette revue de Free Flight, afin de faire connaître le TEAMXC à toutes la communauté véliplane Canadienne pour que francophone et anglophone partage la même passion du planeur ceci de façon sérieuse et responsable comme on le fait dans la vraie vie. Et le TEAMXC a su faire cela.

Je vous laisse alors découvrir le site de TEAMXC ou je vous donne le lien en fin d'articles.

Pour la petite astuce des personnes uniquement francophone comme moi, qui ne comprennent rien à la langue de Shakespeare, est d'aller ouvrir le lien en bas de l'article dans votre explorateur Google, et une fois sur la page du site TEAMXC, de faire un clic droit avec sa souris et de cliquer sur Traduire en Français.

Ceci vous permettra de tous comprendre dans notre langue de Molière, comment s'inscrire, comment installer le système de radio audio DISCORD, etc... pour que nous nous rejoignons tous sur un seul et unique lieu Nord-américain, soit le TEAMXC.

Voici un petit message de Bret HESS fondateur TEAMXC.us (Traduit avec google):

TEAMXC invite tous les pilotes de planeurs québécois à voler avec nous. Nous aimons aider les débutants et prendre plaisir à voler avec des pilotes de tous niveaux d'expérience. Vous pouvez rejoindre nos vols à tout moment et parler sur les chaînes françaises ou anglaises sur Discord à tout moment, pour vos vols privés aussi. Si l'un d'entre vous souhaite planifier des vols XC coopératifs à une heure différente de nos heures habituelles de US MT à 19 h 00, nous pouvons les mettre sur notre calendrier, et je peux vous aider à configurer les choses et à partager les plans de vol de TEAMXC. - Bret

A bientôt et au plaisir de partager avec vous un petit vol et quelques discussions sur ce team pendant nos vols virtuels...

Quelques infos techniques

Site TEAMXC général : <http://www.teamxc.us>
C'est l'entrée du site de la TEAMXC qui arrive directement sur la page calendrier des

vols proposé

Site TEAMXC – A propos : <https://sites.google.com/view/TEAMXC/about-us?authuser=0>

Ceci est le lien pour arriver directement sur la partie "A propos de Nous" du site TEAMXC, About US en anglais...

Site des serveurs condor : <http://www.condorsoaring.com/serverlist/> A ce lien se trouve la liste officielle de tous les serveurs Condor mondiaux, vous trouverez sous le nom TEAMXC dans cette liste les serveurs de notre site ami ou vous savez sur quelle scène vous allez voler. Juste à cliquer sur JOIN, Condor se lancera et arrivera sur le terrain choisi par la TEAMXC.

Pour la Fréquence Radio : le TEAMXC utilise un logiciel nommé DISCORD, tels une radio VHF, vous retrouverez toutes les explications sur le TEAMXC pour l'installer sur votre ordinateur. Il est obligatoire pour ce parler

Logiciel Condor : <http://www.condorsoaring.com/order/>

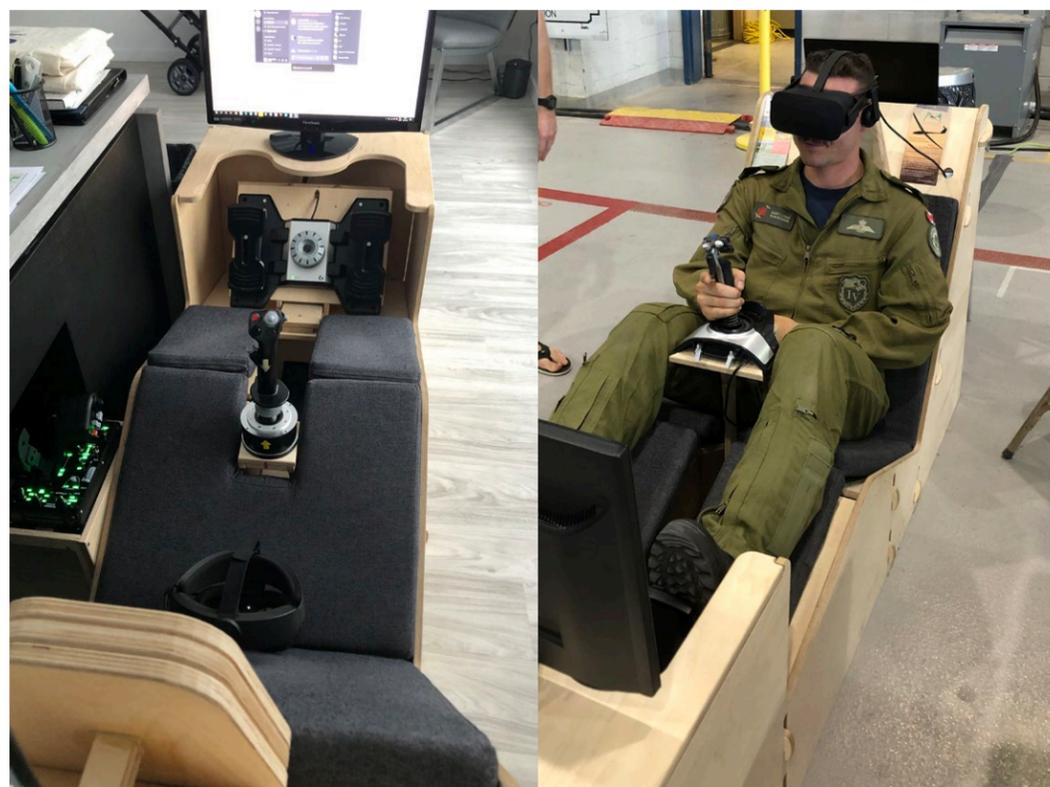
Le guide pratique de l'instructeur simulateur Edition FFV 2014 : <https://fr.calameo.com/read/0047216100467e155c169>

Quelques vidéos de Condor2

Présentation de condor, https://www.youtube.com/watch?v=Fjx-bZ-vX_IU
Présentation scène Arc Alpin pour condor2 <https://www.youtube.com/watch?v=T-kZuQnM-918>
Vol en réseau multijoueur tels que la TEAMXC <https://www.youtube.com/watch?v=Oyc-4bEUMgNs>
Le dernier planeur sorti pour condor2 Le EB29R https://www.youtube.com/watch?time_continue=6&v=RNw0mly5Vug

Démonstration lors du Pagent Aérien de Bagotville 2019, testé par les instructeurs et cadet de l'air, ainsi que le Major Daniel Surprenant, Adjoint à l'Officier régional des opérations aériennes cadets de la Région de l'Est - Unité régionale de soutien aux cadets (Est) - Forces armées canadiennes.

Si vous souhaitez plus d'informations pour nous rejoindre sur la TEAMXC, paramétrer vos logiciels de vol sur condor, des réglages informatiques et sur le simulateur 3D condor n'hésitez pas à contacter Pascal Mourgues par mail à volavoilesaguenay@gmail.com



Flight Training and Safety Committee

Annual Report for 2019

SAC Safety Report

See the separate safety report prepared by David Donaldson, SAC Safety Officer. We have had 1 mid-air with 2 fatalities this year and a total of 7 fatalities in mid-air collisions since the Invermere accident in 2011. See and avoid has its limitations. We have an excellent presentation for training pilots that was used in past years, updated, and is available to clubs. The aim of the presentation is to show the limitations of the human visual system, high risk flight situations and suggestions to mitigate. PowerFlarm can help reduce the risk but will not be the single solution. As with all electronic warning devices they must be used correctly, installed optimally, and limitations understood. Most common situations involve blind spots, descent onto another aircraft, or closing on angle from behind such that there is no relative movement that the eyes can detect. Other solutions should involve club operations to reduce risks such as fixed tow plane release points and tow plane descent corridor(s) and tow pilot training. David will have other recommendations in the safety report.

Instructor Training

There were no SAC instructor courses requested by clubs in 2019. Instructor shortages are a common issue for many clubs. David has suggested that we run an instructor ground school online, in a similar fashion to the online ground school for new pilots. There is synergy of group learning but without having to attend a central classroom site. The self-study program does not seem to be working well. In addition, having CFIs complete the practical flight lessons has not produced significant numbers of instructors. The plan would be to complete the academic portion on line and use simulators (desk top or club if available) to complete the exercises, and then meet candidates regionally with a course conductor to complete the prac-

tical. This should reduce the training time required in the aircraft.

In addition to new instructor training FTSC has been asked to work on instructor refresher program for the next season to help clubs have all instructors teaching the same program and refresh skills. Details will be promulgated later this spring. We will also look at a CFI (examiner) course based on the success of the online instructor ground school course. We will also look at the possibility of a Course Conductor training course.

David will distribute a Survey Monkey to look at point of view of potential pilots motivation to instruct, why the leave and why they stay as instructors. This information will help us better tailor FTSC services to clubs.

Instructor Refresher Training

ASC had requested that FTSC provide refresher training points for instructors based on identified high risk events/traps, tricky lesson scenarios, and most forgotten items. FTSC is examining in more detail and preliminary discussion has identified low and slow maneuvers and those with air brakes open, tow plane upset situations, and low skidded turns. Difficult lesson scenarios include stability demos, stall with angle of bank demo, and landing with high surface winds. Things most often forgotten would include canopy locked, air brake locked, correct gear operation, downwind checks, tail dollies, closing canopies after exit, and calculating/using approach speed correctly. If you have addition items from your club/personal experience, please let an FTSC member know. We will promulgate our recommendations in a free flight article later.

Instructor Standards

Why SAC standards and training materials? Transport Canada is aware of the SAC

training materials and curriculum and is satisfied with our program. However, we are not classified as a "TC approved training program" or TC "Flight Training Unit(s)". However, TC expects clubs to follow the regulations that apply to FTUs. TC issues glider pilot licenses and instructor ratings to retain control. TC rated instructors can write letters of recommendation for glider licenses and ratings based on applicant demonstrated flying skills. Some clubs have a TC "Authorized Person" who can issue temporary licenses. Clubs not following FTSC recommended materials and curriculum are not following the SAC National Safety Program and will weaken SAC's position with TC representing recreational glider pilots. TC is monitoring our training with a view of further regulating gliding which will complicate instructor training and will drive up the costs similar to power flying. Our SAC insurance is also based on the fact that we have a comprehensive central training program and standards. We are risking getting our coverage at reasonable rates for training with different curriculum or standards.

OSTIV TSP Report

The OSTIV Training Safety Panel met near Gettysburg, PA USA in September this year and was attended by the SAC FTSC NSO and Chairman and representatives from USA, GE, Sweden, and by phone Finland, England, and NZ. Safety reports from each country were presented and discussed. Findings included that most countries were experiencing similar issues with stall spin, off field landing accidents and preflight planning issues such aircraft preparation/inspection. Phase of flight for accidents were similar to Canada. In general OSTIV nations are seeing decrease in the number of accidents but there is a decrease also of flying activity. Of interest Sweden has experienced a rise in TMG/MG incidents/accidents and have identified fuel mismanagement as recurring issue. With

respect to winch training, Germany requires 10 days of training on the winch to certify operators which is about twice the OSTIV average. TSP also discussed "I cannot release signal" and any training problems were inconclusive. Canopy, airbrake, and gear up landings are common issues.

FTSC agenda points requested included wing runner check list/drills which most countries also include in their training with similar teaching points. The Canadian wing runner double check reminder that "canopy locked", "airbrakes locked", and "tail dolly off", was well received as a good practice. Emergency scenario training was reviewed at the last seminar and there were no additional best practice recommendations. It was agreed that the more exposure to emergency scenarios the better prepared the pilot will be. The US Soaring Safety Foundation uses many scenario based situations for instructor safety discussions at their Flight Instructor Revalidation Clinics (FIRC). Spiral recoveries were reviewed during the flying sessions with most countries being similar and agreeing the airbrake should not be opened in the recovery. Advanced soaring training was discussed and the Panel had not looked at producing anything by the TSP. Many EU countries include similar Bronze Badge type training as part of basic glider license standard. Sweden has a 3 tiered approach to formal training to x-country standards. Canada agreed to produce strawman for best practice based on our current Advanced Soaring Manual (see SAC website documents). Many US authors have also produced excellent training programs which the panel will look at. The Alberta Soaring Council has also produced a kit for x-country training to simplify the challenge for clubs to get active in promoting cross country flying to help retention and this may be a good contribution to TSP.

The approach control and stick shaker concept proposed by Canada was discussed and the automatic version to use software sensors in current navigation instruments to calculate surface winds was concluded as not possible with the current capabilities of these devices. The use of angle of attack information and tactile warning such as stick shaker was supported and the OSTIV Chairman (in attendance at the TSP Meeting) was going to take the discussion back to the Sailplane Development Panel (SDP) for review. The AoA technology to do this simple for sailplanes and is available, but there seems to be more pilot demand for bug wipers than stall warning! FTSC will continue to look for retrofit design solutions for older gliders based on our current developments for a black box assistant.

National Safety Program (NSP) Status

This is a Performance Measurement tool for the success of the NSP and is measured by percentage of club participation. The NSP status consists of annual Safety Reports at time of writing (currently 68% but estimating 88%), Club hazard/risk analysis (currently 80% of reporting clubs), Safety Audits (currently 72%), and Safety program manuals (68%). The safety program manuals are coming along with more clubs submitting. There is some confusion that an operations manual is the same as the safety program manual. The latter is about identifying how safety will be done in the club, such as incident analysis and information sharing. It should answer who, when, and how safety will be managed, outlining safety training and how follow up will be implemented. Examples are on the SAC website documents section in the Safety Officer Training manual. SAC is also working on incentive programs similar to the grants offered in the past.

Transport Canada CARs Review

FTSC has submitted recommendations to TC in their Regulation Modernization Review. The focus has been in definitions of "glider" and how those regulations affect personnel licensing and aircraft maintenance. The definitions in CARs are not current with the technology (I.E. if it has an engine it is an airplane not a glider). The current regulations for licensing motor glider pilots will not change in the near future and state it is possible to fly TMG/MG with a GPL and a method of launch endorsement. TC in Ottawa has agreed to this if club letters of recommendation follow the current regulations and additional training and knowledge requirements promulgated to clubs last spring by FTSC.

Flight Training Curriculum

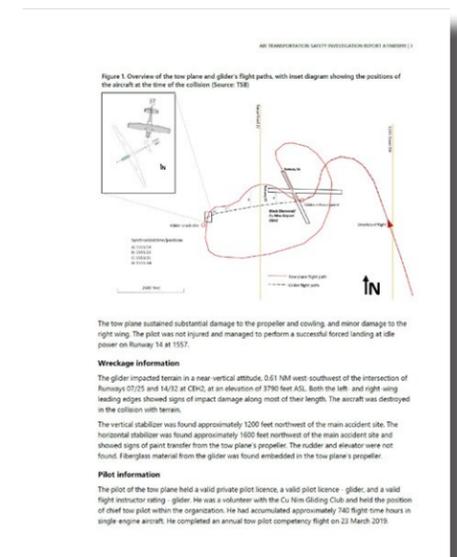
ASC has brought to the committee's attention there are some problems with the "I cannot release signal" in the emergency training practical flights and recommended withdrawing it from Flight Test standards. FTSC has asked for feedback from other clubs if this was a widespread issue. With no other problems indicated FTSC discussed with OSTIV TSP and did some flight testing with the international pilots at the recent meeting. The standard with most countries is first to use the radio. In event of radio failure the backup is a position 45 degrees to the left on tow to make the signal. A visual line up of the tailwheel with the right wheel of the tow plane is a good reference angle recommended. Swinging too far left can result in back release as slack is created in the rope. The

glider must decelerate before turning right to avoid the rope. No TSP recommendations were made to cancel this test standard. Clubs should review the exercise with their instructors.

Tow plane solutions & sub-committee report

Jason Acker forwarded an email which concludes that it appears that SAC clubs fall outside of the regulations for air operator certificates and as such do not perform aerial work. Therefore advance ultralights could be used for glider towing operations but indicated that was a personal opinion of his read of CARs and not a legal opinion. We would suggest finding suitable aircraft (advanced ultralights, homebuilt, etc.) and if we want them as tow plane, we start the work to get them approved. There is a new larger Zenith CH 750 with a 145 HP Rotax engine and CH 801 with 150-200 hp that may be worth a look. Australia has had great success with V8 automotive engine STC in Pawnees. This STC dramatically reduces operating costs with improved performance.

Chairman: Dan Cook
National Safety Officer: David Donaldson
Members: Joe Gegenbauer, Jo Lanoë, John Toles, Jason Acker
SAC Board Liaison: George Domaradzki
Director of Safety: Sylvain Bourque



The Transportation Safety Board report on the fatal accident that occurred in 2019 can be found by going to <https://www.tsb.gc.ca/> and searching case A19W0099.



THE THERMAL - EPISODE #7

Interview with Matthew Scutter

Herrie ten Cate

Predicting the weather has evolved dramatically over the last few years, giving glider pilots far greater insight into the soaring conditions in their area. Now, before even starting the drive to the gliding club, pilots will not only know what kind of soaring day it will be but also what kind of task they can expect to fly.

Over the years, glider pilots have become familiar with weather applications like Dr. Jack and XC Skies. Many pilots have also become their own weather forecasters by using various public forecasts and interpolating the information for their area.

Australian glider pilot Matthew Scudder has gone one step further. Matthew is a very experienced contest glider pilot who has had a number of remarkable flights back in Australia. And in 2015, he was the Junior World Gliding Champion.

Matthew's gliding accomplishments don't end there.

He has built the SkySight weather application designed specifically for soaring pilots and it has very quickly turned into the highly successful "go-to" site for glider pilots around the world.

I've reached Matthew Scutter in London, England.

HtC: Hello Matthew and welcome to The Thermal.

MS: Thanks for having me. I'm looking forward to it.

HtC: Many of us have wished for better forecasting tools over the years but you've actually been able to build your own. How did you do it...talk me through the process.

MS: It started for myself actually...wanting

better forecasts for the Junior World Championships in Australia. And also, so I could have a bit more insider information on what the weather was going to be like on the weekend. So, I could haggle my colleagues to be get on or off the call duty for the weekend.

HtC: But how did you figure this out...most people don't have the tools to figure this out.

MS: I started off doing my own forecasting by reading books and then later I discovered RASP through Dr. Jack and I even set up a few RASPs in Australia, which I still maintain to this day. And it all kind of snow-balled from there. I used to be a software engineer first working for a startup then a company called Blackboard and then working for Google doing software engineering and from my perspective modern meteorology is more applied computer science rather than derivative physical sciences. So that's where I put my engineering experience in engineering large computer set-ups and operating things at scale to weather forecasting.

HtC: So, is that part of the secret to this whole thing...having the massive computer power behind you that we have nowadays?

MS: I'd say the key differentiation from how we do things is that we use cloud computing at an enormous scale which lets us achieve forecasts that I don't think would be possible with conventional setups. It's just not affordable to buy a million dollars' worth of computer equipment and stick it in a rack and do an hour's forecasting per day. With cloud computing I can run forecasts on a thousand servers for a couple of hours and then turn them off and stop paying for them. And the cost of doing that is less than the electricity costs if I were to do that in Australia.

HtC: What sets SkySight apart from some of the other weather applications we've got out there...specifically how does it set itself apart?

MS: I like to think the biggest differentia-

tion is that it's still under active development. My reason for starting it initially is that I had the feeling that technology had advanced but other products had just been left stagnant. There wasn't any active development going on to keep up with the state of the art that was continually improving. So that's the key difference. And I think we've built a really nice user interface that utilizes the power of your computer to deliver a really nice map and interactive functionality to give you different ways to slice and dice the weather and that enormous computer power that we talked about lets us deliver quite accurate forecasts, using the full resources of what's available today.

HtC: You managed to British Junior team at the World's. How did using SkySight play a role in their victories?

MS: Biggest thing for us was over-laying their position on top of the weather map. So, we had that set-up on the ground and could see where they were in relation to the forecast. That was a real key differentiation for us that helped us succeed at the Junior World's. There wasn't any weather information that we had just for us or anything like that but having access to those forecasts and knowing how it all worked...certainly some advantage.

HtC: So, you're doing that in real time...and were you then able to communicate with them?

MS: Yeah...that's the role of the team captain basically...to steer the gliders around the sky. And we were able to do that in relation to the forecast, satellite picture and the rain radar, which on a number of days was really critical at the World's in Hungary.

HtC: How do you see SkySight evolving in the next couple of years...how much more precise is it going to get?

MS: The biggest recent evolution is that we've partnered with the Deutscher Wetterdienst - the German weather agency. They have a product called "top therm" and "pc met" which is essentially a German only

product, but Germans are the majority of glider pilots. And that's quite a legacy product now and they've partnered with us to develop the next generation of their products. And as part of that we have access to all of their weather models as well. So, we're utilizing their weather models for some purposes and our weather models for other purposes. They've got the capacity to update their weather models every three hours and they're using very recent data in doing that so if you look at SkySight now, at least within Europe, you're able to select our weather model which updates a couple of times a day depending on what time of day it is...while their weather model updates every three hours. So that's one of the biggest areas of improvement in weather forecasting at the moment, is the focus on the real short term, getting those latest observations and getting a new weather forecast out. They call it "now casting". We've got access to that and built into SkySight as well as our weather models. Our weather model has other advantages. It's much more detailed than what you get from nation state models...like models available from the Deutscher Wetterdienst. So, it really sorts waves and convergences and subtle terrain differences a lot better.

HtC: So, I find this fascinating. You've been able to use existing resources that are out there and you've been able to bring them altogether into your app SkySight which is then able to use all of the tremendous computer power out there to work the system...it sounds ingenious, the way you went about it.

MS: Yeah...that's the idea. You try to use the best of what's available. And make up the shortfall ourselves where it's not otherwise available.

HtC: Do you see other applications for this...it's great for soaring pilots but what about sailboat racing?

MS: Sailboat racing...probably not going to dabble in just because there's a really strong competitor already there. I've had a good close look at what they offer, and I've realized these guys are pretty good and I don't want to mess around there. But generally, aviation is an area that I'm actively targeting. We're going to have a product coming out next year that again leverages that partnership with Deutscher Wetterdienst to offer a global and likely free weather forecast for general aviation pilots with a lot of the functionality from SkySight as well. Things like route planning and I'll better adapt it to power pilots so you can put in your VFR waypoints and things like that. And also adapt it to IFR pilots as well with

charts for things like icing and so on. I'm not quite sure where that product is going to go long term. I'm going to make it free initially and we'll see where the interest is and decide from there.

HtC: So, I gather this is now a full-time job for you?

MS: Yes, I've been working full time for about three years now...

HtC: And I gather with the number of subscriptions you have that you're able to make a decent living at it?

MS: Yes...for sure. And I also have a couple of other people working with me as well now.

HtC: That's fantastic. Are you surprised that you've gotten so far so quickly?

MS: Well when I left Google, I wasn't sure if I'd be finding myself back there in a couple years' time or not. But things grew quite quickly. Particularly last year when we really cracked the European market. And things have grown very rapidly from there.

HtC: So, what's your rough number of subscribers?

MS: I'd rather not say the rough number, but I can tell you that we're the second biggest gliding weather forecaster at least within sailplanes now...

HtC: And who's the first?

MS: I'll have to let you guess that I'm afraid...

HtC: So other than SkySight...you're a competition glider pilot in your own right. What's happening on your own flying front?

MS: Well, I spent a lot of time building myself up to the World Junior Championships in Narromine and had very successful result...

HtC: You were the Junior World Champion...

MS: That's right in 2015 in Australia. But after that I've taken a little bit of a break. And it was just in the last year that I got back into it. So, I flew the World's in Poland and also the Czech Republic and came fourth in the senior World's in the Czech Republic and now I'm really starting to get back into it. Next year I have a new glider arriving. I've ordered a Diana 2 with a FES and I'm really hoping to hit it hard next

year, so I've got a full calendar of competitions including I hope both world championships and hoping to get back on the horse again.

HtC: But you're in London right now...I understand you're on our way to Namibia later this year?

MS: My short-term calendar is London until December and then December in Namibia and then I'm in New Zealand from January until March. But that's not strictly gliding related, my partner has an internship down there so we're going down for three months while she does that, but I'll definitely be making the most of the local gliding while I'm there.

HtC: That sounds lovely spending time down in Omarama...

MS: It's beautiful

HtC: Where are you going to have your glider delivered...will that be back in Australia?

MS: No...I'll pick it up from the factory in April next year and then fly the whole season again in Europe and who knows after that. I'm not sure where I'll end up the following year.

HtC: Are you working on other projects at the moment?

MS: Not so much...I'm actually attached to the company that make the Diana 2 through their avionics company. You might know them from the trailers they make. The make quite nice trailers they're called AVGs is the brand name on the trailers and they're making the Diana 3 as well. I've been working with them for a couple of years now to make sure that the Diana 2 and 3 are real successes. And I'm hoping to capitalize on that with the Diana 2 that's arriving next year.

HtC: Before I let you, go...I understand you're going to do some ridge soaring this weekend?

MS: We're heading out to the Long Mynd Gliding Club...it's a friend's birthday party. A gliding birthday party so everyone is dragging their gliders up and hopefully this forecast threatening large quantities of rain passes, we're going to have a good weekend of ridge soaring.

HtC: Safe flying and thanks for speaking to me on The Thermal Podcast.

MS: Thanks

COWLEY



Top of the Cowley Wave

Patrick Pelletier flying his DG300 "Zulu Alpha" at the top of the Cowley mountain wave in a failed attempt to break the Canadian altitude record on October 7th 2019. Patrick had received authorization from Edmonton Centre to climb to Flight Level 360 for a short period of time in an attempt to break the Canadian altitude record. Despite the forecast showing wave reaching well above FL360, the lift ceased at 28700 feet MSL where this photo was taken.

LOOKOUT:



HOW THE EYE CAN LIE

PART ONE

“I just didn’t see it!”
Sound familiar? Paul Sheffield explains why it may not be your fault

Most of us probably think we carry out a pretty good lookout when flying and we need to, because our vision is not all that it seems. How many times, for example, have you heard people say: “I never saw the person, the bike or even the truck”?

In the UK we had TV adverts stating ‘Think Once, Think Twice, Think Bike’ because drivers were pulling out of junctions into the path of motorbikes. The point wasn’t simply about looking, it was about giving your eyes an opportunity to overcome physical issues with eyesight – the natural blind spot and saccades.

Just imagine for a moment you’re sitting in a car at a ‘T’ junction as a cyclist rides past on the main road in front. You’ll follow their

path smoothly and see everything along that path, but try moving your eyes just as smoothly when there’s no bike to follow. You can’t; it’s impossible. Without something to track, your eyes will be moving in sudden jerks, or ‘saccades’, then pausing for a moment (fixating), before another saccade, and so on.

During this very rapid and short – around 20–200 milliseconds – saccadic eye movement you are effectively blind. This is because the brain suspends vision during the saccade and nothing new is seen for that small duration. If that wasn’t the case, the world would whizz past in a very blurred and disconcerting fashion. Our vision is only updated when our eyes have come to rest and had a moment to interpret the image.

The consequence of this in flying is that with large saccadic eye movements we could easily ‘jump-over’ any number of aircraft while we are ‘blind’, and if there are none where our eyes come to rest, or fixate, we will assume there are none anywhere. Even a bright flash of light would not be seen during a saccadic eye movement.

Collision course

If an aircraft is moving relative to us in that jumped-over part of the visual scene, we might see it after the saccade ceases if our peripheral vision detects movement, but if it’s on a constant relative bearing (collision course), it’s very probable we wouldn’t see it until it’s alarmingly large in our field of view.

In addition to saccades, we have a natural blind spot, and the eye makes assumptions about what’s in that blind spot. These are often the cause of “I just didn’t see it...”.

Light enters the eye through the cornea, continues through the pupil and adjustable crystalline lens, and finally falls into focus in the form of an image on the retina. This retinal image is received by more than 100 million light sensitive cells, and additional cells that convert the light (ie the image) to nerve impulses. The result is only superficially analysed in the retina and so is compressed and sent to the brain for further interpretation. Note that this compression of the data means assumptions have to be made by the retina. The main thing it does is to break down the image into edges and contours – a contour map of edges. One of the biggest assumptions is that anything within a given contour is uniform, in other words, nothing else exists within that particular boundary. There are roughly one million nerve fibres leaving the retina (the optic nerve), so clearly there has been at least a 100:1 data compression by the 100 million light sensitive cells.

It’s also worth looking at the retina’s two types of light sensitive cells in more detail: rods and cones. Cones require a lot more energy (brightness) to work and therefore generally only function in daylight conditions (photopic conditions). Cone cells peak in number in the centre of your retina – the macula (and the macula therefore gives rise to the centre of your field of vision and its peak resolution) – and rapidly decrease in number more peripherally.

Daylight conditions

Rod cells only work in low light (scotopic conditions) and are completely bleached out

and functionless in daylight conditions. Rod cells are much less numerous in the very centre of the retina, which is why a faint star appears to fade if directly looked at, and brighter if looking just to one side of it at night-time. Rod cells cannot detect colour, and so the colour of navigation lights is only seen by the cone cells, and they only function when there is sufficient-focused light energy at night to stimulate them. Fortunately, rod cells at night are extremely sensitive and excellent at detecting flashes.

In daylight conditions then, what you might think of as one big clear, detailed picture is far from it; detail is seen very centrally, in an area roughly that of a thumbnail held at arm’s length. Not only is this area small, but also an image falling on it has to be stable for a moment for retinal processing, and for the higher brain centres (the pilot’s attention) to comprehend. The more peripheral your field of vision, the less resolution. Try reading a car number plate by moving your eyes (your point of fixation) just one car width to the side.

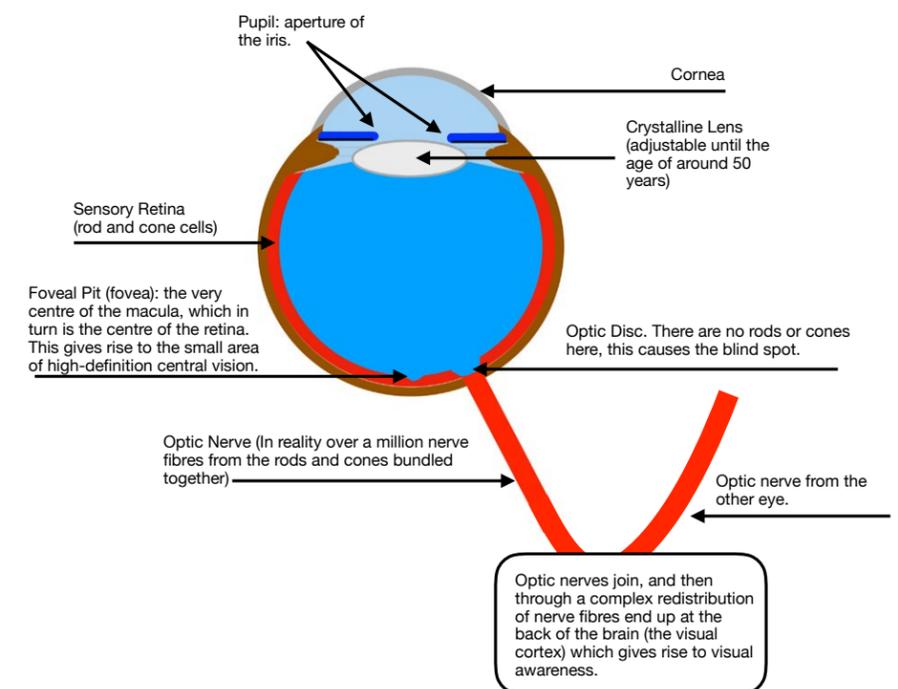
Meanwhile, the cones in the periphery of the retina are responsible for the peripheral

stant relative bearing – a collision course.

On top of all this, the nerves from the rods and cones pass through a hole in the retina (the optic disc), which gives rise to a small, circular area called the blindspot about 12.5 degrees from your absolute central vision (your fixation point), about the size of a fingernail at a hand-span’s distance, where there is no vision whatsoever.

Visual field

This area of blindness is to the right in the right eye, and to the left in the left eye on the horizontal plane. Each eye simply fills in the blind area with whatever it sees around the edge of the blindspot, so in a blue sky it will be filled in with blue – the retinal data compression assumption. Thankfully, one eye tends to cover for the other blindspot with its visual field when looking ahead. It is possible when just moving your eyes to the left that the right eye doesn’t cover the blindspot in the left eye, and vice versa when looking to the right, so it’s crucial to turn one’s head when looking around to maintain a full field of vision.



visual field in daytime, and it is now motion detection that comes to dominate. You may have noticed a flickering fluorescent light bulb in your peripheral vision which appears less flickery when looked at directly. Peripheral vision is especially good at detecting motion and flicker. Movement of an object is a very important attention-grabber. This is fine if an object isn’t on a con-

Then there is empty field myopia. It is easy, in a younger eye (roughly less than 50 years of age), in a featureless sky, or poor visibility, with no visual cues to stimulate the eye’s focus, to stop actively adjusting the crystalline lens. Focus comes to a rest at a point in space one to two metres away – this is called empty field myopia (effectively a temporary short-sightedness). The result is you won’t

necessarily see anything that does gradually appear in your field of vision, as it will be out of focus. To counter this, we need to look at an object at a distance, preferably some feature on the ground, the sharp edge of a distant cloud, or even the wingtip.

The focusing crystalline lens of the eye also suffers a significant age-related loss of ad-

be returned to proper focus. With a hardening crystalline lens due to age your distance vision will become gradually blurred as no compensation can take place.

So, what can we take from all this? I don't own my own glider, so I have to wait for a club single-seater to land. On an excellent day, when the thermals are so strong that

Attitude of mind

In reality, both these methods have their uses, but in the latter case if I'm looking for a distant aircraft, I'd almost certainly not see one that was there. Here lies the clue on how to look out for other aircraft. The first step is attitude of mind. If I think it's unlikely there's an aircraft there, the temptation is not to look properly. So when looking out, absolutely assume there's something out there. Next, look in the area of sky the threat is most likely to be. Where these are, and how we move our eyes and head depends on the mode of flight we're in, and what we're flying. Gliding and light aircraft typically have very different flight paths. These will be looked at in the second part of this article in the next issue.

Quite apart from the physiological limitations, the eyes are vulnerable to other visual distractions; lighting, illness, fatigue, emotion, the after-effects of alcohol, certain medications, dehydration and age all play their part. There are also additional challenges, such as atmospheric conditions, glare, deterioration of transparencies, aircraft design and cockpit temperature, which all take their toll on your eyes and what you can see.

You'll probably be familiar with the problem of 'constant relative bearing', or 'stationary in the field of view', mentioned earlier where colliding aircraft have a relative bearing constant to each other until impact. The subjective effect of this is that the collision threat remains in the same place (stationary) on the canopy – so looking intently is key. An unfortunate consequence of 'constant relative bearing' is that pilots are most likely to see aircraft that are moving in the field of view and therefore not on a collision course. Frustratingly, it's the very ones on a collision course that are so hard

to see because they don't move in your field of view.

Collision threat

A quick bit more science shows that as a collision threat approaches, its angular size roughly doubles with each halving of the separation distance, so colliding aircraft stay relatively small until shortly before impact when it all happens rather quickly. This presents a bit of a challenge even if you do perform a good lookout, but it underlines the importance of apportioning the correct amount of time for a systematic and repetitive scan pattern to spot aircraft early.

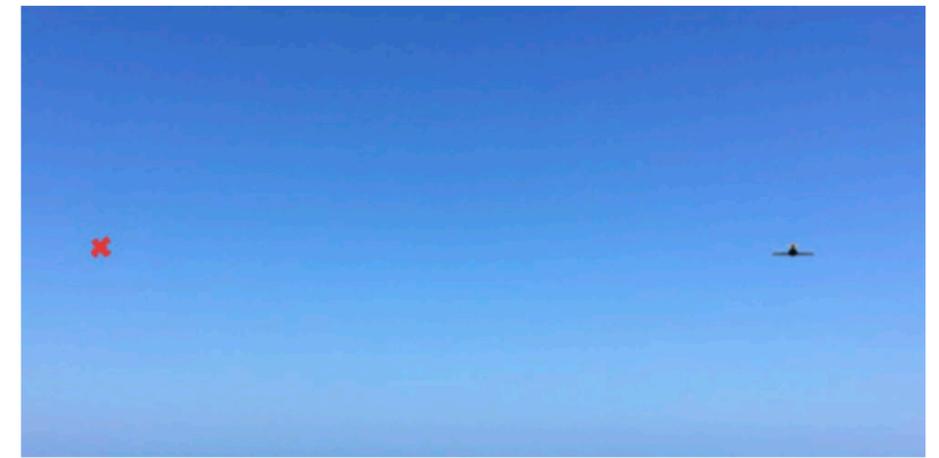
It's a curious thing about flying that many

pilots believe they keep a good lookout when, in reality, it's less than effective. Glancing out and scanning with non-stop eye or head movements is unproductive because for the pilot to perceive another aircraft, time is needed for a stable image of it to fall on the retina, up to one second in fact.

Lookout should be performed using a series of eye and head movements with intervening fixations, the latter being the only time when the outside world is really being interrogated. Carrying out regulated scans may sound a bit formulaic and, let's be honest, boring, but they do work. That said, there is no one technique that suits all situations or all pilots, so it is important to develop your own comfortable and workable scan.

In short

- Ensure your eyesight is properly focused in the first place with clean spectacles and canopies, and your eyes focused in the distance.
- Only a small, central area of your vision is high definition.
- The peripheral retina is good at detecting movement, but an aircraft on a collision course, a constant relative bearing, has virtually no movement until the last few seconds.
- You must turn your head as well as your eyes to mitigate the effects of the natural blindspot. Additionally, moving your head relative to the canopy or windscreen helps reduce obscured areas from canopy furniture, pillars, high/low wings etc.



Paul Sheffield went solo at 16, then gave it up, apart from the odd week's gliding holiday around the country. He took it up again and got Silver C 20 years later. Family/work commitments meant that Paul gave up gliding again until in recent years. He now flies from the Gliding Centre and is hoping to try cross-country flying. Paul has been an optometrist for 35 years.

Cover your left eye and look at the red cross (above) with your right eye only, from a distance of approx 40cm. The aircraft will disappear, if it doesn't, move your head slightly closer, or further away from the page until it does.

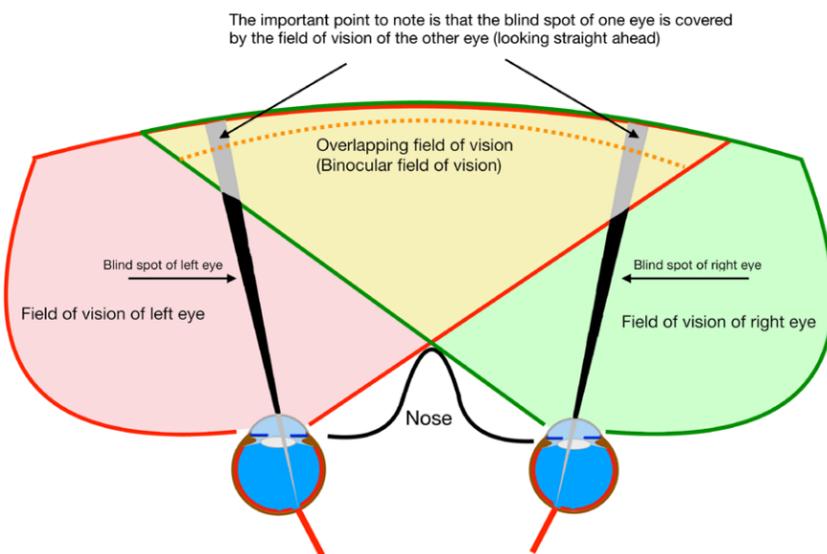
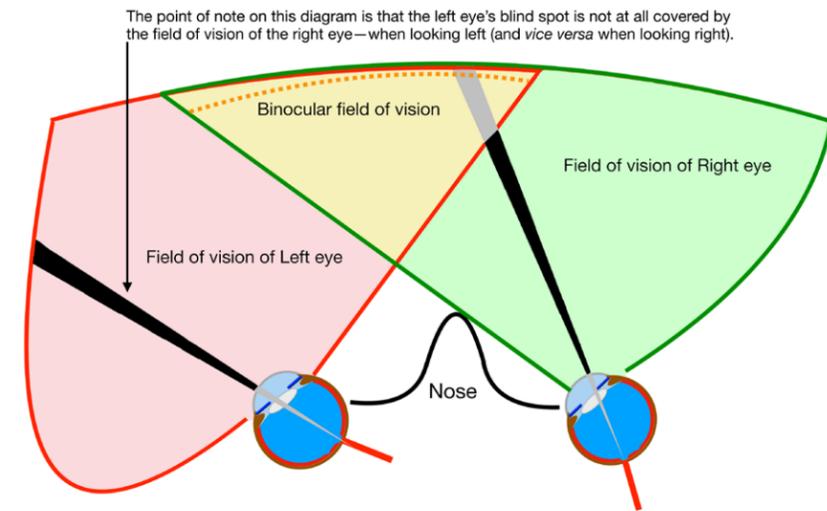
The aircraft is now in the blind spot of your right eye.

Now open your left eye (whilst still looking at the red cross). The aircraft will re-appear, but not that obviously. The left eye's field of vision is now making up for the blind spot in the right.

Now, keep looking at the red cross with both eyes open and slowly turn your head to the left (which is in effect the same as glancing to your right without a head movement), the aircraft will disappear again as your nose cuts off the overlapping field of vision from your left eye. This could be quite a small movement if your nose is larger, or your head held slightly chin high.

This latter demonstration shows that when looking to your right, without moving your head, it is possible that an aircraft further to the right is lost in your blind spot even though your field of vision extends well beyond that point. Turning your head, ideally roughly pointing your nose in the direction you wish to scan, will allow the fellow eye to cover the other's blind spot. The same is true for the other eye if looking the other way – close your right eye and look at the aircraft with your left and the red cross will disappear.

Lookout: How the Eye Can Lie, was written by Paul Sheffield. It was kindly provided by the British Gliding Association's *Sailplane & Gliding* magazine. www.sailplaneandgliding.co.uk



justment after 50 years (presbyopia – this being the reason that that age-group end up with reading spectacles or multifocals), with virtually no focusing adjustment by the age of 55. Beyond this age, the eye's focus will set at a distance dependent on whether you had previously perfect eyesight (rare), myopia – in which case your spectacles should give you good distance vision regardless of your age, or are long-sighted (hyperopia). In the latter case this is not as good as it sounds because when younger the crystalline lens can compensate for hyperopia (an eyeball that is a fraction short) and your vision can

even dustbin lids are going up and not coming down, I search the bit of sky 'my' glider was last seen in to see where it's got to, and whether it's coming back! I make lots of small eye movements in the area it's most likely to be, pause, look intently and examine that small bit of sky before moving a little further to the adjacent piece of sky. If on a non-flying day someone had asked me to look for an aircraft in the sky, I would probably make large saccadic eye movements, pausing for as short a time as possible so as to cover as much of the sky as I can.

A SALUTARY TALE...

In 2009 two Grob Tutors (a single-engined, two-seat trainer) collided at 2,500ft. The visibility was good with light scattered cloud.

It took on average just 20 seconds for them to impact the ground.

Minimum operating height of the pilots' parachutes was 500ft and, due to the aircraft flight trajectory, after collision they had 10 seconds to minimum abandon height.

The pilots and students would have been shocked and disorientated, the aircraft rolling and yawing about a new, unfamiliar C of G with increased G loads.

There were no survivors. Recommendations/Observations by the MoD:

- Get to be thoroughly familiar with the abandon drill of your aircraft, and know

exactly where to find your parachute handle... seconds really do count.

- Conspicuity of aircraft (they were white with blue flashes on the fuselage) was poor against a bright sky, especially against clouds.

- Obscuration of field of view by canopy arch required significant head movements to mitigate.

- Glare from the sun.

- Windscreen zoning — the tendency to look out through the easy, central parts of a canopy, and not to the edges.

- Lookout, although never perfect, must be developed and practised to search in the higher risk areas.

In general, the probability of a pilot seeing a threat until a short time before impact is low.

SAC Safety and Instructor Development Grant

The renamed SAC Safety Improvement Grant program is back to life for another three year period, with a new goal of promoting safety through instructor development. Stress on instructor training is the investment we wish to promote in this iteration of the grant. Safety is one of SAC's highest priorities and the SAC Safety Improvement Grant was introduced in 2015 to assist clubs with safety-related expenditures, with the ultimate goal of improving the safety culture at SAC clubs across Canada. The SAC board of directors has committed to a 3 year term for 2020-2022 for the program with grants of \$40,000 for each of the 3 years. The program will be providing a total of \$120,000 to clubs to support safety improvement initiatives. Each SAC member club will be receiving a minimum of \$1,000 per year if they have a minimum of 5 members. No safety expenditure made prior 2020 will be taken in consideration.

The goal of the 2020-2022 Safety and Instructor Development Grant is to improve the safety culture at clubs across Canada by first encouraging instructor initial training, refresher and upgrading, and secondly by encouraging clubs to think about how they can improve safety in their operations and also encourage compliance with SAC's National Safety Program. More information on the Club Annual Safety Report, Safety Audit and SAC National Safety Program can be found at: <https://www.sac.ca/index.php/en/documents-en/safety-and-training/accident-prevention>

The phased approach used to determine whether a club is eligible for the disbursements will reward clubs for compliance with SAC's National Safety Program with the goal of full compliance by every club every season. In addition, new requirements at the end of 2020 to receive the 2021 grant and another new requirement for the end of 2021 to receive the 2022 grant have been created focusing on Instructors.

Disbursements for the grant program will be dependent on the club complying each year with requirements of SAC's National Safety Program which include:

- The submittal to the SAC National Safe-

ty Officer (NSO) (david.donaldson@greatlakesgliding.com) before December 1st of a Club Annual Accident & Incident Safety Report of the previous season;

- The submittal to the NSO before July 1st of a SAC Club Safety self Audit performed within the last 3 years;
- And to have a Club Safety Manual in place based on the SAC National Safety Program and reviewed on an annual basis. (this is not an operations manual) Club Safety Manual content updated and mitigation actions for risk factors submitted to National Safety Officer before July 1st of the actual season.

In addition to the above, each club will have to accomplish:

- For July 2020, an annual safety seminar and recurrent training in place for all SAC clubs members. The safety seminar and recurrent training could be available at club level, regionally or nationally;
- For July 2021, to receive the 2021 and 2022 allocation, all pilots need to pass an annual flight review;
- For July 2022, to receive the 2022 allocation, SAC clubs Instructors need to complete an instructor recurrency review within the last 3 years.

The safety grants will be allocated to each club based on the total number of paid SAC members on July 31th of each year of the program. The estimated club's grant allocation would represent about \$45 per paid SAC member. Please note that this is an estimate and actual clubs allocations will be dependent on membership numbers registered at the SAC office on July 31th of each year. Clubs will receive a letter outlining their allotment in August of each year of this three year program.

To apply for the SAC Safety Improvement Grant, SAC clubs should contact their Zone Director outlining their plans for the grant. If the expenditure is not one of the approved items below, the Zone Director will consult

with the SAC Board and the Flight Training & Safety Committee to review the proposed expenditure.

Following approval from the SAC Board, clubs can then proceed with the expense and will receive reimbursement by mailing receipts for the expense to the SAC Office and copies via e-mail to sacoffice@sac.ca

SAC is willing to consider any instructor initial training, refresher and upgrading and also any safety related equipment or initiatives that will enhance safety. If your club has other suggestions for the SAC Safety Improvement Grant, do not hesitate to contact your Zone Director to verify if it would be eligible.

Maintenance of equipment is not considered an enhancement to safety in this program.

List of recommendations items for safety improvement:

- > *Instructor training, refresher & upgrades*
- > *Attendance at Safety or Instructor Clinics*
- > *Pilot training & safety meeting expenses*
- > *PowerFLARM units*
- > *Aviation Radios*
- > *Transponders*
- > *Energy absorbing foam cushions*
- > *Sailplane tracking devices (Spot, Spider Tracks, etc)*
- > *Parachutes*
- > *Ballistic recovery systems*
- > *Stall warning systems*
- > *Landing gear warning systems*
- > *Replacement of Schweizer hooks with Tost on tow planes*
- > *Pulse oximeters*
- > *First aid training*
- > *Airfield safety improvements*
 - *Weather station*
 - *Obstacle removal*
 - *Runway improvements*
 - *Safety signage*
 - *Movement control (fencing, security camera, gate locks, etc)*
 - *Tie downs*
 - *Fuel, battery, oil storage improvements*
 - *Pool noodles (protect trailing edges or runway traffic control)*
- > *Additional fire extinguishers and First Aid Kits*

continued on page 25...

SAC Historian

Annual Report for 2019 - Bruce Friesen

In the SAC Historian portfolio, far and away the most exciting 2019 news is the revival of Free Flight/vol libre magazine. Our new Editor, Ben Hornett, flies with the Cu Nim Gliding Club south of Calgary and is really excited about his newly acquired half-share in an LS-6b. Ben brings a lot of energy and enthusiasm to the editor position. He also brings the perspective of our next generation of cross-country and contest pilots.

Ben expands on his vision and plans for the magazine elsewhere in the reports package. I will just emphasize the critical role for each of us, the essential need for each of us, to provide Ben with content for our magazine.

Have you caught on to Herrie ten Cate's "Thermal Podcast" yet? If not, you must! Herrie launched "The Thermal Podcast" earlier this spring, and his efforts to share soaring stories through the podcast medium are already attracting notice and acclaim world-wide. Herrie is a former CBC Radio producer who now uses his journalism skills to create a podcast aimed specifically at glider pilots and the sport of soaring. You will hear everything from the background to the latest record-breaking flights to gliding book reviews. The Thermal Podcast's wide-ranging content includes enough soaring history to permit this report to claim some reflected glory! Access Herrie's work through your normal podcast supplier. I highly recommend it.

Make space in your calendars for IVSM 2020. What is an IVSM? The International Vintage Sailplane Meet, to be held at Harris Hill Soaring Center at Elmira, New York, 4-11 July. The Harris Hill Soaring Corporation, National Soaring Museum and Vintage

Sailplane Association will welcome you to Harris Hill and the scenic New York Finger Lakes for a week-long gathering of some of the world's significant and beautiful vintage and classic gliders. Also a substantive program of presentations relevant to those interested in glider history and restoration, and a full social program. For information and registration, contact the NSM (607) 734-3128, www.soaringmuseum.org or info@soaringmuseum.org. I had the pleasure of attending the last iteration of this once-every-four-years event, in 2016, and had a great time. I am planning to be there again this year, this time with the Scarlet Lady in tow. It would be wonderful to have a strong Canadian contingent this July to help put the 'international' in IVSM.

The Vintage Sailplane Association (VSA) is mentioned above. I have been a member of that organization for a few years now, and speak very highly of it – a small but enthusiastic, energetic and knowledgeable group of people committed to ensuring soaring history and historic gliders remain vital and enjoyed by future generations. The VSA decided to court Canadian membership by setting membership fees the same for American and Canadian members, absorbing the incremental cost of postage to Canada for the Association magazine, Bungee Cord (an excellent glossy publication, issued four times per year). Look them up; give them a try. They earn our support.

Speaking of the VSA, the most recent issues of Bungee Cord have highlighted the prospects for 'barn finds', for finding (or tracking down) historic airframes worthy of preservation and restoration. I am aware of at least two significant 'barn finds' in Canada during the past year. They are out there! Let's resolve to find them and treasure them.

We can also treasure all the other elements of our soaring history—documents, photographs, artifacts. During 2019 several individuals took me up on my offer to take possession of such things, and protect them until lodged with a permanent protective environment such as the National Archives of Canada. If you possess interesting things, or bump into interesting things, and would like to ensure their future, please consider sending them on to me, the SAC Historian.

In that vein, important historical documents went to the Museum of Flight in Seattle. Canadians, particularly Tony Burton, made significant contributions to the Chinook Wave Project in the mid-1980s. Organized by a professor from the University of San Jose, the University of Calgary Physics Dept, and Boeing, the project used the Alcor sailplane built by Bob Lamson and flown by Tony. Tony has now assured relevant meteorological information and flight records are preserved in the appropriate location.

...continued from Safety Grant on page 24

If clubs are interested in making a large safety-related expenditure where the cost will exceed the grant amount for the club for a given year, clubs can apply for the grant to cover the remaining amount of a larger expenditure made in the first or second year of the program. For example, if a club elects to equip its entire fleet of aircraft with FLARMS in 2020 with a total cost of \$10,000, the club can apply for the grant in 2021 and 2022 and use the grant to offset the \$10,000 expenditure.

The SAC Board of Directors hopes that all clubs will take advantage of this significant grant and find ways to maximize the benefit of the grant to improve the safety culture within SAC clubs.



A Line of Diamonds

Chris and Andy Gough speak with Free Flight on a history of perseverance and achievement.

Free Flight: Chris you achieved another major milestone in October of 2019 during the Fall Cowley Camp when you flew a diamond altitude flight. Congratulations! How did the flight go and what did it feel like to reach that height?

Chris: Thanks. It felt great knowing I had finally achieved my goal. The flight was quite straight forward. I released under a wave cloud into strong lift and just tried to stay in it. I let myself get pushed a bit downwind around 14,000ft and lost the lift. I recognized it, pushed back into the wind and was back into strong lift up to my highest altitude of 25,923ft. The wave was still going up, but I knew I had the diamond and there were others on the ground hoping to do the same. I was up and down in 1 hour and 4 minutes. Patrick McMahon flew the glider after I got down and also achieved his diamond.

Free Flight: This isn't your first diamond flight; it complements the 300 km distance to a goal and a 500 km distance flight. How long has it taken to achieve the three legs of the diamond badge?

Chris: I got my first diamond at age 17 in 2001. I flew the 300km task out of SOSA in 5 hours in my dad's LS-8-18. A few weeks later I flew the same task during a x-country clinic with Walter Weir in 3 hours. It was one of the best lessons I ever had on flying fast. My flying quieted down quite a bit in the next few years, but I got back into it in 2006. In 2007, I flew my 500km distance out of SOSA in a Standard Jantar. After that, the allure of the third diamond grew. I traveled to Vermont in the Fall of 2007 to make an attempt. The weather didn't cooperate though. In 2013, I moved to Slave Lake, Alberta and was close enough to the Edmonton Soaring Club to become a member. They regularly attend the Cowley wave camp and I had my first chance to attend in Fall of 2014. My first diamond attempt got me to 21,935ft from a 5,839ft low point missing the diamond climb by 308ft. I knew I was close, but the lift died off there. For the 2017 Cowley Fall camp, I was salivating at the weekend wave forecast but my boss called me up and asked me to go to the Beechcraft factory with him to pick up a brand-new King Air. I was initially thinking of turning him down but when I thought about it, I realized that it may be my only chance to pick up a brand-new airplane from the factory in my life. The weekend was great and there were numerous diamond climbs. I also had a great time at the factory. There would be another day. Luckily this year's wave camp was it. So, the short answer is 18 years between my first and last diamond.

Free Flight: Is it true that achieving the diamond badge is a family affair, something of a Gough Gliding Rite of Passage?

Chris: I guess. I remember when I was younger, maybe 6 or 7, I was rummaging around the house and found my grandfather's 3 diamond pin. I showed it to my dad and asked him what it was. He described the three legs and told me about his and my grandfather's flights. At that point I knew I wanted to earn one for myself.

Free Flight: We hear you are currently doing some gliding in Australia and you are sharing a two-seater with your dad. Would your dad be able to give us an account of his own diamond flights? How were these similar or different to those of Andy Gough Sr? Of three generations, which Gough is the better pilot?

Andy: The gliding in Australia was a bust, smoke from the wildfires was too thick to launch for most of the time we were in Benalla.

All three of us took some time to make a successful diamond climb. Andy Gough Sr probably travelled the furthest travelling on numer-

ous occasions to Fayence in France, Zell am See in Austria and failed to contact the necessary conditions on a trip to New Zealand. Finally, the climb was achieved from the ridge at Port Moak in Scotland from a winch launch.

Diamond distance was the cross-channel flight from South Cerney, Gloucestershire to Heerlen in Holland in a Skylark 3. This flight was flown in a contest where free distance had been set for the day. Starting from South Cerney and flying east with the wind one runs out of task area at Dover with less than 300km flown. At 6,000' a few miles out to sea the opportunity presented itself to add considerable distance on the other side of the Channel. This opportunity had been anticipated and charts with the course had been prepared and eventually were used to convince Dutch customs officers that the glider sitting in the field in Heerlen, Holland had actually flown from England and not the local Service gliding club in Geilenkirchen, Germany a few kilometers across the border. Up until this flight most Channel crossing ended up on or near the beach.

I think in the same year diamond goal was flown in an Olympia 2 from Andover in Hampshire to Skipton in Yorkshire. In those days a diamond goal flight could be claimed from a straight-line flight. The Olympia had a best glide of 25:1 @ 72km/hr and the Skylark 32:1 @ 74km/hr. For distance flying downwind was the best option.

In the late 60's I made a number of trips to Scotland's premier wave sites, Port Moak and Aboyne in search of diamond height. My day came during a wave camp at North Conway, New Hampshire on my first flight. I took a 700' tow to the ridge and climbed just enough to make diamond height.

My goal diamond was a 300km out and return from Bicester, Oxfordshire to Lincoln cathedral in a Dart 17. The flight was a seven-hour slog in the blue; I think I reached 4,000' at some time in the flight. A couple of technical glitches almost annulled my efforts. The film sprocket feed of my Kodak Instamatic turnpoint camera was slipping. On the twelve shot roll of film only frames 1, 6 and 12 recorded a picture, fortunately the frames recorded the declaration the turnpoint and at the end of the flight, the supervising O.O. Glitsch#2, there was no foil or paper attached to the drum of the barograph which resulted in a very faint trace and the whole drum had to be fixed to preserve the evidence.

500km diamond was flown out of SOSA, Thamesville, Flesherton in my Mini Nimbus. On this day John Brennan in his ASW20 and I claimed the first 500km FAI triangles flown from Rockton. Peter Schwirtlich in his Libelle also flew the same flight and had completed the very first 500km FAI triangle a few weeks earlier but unfortunately his turn point photography did not match his cross-country skills and both his claims were denied.

Best pilot? it has got to be Chris!

Free Flight: Most of us are just dreaming of flying right now. What's on the horizon back in Canada this year?

Chris: I have a number of tasks planned out that I want to achieve; an out and return to Jasper from Black Diamond, a straight out to Winnipeg and a 900km triangle as well as the Canadian Nationals in Chipman, AB, May 25-June 5. I think it is the best site in Canada to run a contest because of the weather conditions, landout options and club culture. I am also looking forward to attending the Summer Cowley Camp this year as I haven't been able to attend the last 5 years.



Photos © Luke Szczepaniak

Winter Gliding at

SOSA Gliding Club

Speed Brake Emergency

Ken Armstrong

My soaring steed is a Diamond Katana Xtreme (aka Super Diamona) motorglider which has often taken me to the maximum allowable altitude of 12,500 (in Canada's west coast area) where we soar out of Hope, British Columbia with the Vancouver Soaring Association. I typically lock my spoilers in the closed position whilst she is tethered to the ground to prohibit or reduce the water or moisture that can collect in the inner wing area and potentially create corrosion. An hour prior to a flight, there had been an instance of a shower producing prodigious precipitation. The pre-flight showed no issue and the spoilers, or speed-brakes if you like, produced free and proper motion and were of course locked in for take off—something I usually do...and when I don't she will remind me shortly after take off... There was considerable moisture remaining in the atmosphere and this can be a good thing as

it told me where the cap cloud was on the peaks, as well as where the rotor cloud and the lenticulars were – great stuff! However, the downside is a restriction in visibility due to all the clouds lingering about. So, on reaching the walls of lenticulars and following the need to remain clear of cloud in this airspace, we meandered the hallways of open space where the several descending portions of the waves burned off the cloud and provided lift in front of the lenticulars. In due course we were lofted upwards to 10,500 feet and I pointed the bird's snout in various directions to garner up some OLC points for the club. There were times that the white fluffy stuff was greedily trying to fill all the airspace between the clouds and it seemed prudent to extend the air brakes to ensure a rapid descent could be readily accomplished if visibility decreased. This had occurred several times over the years when precipitation from above saturated the wave slot and attempted to make the ground disappear. Well, the Xtreme refused to extend her dive brakes. Perhaps she was shy and maybe it was because trapped moisture in the system had frozen them closed. This perturbed me somewhat as one does not want to be trapped in cloud with minimal instruments

and no nav aids. So, I wiggled her spoiler extension handle several times – with increasing effort and she still resisted my attempts to become a drag. To get even, I decided to make her appear to gain weight. These feminine devices don't like the perception of weight gain and my fore and aft movement of the stick with resulting g forces must have loosened her up somewhat to my advances and she gingerly extended the right dive brake—asymmetrically. Please note I have not been using the term spoiler to describe these boards which are exceeding effective in producing prodigious drag. I was surprised the bird showed no tendency to roll with just one extended... Some more wiggling of the joy stick and the extension handle convinced her to pop out the other dive brake in due course and the situation was no longer verging on critical. So, to be succinct, when flying in below freezing conditions it becomes a good idea to extend the “boards: from time to time to ensure ice does not weld them to the wing. Otherwise you may find yourself in a situation where you end up IMC without the ability to dive out of worsening weather conditions. Moreover, you don't want to have to make a landing on a short runway without those drag developers...

On Approach

Seminole Lake - Charles Petersen

“To have your cake and eat it too” is a popular English idiomatic proverb or figure of speech, ... trying to have two incompatible things.” Wikipedia

Combining a family vacation destination popular with the wife and kids, and a gliding vacation seems to be a challenge. And even more so in the cold winter months. But both can be had, mid-winter, in central Florida. There are resorts and theme parks for which Orlando is well known, - and they are within easy access from a commercially run gliderport.

Seminole Lake gliderport, www.soarfl.com, located in central Florida just 25 Km. West of Disney World, www.disneyworld.disney.go.com, offers soaring conditions, during the winter months that attract glider pilots from all over the USA, Canada, and even Europe. Close to the many area attractions, there many more than just the Magic Kingdom at Disney World: choose the Wizarding World of Harry Potter at Universal Studios, Epcot Centre, Seaworld, the Animal Kingdom, or others. Diversions for pilots on non-flying days include the Fantasy of Flight Museum, www.fantasyofflight.com, a true favourite of mine, but only open Friday through Sunday, or the Kennedy Space Centre at Cape Canaveral on the Atlantic coast, www.kennedyspacecenter.com; a full day is recommended for both. For a listing of attractions in Orlando, visit www.visitorlando.com.

But the glider pilot in the family is going to love Seminole Lake. This commercial operator (FBO), which has the atmosphere of a small club, offers flying 6 days a week (closed Mondays). It has one grass runway, one Km. long, with Pawnee tugs offering 2000' tows (~600 meters) for US\$50. Rental rates are on the website. If the soaring forecast is good, I expect my flying buddies there mid-morning, we help each other rig, choose a task for the day, fly it. On Sundays, after de-rigging, there is the 'social'; we share a few beers and a few lies by the pool. The recently renovated club house has an outdoor swimming pool, (although it's cool in the winter) and pilots' lounge, and customers include students and visiting pilots, many with their own ships. A small rental fleet includes: Two Grob 103 Twin II, Two

Blanik L-23, and a Schweizer 1-34. It's recommended that you get an update on rentals available.

You can of course fly with one of the resident Instructors. To fly solo in the US, visiting foreign pilots will need a reciprocal licence, issued by the FAA, and based on their own licence (and medical if that validates your native licence). The process can be lengthy, and is best started before arrival; contact the Manager at soarfl@aol.com for assistance. She will facilitate the process so your licence can be picked up at the FAA Flight Services District Office near the Orlando airport when you arrive.

Transportation

Orlando is a major airport, well served with frequent airline connections to transport the many visitors to Disney and the other theme parks. Rental cars are reasonably priced, and facilitate access to the other area attractions; you will find renting one a bargain compared to the cost of a taxi to the gliderport and back. Google Maps will prove useful. The airfield, less than an hour drive from the airport, is located in Lake County, and a web site offering visitor information for nearby attractions is at: www.lakecountyfl.gov.

Central Florida is not the Florida found on postcards, high rise hotels shoulder to shoulder along a beach; it is rural with small towns, and as you might expect from the county name, many lakes and the Green Swamp. But it has its own charm, and the beaches are just 90 minutes away. It is worth your while to research other attractions in the area, from kayak trips through the Manatee refuges, the Greek sponge-fishing town of Tarpon Springs on the Gulf coast, or the favourite winter destination for North American pilots, Sun 'n Fun www.sun-n-fun.org in April. And charming towns like Mount Dora, filled with boutiques, artist's ateliers and restaurants are worth the drive. You can request a very good interactive CD from: http://www.lakecountyfl.gov/visitors/brochure_and_cd_request.aspx; it is free.

Accommodation

There is a bunkhouse on the field offering

nice rooms or apartments, with private baths, from \$30 per night, weekly rates available, and reservations are recommended. I live in a small town, Howey in the Hills, 45 Km. North, and for golfers the resort hotel there offers rooms overlooking one of the best golf courses in Florida, El Campeon, (although Florida is filled with golf course choices), info at: www.mission-innresort.com. Condos are available for weekly rent. Or, if your family includes young children, consider renting a house in Kissimmee www.visitkissimmee.com, close to Disney and the other theme parks. Good restaurants are becoming easier to find in the country; ask the locals.

The Flying

There are good conditions in November and February, with the best March through May, when cloud bases can be 5000 feet and more, and flights of 500 Km+ are possible. Convection is weaker in December and January. An examination of the OLC for Seminole Lake will give you a better idea of what can be done, even on the shorter winter days. There is controlled airspace over both Orlando and Tampa, restricting most of the flying to NNW to SSE. SE winds bring the best conditions, often offering streets of cumulus clouds along the Florida Ridge, an invisible from the air spine of slightly raise elevation down Highway 27, where the convergence zones often appear.

The airspace should be studied before arrival, and the Terminal Control Areas understood. There is also a high volume of General Aviation traffic.

If March is a period you're considering, plan around the Seniors National Contest, held mid-month; it is worth watching, but closes the field to other flying for the duration. This is the 30 Anniversary year, and, it is the most popular contest in America, - it is limited to 55 entries over the age of 55. Some years just under half the pilots have held a national or regional title. Dates are on the web site. A posting on r.a.s. Might find you a glider to rent for this very enjoyable event, but enter early by registering on the Soaring Society of America's web site, www.ssa.org.

See you on the field...

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FAI Awards

Walter Weir

These badges & badge legs were recorded in the Canadian Soaring Register during the period 18 August 2017 to 3 March 2020. C Badges have been omitted and will be printed in a following issue of Free Flight.

DIAMOND BADGE

112	Jean-Yves Germain	Quebec	World number 7544
113	David Hocking	Vancouver	World number 7551
114	Conrad Lamoureux	Cu Nim	World number 7613
115	Chris Gough	Cu Nim	World number 7619

GOLD BADGE

343	Skyler Guest	Saskatoon
344	Jay Allardyce	Winnipeg
345	Bruce Macgowan	Lethbridge
346	Christopher Gough	Cu Nim

SILVER BADGE

1109	Rob Russell	SOSA
1110	Patrice Gravel	Montreal
1111	Denis Saucier	Quebec
1112	Jan Brochocki	Montreal
1113	Derek C. Jones	Cu Nim
1114	Geoff Minors	Lethbridge
1115	Gordon Lendrum	Rideau Valley
1116	Dino Santarossa	SOSA
1117	Seth Thorson	Saskatoon
1118	Alexandre Depoutovitch	SOSA
1119	Charles Honey	SOSA
1120	Daniel McDonald	Gatineau
1121	Kyle Corbin	Great Lakes
1122	Tyson Whitehead	London
1123	Kevin Forsyth	Vancouver
1124	Francois Proulx	Quebec
1125	Francois Saucier	Quebec
1126	Bashar Dahabra	Montreal
1127	Mark Lightfoot	York
1128	Alain Richard	Montreal
1129	Jack Mika	Great Lakes
1130	Cole Bishop	York

DIAMOND DISTANCE (500 km distance flight)

Conrad Lamoureux	Rockies	503.7	Genesis 2	Invermere BC
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DIAMOND GOAL (300 km goal flight)

Andrzej Cholewinski	SOSA	327.9	LS-4	Rockton ON
Rainer Hau	Montreal	301.7	Antares 185	Hawkesbury ON
Jean-Yves Germain	Quebec	306.3	ASG-29	St Raymond QC
Ray Wood	SOSA	301.0	PW-5	Parowan UT
Karl Waskiewicz	Edmonton	377.1	LS-4	Benalla Australia
Zbigniew Sobolewski	Toronto	305.0	SZD-41A	Conn ON
Karl Boutin	Gatineau	304.9	ASW-20	Pendleton ON

DIAMOND ALTITUDE (5000 m height gain)

Skyler Guest	Saskatoon	6500	Blanik L-33	Cowley AB
David Hocking	Vancouver	6470	ASW-19	Cowley AB
Christopher Gough	Cu Nim	5480	ASW-19	Cowley AB
Bruce Macgowan	Lethbridge	5790	Libelle 201	Cowley AB
Patrick McMahon	Cu Nim	5470	ASW-19	Cowley AB

GOLD DISTANCE (300 km distance flight)

Andrzej Cholewinski	SOSA	327.9	LS-4	Rockton ON
Rob Russell	SOSA	302.3	LS-4	Rockton ON
Rainer Hau	Montreal	301.7	Antares 185	Hawkesbury ON
Ray Wood	SOSA	301.0	PW-5	Parowan UT
Karl Waskiewicz	Edmonton	377.1	LS-4	Benalla Australia
Zbigniew Sobolewski	Toronto	305.0	SZD-41A	Conn ON
Jack Mika	Great Lakes	307.0	Std Cirrus	Colgan ON

GOLD ALTITUDE (3000 m height gain)

Sergey Skobkarev	Vancouver	3010	DG-300	Hope BC
Skyler Guest	Saskatoon	6500	Blanik L-33	Cowley AB
Jay Allardyce	Winnipeg	3145	ASW-19	Starbuck MB
Georges Boucher	Quebec	3277	LAK-17a	Baie St-Paul QC
Christopher Gough	Cu Nim	5480	ASW-19	Cowley AB
Bruce Macgowan	Lethbridge	5790	Libelle 201	Cowley AB
Patrick McMahon	Cu Nim	5470	ASW-19	Cowley AB
Pascal Hayet	Quebec	4647	Lark IS-29D2	Baie St-Paul QC
Christopher Gough	Cu Nim	5480	ASW-19	Cowley AB
Robert Williams	Vancouver	3133	DG-300	Hope BC

SILVER DISTANCE (50 km distance flight)

Rob Russell	SOSA	101.7	LS-4	Rockton ON
Jeremy Bruns	Cu Nim	72.0	DG-303	Black Diamond AB
Patrice Gravel	Montreal	54.1	DG-300	Hawkesbury ON

Mike Luckham	London	59.0	Astir CS	Embro ON
Tyson Whitehead	London	65.0	Astir CS	Embro ON
Denis Saucier	Quebec	72.5	Grob 102	St Raymond QC
Jan Brochocki	Montreal	55.1	DG-300	Hawkesbury ON
Francois Proulx	Quebec	67.0	Grob 102	St Raymond QC
Kevin Forsyth	Vancouver	50.7	Phoebus C	Ephrata WA
Derek Jones	CuNim	61.0	Discus CS	Cowley AB
Gordon Lendrum	Rideau Valley	63.0	PIK-20D	Kars ON
Dino Santarossa	SOSA	57.8	SZD-51	Rockton ON
Seth Thorson	Saskatoon	64.3	Blanik L-33	Cudworth SK
Daniel McDonald	Gatineau	51.9	SGS 1-35	Pendleton ON
Pablo Wainstein	Cu Nim	58.9	DG-303	Cowley AB
Alexandre Depoutovitch	SOSA	62.0	SZD-51-1	Rockton ON
Charles Honey	SOSA	52.8	SZD-51	Rockton ON
Peter Logar	SOSA	63.6	SZD-51	Rockton ON
Soren Christiansen	Cu Nim	52.5	DG-303	Black Diamond AB
Gordon Gregg	Rideau Valley	54.0	SZD48-1	Kars ON
Kyle Corbin	Great Lakes	145.0	ASW-19	Colgan ON
Angelo Quattrociocchi	SOSA	65.7	SZD-51	Rockton ON
Mohammed Attia	SOSA	60.0	SZD-51	Arthur E ON
Francois Saucier	Quebec	50.5	Grob 102	St Raymond QC
Bashar Dahabra	Montreal	55.0	DG-300	Hawkesbury ON
Mark Lightfoot	York	58.0	LS-4b	Arthur E ON
Molly Gibson	York	66.0	Grob102	Arthur E ON
Alain Richard	Montreal	55.0	DG-303	Hawkesbury ON
Ben Hornett	Cu Nim	63.7	DG-303	Black Diamond AB
Stephen Lazuk	Gatineau	53.5	SZD-51	Pendleton ON
Jack Mika	Great Lakes	90.8	Std Cirrus	Colgan ON
Cole Bishop	York	63.5	PW-5	Arthur E ON

SILVER/GOLD DURATION (5 hr duration flight)

Marc Vanderbanck	Montreal	6:05	Astir CS-77	Hawkesbury ON
Patrice Gravel	Montreal	5:21	DG-300	Hawkesbury ON
Alexandre Depoutovitch	SOSA	5:11	SZD-51-1	Rockton ON
Tom Bistricki	York	5:19	ASK-21	Clermont FL
Jan Brochocki	Montreal	5:54	DG-300	Hawkesbury ON
Chun Yiu Jonathan Mok	York	5:09	SGS 1-34	Arthur E ON
Francois Saucier	Quebec	5:14	Grob 102	St Raymond QC
Mark Lightfoot	York	5:12	LS-4	Arthur E ON
Geoff Minors	Lethbridge	5:11	Ka-6	Cowley AB
Gordon Lendrum	Rideau Valley	5:21	PIK-20D	Kars ON
Daniel McDonald	Gatineau	5:38	SGS-1-35	Pendleton ON
Dino Santarossa	SOSA	5:25	SZD-51	Rockton ON
Seth Thorson	Saskatoon	5:17	ASW-28	Black Diamond AB
Charles Honey	SOSA	5:24	SZD-51	Rockton ON
Owen Cole	Toronto	5:21	SZD-51	Conn ON
Peter Logar	SOSA	5:21	SZD-51	Rockton ON
Kyle Corbin	Great Lakes	5:14	ASW-19	Colgan ON

SILVER ALTITUDE (1000 m height gain)

Rob Russell	SOSA	1142	LS-4	Rockton ON
Edouard Lariviere	Quebec	1350	Grob 103	St Raymond QC
Jeremy Bruns	Cu Nim	2061	DG-303	Black Diamond AB
Mercedes Supel	Edmonton	1143	SZD Perkoz	Chipman AB
Patrice Gravel	Montreal	1731	DG-300	Hawkesbury ON
Tom Bistricki	York	1342	ASK-21	Clermont FL
Jan Brochocki	Montreal	1731	DG-300	Hawkesbury ON
Chun Yiu Jonathan Mok	York	1161	SGS 1-34	Arthur E ON
Francois Saucier	Quebec	1370	Grob102	St Raymond QC
Avery Cole	Toronto	1403	SZD-51	Conn ON
Mark Lightfoot	York	1208	LS-4	Arthur E ON
Toma Toida	Montreal	1172	Astir CS	Hawkesbury ON
Gordon Lendrum	Rideau Valley	1962	PIK-20D	Kars ON
Dino Santarossa	SOSA	1333	SZD-51	Rockton ON
Seth Thorson	Saskatoon	1283	Blanik L-33	Cudworth SK
Maria-Pilar Cifuentes	Cu Nim	1985	ASK-21	Cowley AB
Pablo Wainstein	Cu Nim	1747	DG-303	Cowley AB
Alexandre Depoutovitch	SOSA	1285	SZD-51-1	Rockton ON
Charles Honey	SOSA	1155	SZD-51	Rockton ON
Daniel McDonald	Gatineau	1124	SGS-1-35	Pendleton ON
Soren Christiansen	Cu Nim	1523	DG-303	Black Diamond AB
Gordon Rutgers	Saskatoon	2001	Blanik L-23	Cudworth SK
Gordon Gregg	Rideau Valley	1690	SZD48-1	Kars ON
Bashar Dahabra	Montreal	1310	DG-300	Hawkesbury ON
Kyle Corbin	Great Lakes	1376	ASW-19	Colgan ON
Tyson Whitehead	London	1152	Astir CS	Embro ON
Angelo Quattrociocchi	SOSA	1160	SZD-51	Rockton ON
Mohammed Attia	SOSA	1400	SZD-51	Arthur E ON
Molly Gibson	York	1094	Grob102	Arthur E ON
Bertrand Simard	Quebec	1211	Grob102	St Raymond QC
Ben Hornett	Cu Nim	1993	DG-303	Black Diamond AB
Cole Bishop	York	1237	ASK-21	Arthur E ON
Alain Richard	Montreal	1211	DG-303	Hawkesbury ON
Keith Laidlaw	York	1072	LS-4	Arthur E ON
Stephen Lazuk	Gatineau	1129	SZD-51	Pendleton ON
Jack Mika	Great Lakes	1110	Std Cirrus	Colgan ON
Elaine Ernewein	London	1495	Astir CS	Embro ON

Chipman

Site of Soaring Opportunity

Bruce Friesen

Are you wondering what soaring opportunities the 2020 Canadian National Soaring Championships at Chipman may provide? Debating the trip and the time? Perhaps an exploration of the table of Canadian soaring records will help you decide.

Twelve separate pilots' names appear on the table of records for flights originating from the Chipman Glider Field. Hands down, that is the most for any soaring site in Canada. What explains success by so many? I can suggest three factors.

Long days: Chipman Glider Field is the most northerly active gliding site in Canada. Which means long days, long hours of sunshine and long hours of convection. Chris Gough was on task for almost eight hours in flying his record triangle free distance flight in 2015. On my longest flight of 2019, I was in the air for 9.25 hours. What does this mean for a contest? Unlike some other sites, the task committee will not feel pressure to get the field back by 17:00, or even 18:00. Pilots may have the opportunity to fly four or five-hour tasks. Days used, not wasted.

Strong conditions: Not always, granted. But sometimes. Strong convection to high cloud bases, permitting fast

speeds. My 2015 triangle (speed for triangle over 400 km) at 134 km/h was most satisfying. A handicapped 113 km/h for a 300 km out and return in an old wooden glider was not too shabby either. In 2010, I had over 36 hours in the air over six days, during which period I actually took one day off as a rest day. Conditions like that come to Chipman at some point most years in May or June and last a week or more. Will such a period overlap the 2020 contest? It could!

Downwind dash: Most of the significant Canadian long-distance record flights originated at Chipman – Dave Marsden and Mike Apps in Open and 15m classes, Ursula Wiese in Female, Chester Zwarych flying his Blanik with Hugh McColeman and Reg Adam in Multiplace. The weather systems set up perfectly from time to time, and the geography and airspace are supportive of dashing downwind following glorious streets of clouds. Would a task committee send the entire field downwind to 1000 km diplomas? Be that bold? Probably not! But! After the contest? Fly home to Winnipeg? Fly halfway home to Toronto? Why not dream big?

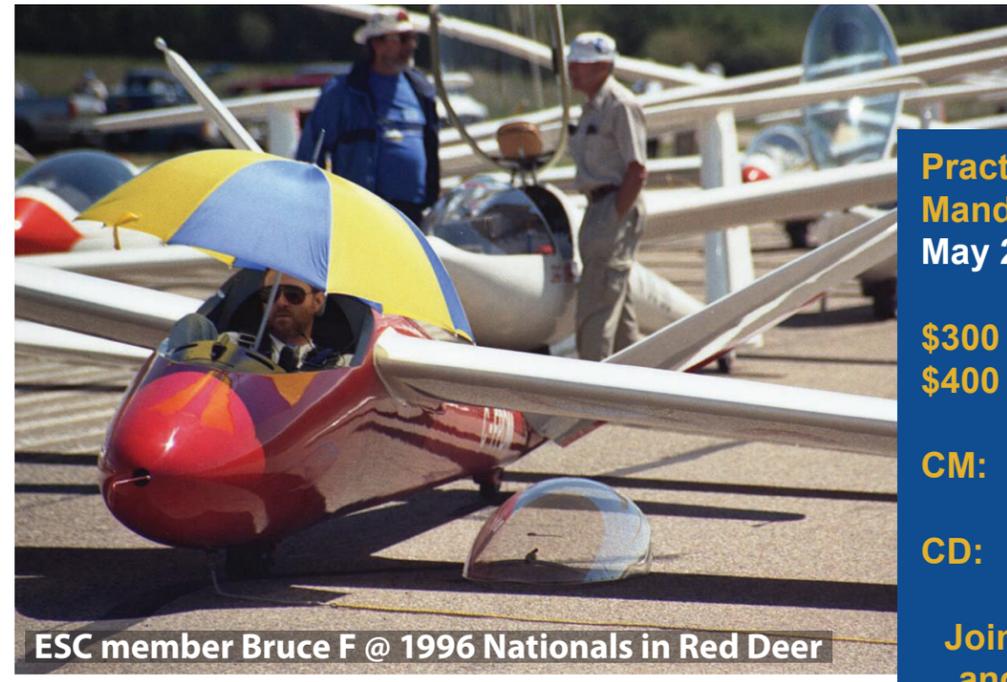
Nothing in soaring is ever guaranteed. But Chipman in late May is a pretty good bet. See you there?

See the 1984-04 issue of Free Flight to read about the first 1000 km flight in Canada when Mike Apps and Dave Marsden flew their ASW-20 and DG-202 gliders from Chipman to Starbuck, Manitoba



May 27th-June 5th, 2020

**Edmonton Soaring Club
Chipman, AB**



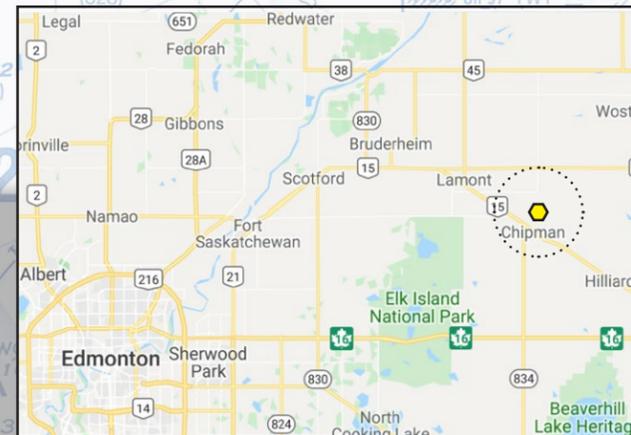
ESC member Bruce F @ 1996 Nationals in Red Deer

Practice: May 25 & 26
Mandatory Meeting:
May 26 @ 7pm

\$300 Registration to April 1
\$400 thereafter

CM: Thorsten Duebel &
Chris Gough
CD: Guy Blood

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