2015/1

free flight
vol libre

Priorities

Sylvain Bourque, SAC president

LE CONSEIL D'ADMINISTRATION DE L'ACVV s'est réuni à Mississauga du 7 au 9 novembre dernier. La réunion d'automne est la seule occasion qu'a le conseil pour se rencontrer autrement qu'à l'assemblé générale annuelle de mars. Nous avons aussi une réunion téléphonique entre chacune de ces deux rencontres. Ceci donne la chance au conseil de s'immerger dans les affaires de l'ACVV, de traiter des sujets nationaux courants, d'affaires spécifiques des différents comités et également de planifier pour 2015. Nous avons aussi eu la chance de rencontrer Jörg Stieber, directeur du comité sportif pour prendre le pouls du comité et sa planification pour les Nationaux, PanAm et mondiaux juniors à venir en 2015. Nous avons eu l'opportunité de rencontrer un des volontaires potentiels pour le remplacement de Tony comme éditeur de notre magazine *Vol Libre*. Pour plus de détails, lisez les minutes de la réunion d'automne 2014 disponible sur notre site Internet.

Nous sommes à planifier le prochain AGA. Le prochain AGA aura lieu le 28 mars 2015 à Saskatoon. La moitié de nos six directeurs sont en processus de réélection pour un terme de deux ans. Le directeur de la zone du sud de l'Ontario et de la zone Est sont volontaires afin d'être nommés pour un autre terme de deux ans. David Collard se retirera après huit ans en tant que directeur de la zone Pacifique et aussi six ans comme trésorier bénévole. David a pris la bénévolement la relève de la trésorerie suite à la retraite de Jim McCollum, directeur exécutif et trésorier de l'ACVV. David a joué un rôle important lors de la transition vers la gestion de l'ACCV par le bureau de la COPA. Il a aussi été la personne ressource de la gestion de l'ACVV par la COPA et a fait le suivi sur une base régulière. Nous remercions David pour son engagement et le travail important qu'il a fait pour l'ACVV.

◆

THE SAC BOARD OF DIRECTORS met in Mississauga on 7–9 November. The fall meeting is the only face-to-face time the Board has other than at the AGM. We also have a phone meeting between each of the two face-to-face meetings. It gives the Board the opportunity to immerse themselves with SAC business and to deal with ongoing national issues, committee items, and planning for 2015. We had the chance to meet with Jörg Stieber, chair of the Sporting committee, for a preliminary report and planning for the coming Nationals, PanAm and Junior World gliding competitions. We also had the opportunity to meet with a potential candidate to replace Tony as *Free Flight* editor. Have a look at the BoD November 2014 minutes available on our redesigned website if you want more detail.

We were also planning the SAC 2015 AGM, which will be held in Saskatoon on 28 March 2015. Half of our six SAC Directors are up for election for a two-year period: the Southern Ontario and the Eastern Zone Directors are willing to be nominated again. David Collard is stepping down after eight years as the Pacific Zone Director and six years as our volunteer Treasurer. David took on the Treasurer position after Jim McCollum stepped down as the Executive Director & Treasurer. He also acted as the liaison person with the COPA office for SAC management, monitoring this on a regular basis. This is a key position on the Board; it needed expertise as well as a commitment to take on the job, and for that we thank David for the important work he has done for SAC. ❖

free flight vol libre

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

ISSN 0827 – 2557

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

A happy Tim Wood back at the Elko airstrip following his 9 July record flight to Valemount.

photo: Bob Cutts

DEPARTMENTS

a new Free Flight editor is on the way

(cue the trumpets)

Tony Burton

WHEN THE WORD WENT OUT IN THE LAST ISSUE that a new editor was going to be needed beginning sometime this year, I didn't know how long that search was going to take. It would require someone who had the time, the technical expertise, and knowledge of our gliding "landscape" here in Canada. Well, right away I got e-mails expressing interest! There you go – no one is irreplaceable.

The person who fits the bill has a split personality because he will be a team, Doug Scott and James Ginn, both SOSA members. Doug will edit *Free Flight* and James will do the layout and other preparation to make it print-ready. If Doug works into the editing as well as he writes, your magazine will be in good hands.

Of course it will take a few issues for Doug and James to get into the swing of things so we will work together on the transition. I will be responsible for the next (spring) issue, and it will be a practice issue – Doug will also edit material and James will do a layout of a "ghost" issue along with me (I see a blizzard of pdfs flying back and forth). The summer issue will be under their names, but with me heavily involved in the background. After that I will be happy to advise in an ongoing way for some time. For me, doing *Free Flight* is almost on automatic pilot, but Doug and James will need all the help you can give them while starting out.

So, from now on I ask everyone to send your stories, photos, reports, etc. to me *AND* to Doug (***dougmscott@hotmail.com***) and James (***jamesginnjr@gmail.com***). Help Doug out by thinking what you may contribute to *Free Flight before* he has to chase after you for a story he knows you should write.

Let Doug and James introduce themselves:

Hi, my name is Doug Scott and together with James we will be attempting to do the work that Tony has been so very successful at in editing *Free Flight* for so many years.

I have known Tony since 1998 and he and Ursula have been very helpful in shaping the articles that I have submitted to our magazine. I am grateful to them both.

I know that we can never truly replace Tony and Ursula and I sincerely hope that they can use their new-found free time to fly more, travel a lot, and enjoy life to the fullest.

We plan to separate the editing roles: I will gather the stories and edit them for interest and content and then pass them on to James who has the knowledge and experience in

SOARING ASSOCIATION of CANADA

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

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

Material published in *free flight* is contributed by individuals or clubs for the enjoyment of Canadian soaring enthusiasts. Individuals and clubs are invited to contribute articles, reports, club activities, and photos of soaring interest.

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

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

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

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10 **March, June**
September, December

ASSOCIATION CANADIENNE DE VOL À VOILE

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

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

Les articles publiés dans *free flight* proviennent d'individus ou de groupes de vélivoles bienveillants. Tous sont invités à participer à la réalisation du magazine, soit par des reportages, des échanges d'idées, des nouvelles des clubs, des photos pertinentes, etc.

L'idéal est de soumettre ces articles par courrier électronique, bien que d'autres moyens soient acceptés. Ils seront publiés selon l'espace disponible, leur intérêt et leur respect des normes de qualité du magazine. Des photos, des fichiers .jpg ou .tif haute définition et niveaux de gris peuvent servir d'illustrations.

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

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

Pour un changement d'adresse, communiquez par *sac@sac.ca*. La revue est disponible gratuitement, en format "pdf" au *www.sac.ca*.

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print design to set them up for the printer. This will be an interesting and challenging period as James and I attempt to get the magazine out to our readers and to react to changing times and attitudes towards print versus on-line media.

I began flying lessons in 1974 in a Cessna 150 and first flew a Blanik L-13 in 1991 at Lock Haven, Pennsylvania, home of the Piper Cub. I currently fly at SOSA in Ontario and have flown at all the clubs in Ontario and a few in other provinces. I have been active in instructing, towing, club management, and SAC boards, cross-country flying, and provincial and national contests. The more I fly and the more people I meet, the more I realize that I have a lot to learn, and I am very, very grateful for the national and international relationships that I have been so fortunate to develop over the years.

I really look forward to meeting you and to building relationships through *Free Flight*, and to doing my part to encourage soaring as an engaging and rewarding activity in Canada.

❖

Hello, I am James Ginn and, along with Doug Scott, will be serving as the new production editor of *Free Flight* as Tony Burton gradually completes his circuit with the magazine after many years. While Doug is a long-time pilot and understands our sport very well, I am a relatively new participant whose professional experience has included working on and developing publications like *Free Flight*. Doug and I will work together closely to continue delivering to our soaring community the worthwhile content in our magazine we both need and want. Our goal is to continue providing this service in a way that is relevant to the readers and that will make Tony proud.

When I wrote that I am a relatively new participant to soaring, it might be better to say *very* new. My first ride/instructional flight in a glider was in May 2014 in a Puchacz at SOSA. It featured a winch launch with a subsequent rope break at 500 feet with instructor Dave Springford, a popular soaring name with which I was completely unfamiliar at the time. Ignorance is bliss and I had no idea that things did not go as planned, but this exhilarating launch hooked me into the sport. The excitement was enough to carry me through getting sick on the second flight – sorry Dave – and on to solo flights by the end of the season.

While being new to soaring, the love of flight has been present since childhood. Watching space shuttle flights and viewing posters of Air Force fighters climbing vertically kept me looking up at the circling skies. At the age of 12, I finally got the opportunity to fly. It was in a Cessna 172, which is not quite the same experience as I imagine riding an F-18 to be, but it was enough to bring relevance to Da Vinci's famous quote, *"When once you have tasted flight, you will forever walk the earth with your eyes turned skyward, for there you have been, and there you will always long to return."* It's this longing and passion for all things flight that has now put me along side Doug in your humble service. ❖

the early history of gliding in Canada

Maria Niklaus

"Once you have tasted flight you will walk the earth with your eyes turned forever skyward, there you have been and there you long to return."
Attributed to Leonardo da Vinci

THE ABOVE QUOTE CLEARLY SHOWS the long fascination for flying, especially gliding – one that has not lost its power even though humans have been flying for more than a century now. What better way to explore this fascination than by looking at the origins of flying, specifically gliding? A lot of people shared the dream of flying like a bird.

This attempt at an early history of gliding in Canada first focusses on the young pioneer Lawrence Lesh, followed by the many early enthusiasts scattered across a huge land up to the foundation of an organization for this sport forty years later.

Most of the early attempts are documented, but the areas in between big events are hard to find as the literature and information is scattered. This is due to the fact that no one bothered documenting these enthusiasts, and Canada is a big country. When gliding started, these pilots were far apart from each other. This changed during the lead-up to the founding of the Soaring Association of Canada in 1945. Flying and gliding were established at universities and received attention from the press which provided more information since documents could be found in archives and newspapers.

The beginning of gliding in Canada

The first attempt to glide in Canada by the young American Lawrence Lesh is widely known and documented. Subsequent attempts as well as previous failed attempts were not as noteworthy but they are important and will be described. Lesh succeeded in gliding for the first time in Canada in August 1907. The fourteen year old started to develop an interest in gliding from a very early age and was under the patronage of Octave Chanute, the famous aeronautics experimenter in the USA. He wrote to Chanute that he had been flying kites in 1906 and then spent the summer 1906 reading in the Chicago Public Library. This is where he stumbled over the Scientific American article about Chanute's gliding experiments and became interested in building a glider. Lesh did earlier flights with his Chanute-type gliders in the USA before moving with his family to Montreal in July 1907 where he flew his glider for the first time. It was a frail machine made out of spruce and muslin and was towed by a horse on a field near Dominion Park where Lesh had his workshop.

Lawrence Lesh with his early glider in Chicago.

The flight that followed was another first in Canadian history – he succeeded in an over water flight, even though his mentor had discouraged him, saying it was too dangerous. Nevertheless the young aviator went ahead and was towed by a motor boat on a 300-foot tow line on the St. Lawrence River. The six mile flight was his longest. It was also the first crash of a glider in Canada – Lesh wrote that there was miscommunication between him and the boat's captain. Thus the glider crashed; Lesh was not hurt but the glider was destroyed. Yet this incident did not discourage Lesh to continue and rebuild his glider. In an article in *Aeronautics,* the young man gave an account and summary of his flights in the summer of 1907. In the end he concluded that "a soaring machine would certainly provide great sport" but admitted that certain problems had to be overcome.

Another of his achievements was the introduction of the aileron to North America. On rebuilding the glider, he used horizontal control surfaces. He fitted horizontal rudders or elevons to his Montreal glider number 2 after it was built. This device acted as both an aileron and elevator. Lesh was probably the fifth in the world to use ailerons and the first to do so in Canada. The horizontal rudder was installed between the wings on each side on the inner bay of the inter plane struts. The rudder was

For information about Octave Chanute see: http://www.britannica.com/EBchecked/topic/105919/Octave-Chanute; Octave Chanute was a leading expert in aeronautics at this time as his book Progress in Flying Machines shows. He was not only in correspondence with Lesh but other famous aeronautical experts like the Wright brothers.

controlled by two rods held by the pilot. The difference between his two gliders can be seen in his description of the steering: *"Steering and balancing was accomplished in the first machine by shifting my weight and in the second machine by manipulating the forward and rear rudders."*

After describing difficulties with other means of steering his glider he went on to give a great description of the ailerons he fitted to his glider: *"It occurred to me that these troubles could be overcome by the use of two individual horizontal rudders, and the arrangement was accordingly installed in my experimental machine. The tests demonstrated that with the new device it was possible to quarter into the wind with the wings parallel to the ground, the control being effected by the use of two horizontal rudders alone. I believe this system of control to be efficient."*

There were other attempts before and after Lesh's first glider flight in Canada. One took place only shortly before on 10 August 1907 in Krugerville, Alberta. The Underwood brothers' glider, or rather kite, was tested in flight but was tethered to the earth and carried one of the brothers, John Underwood.

The next flight after Lesh was on 6 December 1907, also with a kite rather than a glider. The *Aerial Experiment Association* in Nova Scotia led by Alexander Graham Bell was a group of enthusiasts diligently contributing to early flying and gliding in Canada. Lieutenant T. E. Selfridge made a towed flight in the kite "Cygnet I", a tetrahedral cell kite, on Bras d'Or Lake. However, the Chanute type glider of the association was tested in the USA.

Other efforts include one in Hamilton, Ontario on 18 May 1909 in which John Burton was injured as he attempted to fly, and one near Mimico, Ontario on Lake Ontario on 10 August 1909. Attempts went on in 1910 in Ottawa, covered by the *Ottawa Citizen* on 22 July 1910, featuring a rather peculiar looking aircraft. A few years later gliding was taken up in British Columbia by a group of young boys, thus spreading the love for gliding to the west coast.

The early pioneers of glider flying showed a lot of passion and patience as they experimented on their own and did not have a network of connections to exchange information or even patronage like Lesh. This interest in gliders peaked around 1912/13 due to the great efforts that were made in Europe. It ceased with the outbreak of the Great War in 1914 but was renewed after its end.

After the Great War – Gliding in the 1920s and 1930s: "Flying for fun" – various attempts by early clubs

Postwar Europe and Germany had to start over. However, gliding thrived, especially in Germany, as other forms of flying were limited or prohibited by the Treaty of Versailles. A number of pilots who flew in the war wanted to keep on flying and thus gliding became very popular there.

How did it look like on this side of the Atlantic, especially in Canada? The period of the 1920s and later the 1930s was shaped by small gliding groups that emerged around the country who were driven by their fascination for gliding but lacked any central coordination. Around Montreal and Quebec they built on the first glider flight in Montreal by Lesh; however, interest caught on in the whole country and individuals and groups emerged.

In the 1930s gliding spread further and the few individuals merged into larger groups and clubs. Examples of this were the Cloud Rangers Glider Club, the Skylarks Glider Club * at Medicine Hat, Alberta, the Montreal Gliding Club, the McGill Gliding Club, the North Battleford Gliding Club in Saskatchewan **, the Three Rivers Aero Club in Quebec, the Lethbridge Glider Club in Alberta (which saw some of the first qualifications for a licence and FAI badges), and the Vancouver Glider Club. The early attempts were hindered by the fact that these enthusiasts normally did not know about each other because of Canada's size and because of a lack of communication between these gliding groups in different provinces. This drawback inhibited the circulation of information about building gliders or organizing flying, as well as gliding itself, etc.

"Up to this time, the record is one of small independent groups across our vast land struggling quietly in aloof communities, usually not aware of other similar groups. Without coordination, without support from outside, without accurate sources of information, they struggled on." One of the early enthusiasts stated in 1937: *"It is indeed a pity that the progress of this great sport in Canada should have been retarded by a complete absence of collective effort."*

However, this period saw steps forward in the design of gliders, which became more sophisticated during the later part of the 1930s when attempts were made to replace the primary gliders by other types of gliders of better aerodynamic design that came to Canada from Europe and the USA. The pilot was covered by a cowl and thus did not just sit "outside". One example of this were the plans one could buy from Schempp, Hütter, and Slingsby. This engendered two groups of people: the enthusiasts who flew their primary glider and had a knack for carpentry and were not deterred by frequent crashes and, towards the end of the 1930s, the early engineers and engineering students who wanted to study aeronautics and aerodynamics.

Another point that slowly started to change was the take-off method; car tow and bungee cord launches were starting to be replaced by more modern and more sophisticated methods, namely winch and aerotow, which is evident in self-made winch constructions that could consist of a car chassis and an engine. This shows that gliding in the 1920s and 1930s had evolved into a more sophisticated sport that used better equipment and methods and attracted different kinds of people, although all were enthusiasts.

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* *"Little hops and frequent crashes"* by Christine Firth in Free Flight 1995/1

** The club achieved outstanding gliding results for this time with altitudes of about 330 metres, being towed by car, and flight durations of nearly an hour of soaring which were primarily achieved with ridge soaring.

These early glider pilots had other obstacles to fight, not only in technology and methods but also culturally. In Canada, the heroes of this time were the bush pilots who flew up north. These activities were seen as something useful and successful that helped the country. Gliding competed against this as only a sport that was done by some "crazy" individuals. Thus in this cultural competition gliding came off a bit short but developed further in the late 1930s and in the 1940s with a professionalization within the sport.

However, attempts were made to promote gliding. One example of the way this was done is the little group that called itself "The Canadian Glider Boosters". * Their goal was to introduce gliding to the public by touring the country with their glider and demonstrating it in flight. In the end, the tour sparked interest in glider flying but more as circus performance and not as a real, sophisticated sport. Nevertheless, they managed to overcome social barriers within society after the first glider accidents and the flying community thus greatly promoting gliding in the early days of this sport.

In comparison with other countries at this time, gliding in Canada was not really a success story. In Europe and the USA, gliding was literally taking off. The Treaty of Versailles forbade any powered aircraft use in Germany thus gliding was the only way to fly. In Canada, gliding was hindered by the outbreak of the Second World War and some gliding clubs could not sustain themselves. However, gliding didn't completely die out as there were always people fascinated by this sport who kept it active and brought further advances in soaring. This development took place not only with enthusiasts but also with more professional people. For example, the damaged gliders of the McGill club made their way to Ottawa in 1942 and were used by the Gatineau Gliding Club. This was not all, as gliding slowly managed to entrench itself further.

Gliding at the University of Toronto

Slowly, gliding evolved into something serious – more than just a sport. It was established as an aeronautical discipline at the University of Toronto in the late 1930s. Two professors, Thomas Loudon and Bernard Etkin, turned flying and also gliding into a formal course of study.

Thomas Loudon started as an engineering student at the University of Toronto and became a member of the staff in 1906. He was interested in flying and aeronautical research.

By 1917 the university had a wind tunnel and basic research was done. Aeronautical engineering was introduced but not as a major – it was not popular as students were sceptical of what employment opportunities would be available in this area. The main figure during the early stages of aeronautics at the university was J. H. Parkin but he resigned in 1930 thus causing instruction within this subject to cease. However, with Loudon fascinated by flight, and aeronautics was reintroduced six years later with him as a professor. He was so intrigued that he got a pilot licence in the same year at the age of 53.

Loudon was a pioneer in the establishment of the Department of Aeronautical Engineering and succeeded in inspiring his students and showing them the fascination of flying. Loudon's great contribution towards gliding crystallized in the "Loudon" glider project. This glider showed his particular interest not only in flying but in gliding itself. The project was a student project for fourth year students to gain practical knowledge in designing and building a glider. As Professor Loudon initiated this, his name was given to the glider. The glider successfully flew on 5 November 1949.

"The LOUDON sailplane took to the air: Smoothly, effortlessly, it soared on that dull November day: eagerly its wings lifted in almost motionless air, buoyant and swift in free flight!" This was the first effort to incorporate practical knowledge of gliding in the university curriculum. The intent of the venture was to design an intermediate glider that would close the gap between the earlier more primary gliders and the high performance gliders. This glider evolved out of a perceived need of the gliding community for a better glider. It was meant to be comparable to the Grunau Baby, a well known standard glider which flew first in the beginning of the 1930s thus nearly twenty years earlier than the Loudon glider.

The glider was celebrated as a huge success. Its flight performance was enthusiastically described as very pleasant and nice, *"Everyone is delighted by it."* It was not only acclaimed for its performance but also because of its implication for Canadian nationalism as the project was supposedly only carried out by Canadians. This does raise a question of national claims, since Czerwinski, who was part of the project, immigrated to Canada during the war in Europe. Certainly, it was a big step towards a Canadian national identity in the construction of gliders.

Bernard Etkin is the other personality from the University of Toronto who was greatly involved in teaching and establishing gliding as a course at the university as well as promoting and raising the interest in gliding. Etkin also started as a student of Engineering Physics where he first met Loudon in the late 1930s. In the 1940s he was part of a course in gliding called "Gliders and Gliding" which was part of the Department of University Extension. In this evening course, students specifically learned about gliding, and not merely as a small part of aeronautics studies. It was widely advertised and it was mentioned that even women applied for it. Articles could be found trying to promote gliding in Canada in *The Varsity* and *The Woodstock Sentinel Review* that headlined, "*Glider Fans Yearn to Build Ships*".

Another way gliding was incorporated into the university was a lecture given by Czerwinski, who was also a teacher in the above-mentioned course and in the Loudon glider project. With this talk he tried to raise the awareness of the importance of gliding. He worked at the Canadian Wooden Aircraft Company and at deHavilland as well as cooperating with Loudon and Etkin at the Univer-

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* The 5-part series by Norman Bruce was printed in *Free Flight,* issues 1970/6 to 1971/4.

sity of Toronto. Etkin was also working for deHavilland where he was involved in building a glider along with Czerwinski.

The industry and gliding
Not only was gliding pursued at the universities but also by people working in the aeronautical industry. During the 1930s and 1940s there were groups within deHavilland and Boeing Canada that formed to build a glider and to also fly it.

There was a group of Polish engineering immigrants who worked for deHavilland and took up gliding which they had done earlier back in Europe, namely Czerwinski, W. Stepniewski, WJ Jakimiuk and T. Tarczynski as well as Bernard Etkin who worked on the project which resulted in the deHavilland *Sparrow* in 1942. This was not carried out as an official project of the company but as an unofficial one, thus helping to form a glider club with a better technical understanding and an engineering background.

The engineers started from scratch and designed a glider which was suitable especially for the Toronto area, which is not suited for gliders that are designed for mountain flying thus the glider was fitted with a better gliding angle to launch the glider higher as it would not be launched by bungee cord but by car. Another aspect specific to Toronto is that strong thermals develop in summer so it was desired to have a good aerodynamic design to enable soaring flights and not just short flights for training. Thus this combination of a primary glider used to learn flying and a glider built for long soaring flights was quite unusual for this time. This project was supposedly the first truly all-Canadian glider as all stages of it occurred in Canada: the design, construction, and the first flight.

DeHavilland was not the only company to built a glider – Boeing Canada produced a steel truss primary glider in 1930, more than a decade earlier. Sadly though, the timing fell into the Great Depression, which did not have a great outcome for the Boeing glider as most of them were placed as gate prizes at the Pacific National Exhibition in Vancouver. Yet there was one notable event that happened with one of these gliders which is the first aerotow in Canada. However, it was done without legal permission and thus is not part of the official record.

All in all, one can see that this early enthusiastic movement of gliding as a sport in the 1930s occurred in different settings such as the university and industry resulting in a maturing and evolution of gliding. But, unlike the situation in Europe, gliding as a sport was hindered by the war effort even though there were examples of operations of gliders during the war.

Gliders during the war
As the war raged in Europe, Canada was active in aviation and not a minor part of this was gliding. During the early days of the war the need for trained pilots became apparent and in 1940 there was a nationwide civilian voluntary organization working together with the RCAF to train young men as Air Cadets to later be pilots in the war. Out of this need for the training of pilots, gliding showed its value as the first steps to take to the air.

A unique effort went further in the summer of 1945 when the possibility of ferrying gliders from Canada to Great Britain was examined for war missions as well as to ferry supplies and freshly trained crews. This was tested with a Waco CG-4 *Hadrian* glider called "VooDoo" towed by a Douglas C-47 Dakota with an increased fuel range for the trip. Training flights finally convinced authorities to give their approval to the proposed Canada – Great Britain flight via Montreal, Goose Bay, Greenland, and Reykjavik to Prestwick, Scotland. The flight was successful even though severe weather conditions, narrow landing strips, IFR flights with no visibility, as well as the potential of air attack in Europe, made the flight extremely hazardous *(this terrifying story is told in Free Flight 1977/1 and 2)*.

This is not the only story about gliders participating in the war, though the next example is quite different as it is about a glider which was used in the war and came to Canada after it. The Laister Kauffmann LK10, CF-ZAJ (still flying in the Toronto area today) started its career as a training glider for the United States Army Air Force training program and found its way to Canada after the war as part of the Queen's University Gliding Club. Thus technically it is not part of the Canadian war effort but it is certainly part of the Canadian history of gliding.

The glider was built in St. Louis, MO and delivered to the USAAF in 1943 with the type designation TG-4A and was used in the training program. After the war it was sold as war surplus. It was one of two gliders bought by the Queen's University Gliding Club for $1500. The club was formed in the mid 1940s and is another example of gliding emerging within an academic setting. The two gliders were picked up by members of the club in the winter of 1947, with all sorts of travel troubles *(see Free Flight 2006/6)*.

After arriving in Canada the gliders were certified airworthy on 20 March 1947 by the Department of Transport with one particular registration number being CF-ZAJ. Only two days later it was presented to the university and flown by students of the gliding club in a big event. CF-ZAJ was flown during her time with the Queen's University Gliding Club until the 1950s and then moved to the Gananoque airport were it flew until the 1990s. This particular glider was then bought by a private pilot *(Herrie ten Cate)* who is still flying it and thus making it one of the oldest gliders in Canada today.

Post-war, Canada also acquired two Grunau Babies as war prizes, one of which flew in Elmira in 1974 and was later sold to two St. Louis pilots.

Reception by the press: *The Toronto Star* weekly aviation column (1930s)
Promoting the "air-mindedness" of all people during the period of the 1930s was the weekly aviation column of *The Toronto Star*. This column appeared in the newspaper every Saturday and tried to feature every aspect of flying, especially news from the Toronto Flying Club but also from clubs within Ontario. News covered ⇨ **p29**

33rd World Gliding Championships
Leszno POLAND 2014

photos: Maria Szemplinska

Team Captain report

Jarek Twardowski, Gatineau Gliding Club

BACK IN 2013 I was approached by Jerzy Szemplinski who proposed that I be the Canadian Team Manager for the 2014 World Gliding Contest in Leszno, Poland. It was a surprise to me that well-established competitors were willing to draft someone with no experience at the highest competitive level (or at any level, to be exact!) to assist with all the tasks required during the WCG. I agreed, and I was looking forward to fulfilling all the duties and obligations that were on a manager's shoulders to the best of my ability. I was sure that I would have to learn many things "on the fly", still I was confident that I could support both pilots and crews.

A team meeting at our B&B was set for Sunday, 20 July. Everybody was coming from different directions – Jerzy from his hometown of Jelenia Gora, Dave from Germany and I from Warsaw. I was asked by Jerzy to pick up an ASG-29 "Hotel Delta" from the owner on my way. I stopped by Michalkowice airport Sunday afternoon just in time to witness gliders returning from a competition task. An ASG-29 with HD on its tail landed just before 6 pm and was derigged and readied for the trip to Leszno in a matter of an hour. Finally by 9, the entire Canadian team was united at our new base!

Soon after our arrival at the B&B, Jerzy started working on his instruments, adding the *ClearNav* set he brought from Canada. That proved to be a critical decision, which prompted constant tweaks and changes for many days to pneumatic and electronic settings of the original and the added instruments, and it cost Jerzy many points. Jerzy's HD was nicknamed "Home Depot" by the USA team. Dave was in a different situation – using the same glider for the third time and knowing all the instruments and tricks with his ASW-27 "Papa Sierra", he was able to focus on flying.

Training started with very nice, typical gliding weather and training tasks of 500 km for all classes. The official opening was held at the Leszno city hall square with many officials, team members with families, locals and bystanders in attendance. All teams, holding their national flags, paraded in front of the stage and were announced by organizers. It was obvious that it was a major event for both the town and the region, as well as for Leszno's Central Gliding School.

The day after the official opening, competition days began and everyone switched into high gear. A typical day started with the organizers announcing grid time, runway, team captain meeting, and pilot meeting. We set up a daily routine that started with rigging Dave's ASW, filling up with water and getting ready for towing to grid. Jerzy's glider stayed rigged all the time (having all-weather covers did simplify things a lot). HD was prepared for the next day immediately after return from a task. That was a big time-saver and allowed us to focus on Dave's "PS" every morning.

Team Canada Dave Springford with his partner, Virginia, competed in the 15m Class. Jerzy Szemplinski and wife Maria are known as well – Jerzy, for his piloting skills and Maria as his crew, whenever she is not busy taking pictures! Jerzy was competing in the 18m Class. We also had two helpers from Poland arranged through Jerzy's contacts. Michal (Mike) and Przemek were a perfect fit with our team. Both spoke English and being "locals", knew the local customs and culture and navigated that 'reality' with ease. They worked tirelessly every day with very little time for relaxation. Big thanks to both!

Organization WGC 2014 organizers did very well overall. It's not an easy event to stage and execute to the satisfaction of every team & pilot. It's like walking on the edge, trying to please everyone and not getting into any conflict situations at the same time.

Competition days The main focus of each day was on the task, weather being the main factor. Tasks were quite challenging due to unstable air masses over the region. For the first few days we experienced a heat wave (over 30C, with humidex reaching 40+!). Every morning, tasks were distributed to pilots prior to their meeting, but several times the CD and task setter changed the day's task. On the last competition day we had a task C, a third version distributed at the grid. One day in particular was *very* memorable – 98 pilots landed out, despite the fact that many of the gliders were equipped with sustainers! On that particular day, Dave made a decision to come back home from the task and was back as one of just few.

Jerzy was pushing until conditions became unflyable. His fuel capacity brought him almost back to Leszno, but landed 34 kilometres short of the airport.

On the last day Sebastian Kawa made a statement that the weather was atypical for the region and one of the most challenging in his career. That said it enough …

Retrievals Yes, we went through those as well. Having two helpers made my life easier since I wasn't required to participate in bringing the boys home. Maria went to get Jerzy once; Virginia did that twice. Knowing Polish roads and Polish driver temperment, the expectations were to average 50 km/h max. I have to say that both ladies did an amazing job navigating through the maze of side roads and fields without a scratch. Some teams were not so fortunate. The Hungarian team totalled their car and damaged their glider (Ventus 2a) and trailer, fortunately no major injuries. In a few cases some teams experienced Polish police "hospitality" for traffic violations (one beer could put you in the drunk tank overnight).

Fun time During the WGC we had a few events for all team members. One of them was an International Day with many teams preparing and serving their national foods and drinks (liquor as well!) We were able to try all the dishes, and even some hard liquor! I would lie if I said I can remember everything, especially after stopping at Russia's table – they served different five types of vodka and pickles, nothing else! The second event was "Polish Day" prepared by the organizers with "traditional" food: Polish sausage on a bun, beer and a side dish. It was great until they ran out of sausages! (Note to self: eat dinner before attending another event.)

As a team captain I was invited to attend lunch with the Mayor of the City of Leszno at the city hall. The duck, prepared by a local chef, was one of the best lunches I ever had! At the conclusion, all captains received a very nice book about culture and architecture of the region.

The last event was a "good-bye" evening, again prepared by the organizers. It was a great time to unwind, exchange e-mails and phone numbers with all the folks and relax, knowing that competition days were over! However, just a few teams were in attendance due to a change in the schedule that was announced at the last moment.

Results Dave, in the 15m Class, was challenged by the weather conditions that were unpredictable many times. One of my tasks was to keep pilots informed on weather-related events, but many times the changes in the sky were so rapid that my information based on internet services was outdated. That was quite frustrating for pilots, as well as for me.

Jerzy, in the 18m Class with "Home Depot", faced different type of challenges during the few initial days – instruments! The original *Zander* vario was not very accurate and Jerzy's *ClearNav* was having issues of its own! For a few days he was changing piping and electronic setting to get some use from the instruments. Finally, he got them tweaked to the point where he was able to focus on flying. One unfortunate intrusion into closed airspace lowered his chances for a good position on the day and overall; Leszno is surrounded by many airspace zones that are not what we're used to in Canada.

I hope our pilots will do better next time! Sincere thanks to Dave and Jerzy for giving me the opportunity to be a part of the Canadian Team at WGC 2014 in Leszno.

Jerzy's story

MY PREPARATION FOR THE WORLDS started as soon as the previous Worlds ended. Although it is two years from one competition to the next, in reality there is just one full season of flying and a couple of months in the year of the Worlds. I planned participation in US contests with similar weather as Leszno, unfortunately the 2013 season

was very restricted for me and I was able to participate in only two contests in the spring. I flew four contests in 2014 before the Worlds and I think I had one contest too many. After winning the Canadian Nationals, I had less than two weeks to rest before I left for Poland.

The most important part of participating in the Worlds is the glider. In 2008 I was able to use my glider and in 2010, thanks to Dan Bush, I flew his brand new glider. This time I wasn't so lucky and I had to arrange a loaner from Europe. Shipping a glider to Europe would have been very expensive, in addition to losing a lot of flying time, so using a local loaner was the way to go.

The European pilot who flew Ed Hollestelle's glider in the 2012 Worlds in Uvalde promised that a Canadian Team pilot could use his glider in Leszno, but after contacting him, he was not so eager to loan his glider and didn't give any guarantee that his glider will be available for Leszno. Germany is the country which accepts our licence as-is, whereas other countries ask for EASA approved medical and paperwork, so I was looking for a glider with German registration close to Leszno, and I was able to secure one in November 2013.

Accommodation was the second important part of preparation, since local hotels jack up prices as soon they learn about the Worlds and places closest to the airport fill up fast. The Leszno hotel located on the airfield increased their prices by more than 100%, which was prohibitively expensive. Other places didn't like to accept reservations ten months in advance and were expensive. The owner of our B&B agreed to accept an early reservation and gave a very competitive price with full breakfast and dinner/supper, at substantial savings, allowing us to afford two young helpers from Poland. In addition, we didn't have to go to restaurants in town after flying, so again, plenty of time saved.

The other important part was a car with a tow hitch, as rental companies don't rent cars with a hitch. Jarek was able to secure a car from his friend, but it used natural gas, plus 10 L of gasoline as a reserve. The closest gas station was in Poznan, 80 km from Leszno, which was unfortunate since driving 80 km in Poland takes on average 1 hour 45 minutes, and Jarek did several trips to Poznan just to fill up.

I didn't have any opportunity to prepare the glider before the practice days because the owner flew in a contest 100 km from Leszno, and on the day of our arrival Jarek picked up the glider as soon as it landed after the last contest day.

I had my *ClearNav* computer vario, because it's very important to have instruments you feel comfortable with. But I made the mistake of entering polar speeds in metric units, which confused my vario to such an extent that it was showing absolutely wrong values. After losing several days, I was able to fix the problem with the help of the *ClearNav* team from the US and UK. But bad luck persisted, and when everything did work well, I went 500 metres into restricted airspace and earned only 60 points for the day. The organizers provided us with the airspace file with all the airspace not user-friendly for us, but multiple levels and changes to active altitude were hard to manage, warnings were constantly activated, and I probably deactivated one warning too many, and that turned out to be very expensive for me.

A flat tire after one of the flights didn't help, as we lost a lot of energy to change the tube twice, as the first one was the wrong size and didn't last even two hours after installation. One of the water valves didn't close when activated in the air and I had to dump water from the other wing to keep the glider balanced a couple times until I fixed it during the rest day.

The weather during the contest wasn't typical. We had frequent thunderstorms and one day the task setter had an idea that a task around the thunderstorm would be the best option to have a valid task. Unfortunately, it was a very dangerous task going to the first turnpoint as we were flying on the edge of a thunderstorm and some early starters from the 15m and Open Classes decided to turn back and fly in the opposite direction of fast-moving 18m gliders. After reaching the first TP on the other side of the thunderstorm, we knew that it would be a distance task.

As I had a sustainer, I was able to start up and fly between two thunderstorms in Leszno's direction. It was the most stressful flight, as the constant rain decreased the glider's performance and lightning between the two thunderstorms was very unsettling. I landed out due to deviations and rain. I ran out of fuel and landed 30 km from Leszno, but I was back before sunset whereas other pilots got back after 2 am due to the long drive from the retrieve.

Gaggle flying in Europe is the norm; no one calls pilots leeches like in North America and the game is to start as late as possible to catch the gaggle and fly with the gaggle. Flying with 30 gliders in a gaggle is not fun. Twice I had close encounters in thermals where I was very close to a collision and I had to take very evasive action, in addition to a potential head-on collision with an Open class glider due to a task which had task legs in opposite directions. In addition, some competitors were turning FLARMs off just to be invisible to other pilots, risking everyone. The organizers were not able to find a solution to deal with such behaviour.

Visibility was poor by North American standards as most of the time we had moisture-filled air coming from the Mediterranean. Estimating distances to clouds was challenging as the clouds were large and sometimes they looked 20 km away but really they were half that. We had ten valid days, which is very good for such challenging weather. We had several tasks which were short due to thunderstorms and very unreliable weather. During the first half of the contest all tasks were area tasks, so the organizers didn't have much choice but to set assigned

speed tasks in the second half of the contest, forcing sometimes the whole fleet of gliders to fly into a thunderstorm.

Currently there is a huge gap between flying in North America and in Europe as they have a lot of high-level contests in Europe having the opportunity to race with top world pilots. In addition, they have European championships between Worlds, and they fly the same tasks in them as in the Worlds. Only our area task is the same, but we have a start cylinder, where they have a 10 km line. From a strategic point of view, starting from a cylinder and from a line is a different tactical game.

I had the opportunity to fly a true assigned task in the last two years only 2 or 3 times. Again, different tactics and different strategy all add up and small errors are very costly at Worlds-level competition. They are used to flying gaggles and a single pilot is often eaten by the group. Although there is only one place on the podium, in reality the winning pilot has huge help from pilots flying in his class, team members of other classes, and ground help. It looks unreal where Open Class pilots are working and giving all information to 15m team members about the position of competitors from the 15m Class. There is no prize money in our sport but some countries are giving substantial support to their teams just to have them on top of the list.

We had a great team in Poland as Jarek took great care of on site organization. In addition, he was very hands-on with all the problems that we had, and Przemek and Michal from Bielsko Biala, where SZD gliders are built, helped us with gliders and retrieval from the fields. Maria has crewed for me in four Worlds. She gained invaluable experience in areas of our logistics and operations ensuring that everything went smooth according to my daily schedule, giving me comfort to concentrate on my flights.

We received great support from the gliding community in Canada and thanks to them, representing Canada in the Worlds was possible. Due to some unfortunate circumstances we didn't finish at the top of the list, but we learned lessons and I hope sharing our experiences with other Canadian pilots will help in the future to have a Canadian pilot on top.

Dave's story

My preparations for this contest started in September 2013 as soon as the seeding list was published and I knew that I was on the team and in which class I would be flying. I contacted Uli Kremer, one of the managing partners at Alexander Schleicher and made arrangements to rent their ASW-27 (PS) and a car. Over the years, Uli has been very helpful in arranging car rentals from a local dealer in Poppenhausen. With those arrangements made, the next item on the list was airfare. The team ran a month-long *Aeroplan Miles* donation campaign in October and, thanks to large and small donations, we had enough miles donated to provide for two tickets to Europe, and at the beginning of November, I booked tickets for the July trip.

The food at our B&B was generally good, but the diet is significantly different than what we are accustomed to in Canada and the portions were generally smaller. Breakfast typically consisted of bread, meat and cheese. After a couple of days of this, I decided to supplement my breakfast with muesli and yogurt to try and better match my normal routine.

Finding a team captain was another important item for the team. The team captain is the only point of contact between the teams and organizers. Pilots do not have direct communication with the Contest Director, this is all done via the team captain. Jerzy and I both felt that it would be beneficial to have a native Polish team captain and we recruited Jarek Twardowski from Gatineau. The team captain's responsibilities also involve providing tactical and weather information to the pilots while on task. Jarek did a superb job for us and spent four weeks of his vacation time to support us. Thank you, Jarek!

We also hired two Polish lads to help with the daily rigging, watering and gridding. Each morning, I would arrive at the airport and Jarek and the crew would have "Papa Sierra" rigged and ready to water. I would guess on the amount needed each day and supervise the watering. By this time, 0930, the task sheets would be available and I would leave the gridding of the glider to Virginia and then go review the task and weather and program the task in *SeeYou* before the 1015 meeting. Most mornings, grid time was 1100 and first launch scheduled for 1130, so there was limited time after the meeting for these jobs.

PS had an LX 8080 computer and V9 vario and I also installed an Oudie so that I would have better access, via the touch screen, to airspace information. Programming the task in *SeeYou* then allowed me to save the .cup file directly to the Oudie for use in *SeeYou Mobile* and then I could also save it to an SD card and load directly into the LX 8080. This saved a lot of time and potential for errors if programming each unit independently.

The airspace in the Leszno task area was very complex and for the first few days specific zones even opened and closed through the day. For example, the control zone at Poznan was open to glider traffic from 1030-1630 during some of the days. The tasks typically took us directly through the control zone on the first leg, then the second or third leg would take us along the side of the zone. This meant that I could not just turn off the zone for the day, I had to be aware of it on the subsequent legs if the time was after 1630. With two computers, I would get multiple warnings for the zones and dismiss them for 5 minutes at a time, while they were still open to us. To compound the problem, for many of the zones the SUA file had two zones stacked on top of each other, so I would often get four warnings for each zone. As the contest went on, the airspace became more stable on a daily basis and I was able to reduce the number of in-flight warnings.

The weather was challenging during the contest; at times it seemed like the weatherman and task setter weren't talking to each other. The day where the thunderstorms landed out all pilots is a prime example. As mentioned earlier, the tasks were delivered around 9:30, so this meant they were planned very early in the morning and with the unpredictable weather associated with the frontal zone that sat over us for the contest, the task did not always seem reasonable. On a few days at the pilot meeting, there were enough complaints that a new task would be delivered on the grid. Of course, this meant last-minute task programming; fortunately, on those days I was at the back of the grid and had plenty of time to program and verify.

The style of racing at the WGC is quite different from what we do in North America. Here, we fly as individual pilots occasionally flying with a few other gliders but for the most part you make the decisions and fly your own flight. In Europe it seems that pretty much no one does this. There is a real pack mentality, and all that most want to do is follow the pack. This begins before the start and on most days at least 30 of the 46 gliders in my class were always in one thermal, waiting at the top, flying in and out of the wisps in the clouds, going around in circles for an hour with no one wanting to start first. When someone finally did start, then usually the whole pack followed over the next five minutes, trying to be the last one to leave and then catch the pack. I found this pre-start gaggle a real challenge and most often avoided it as it did not feel safe. On many days this lead to me starting too early, or too low, or in a poor position.

Throughout the task, the gaggle would often stick together and achieve weaker climbs because of all the gliders making it more difficult to properly centre the thermal. At times when I was with the gaggle, I would get to the top and then head out on course, only to find that they didn't follow, instead of heading for what looked like the next best climb, they would dash off to the next gaggle that could be seen ahead. Over the contest, I found this really frustrating because the climbs with the gaggle were usually sub-par, but if you left the gaggle, they would somehow manage to turn these weak climbs into a faster speed around the task.

The other thing I found really frustrating is that being a sole pilot in your class puts you at a huge disadvantage in the challenging weather we saw in Leszno. Thermals were often hard to find and centre under the clouds and the teams that had two or three pilots flying together had a huge advantage in this regard.

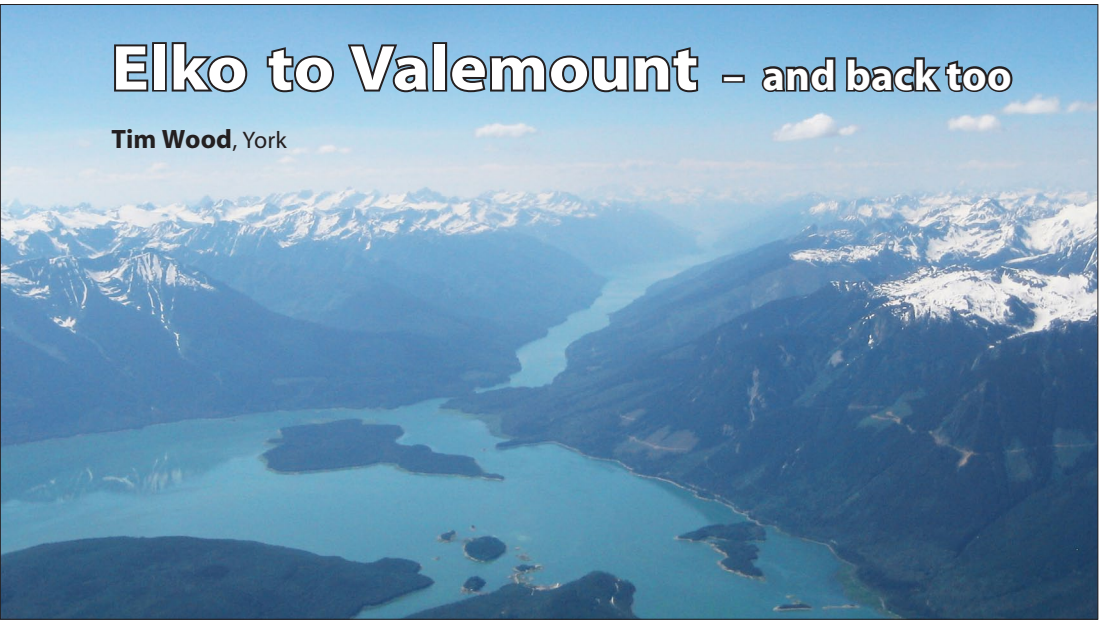
The WGC is no longer a measure of individual pilot skill, but a measure of how many resources team pilots have at their disposal. Some countries had weather forecasts from the team meteorologist above and beyond the standard daily briefing, people on the ground dispersed to the turn areas to report on real-time weather conditions, real-time radar and satellite information over the radio, and teammates to help. In the Leszno case where the tasks for the three classes covered pretty much the same area, some of the teams where their pilots in one class were not doing well would leave early and then report back to the other class pilots the conditions on course. When it comes down to it, an individual cannot compete against this.

Going forward, I would really like to see the IGC start to pare down the contest size and limit countries to one pilot per class and eliminate the advantage of team flying. This would result in smaller classes, safer and more fair contests. I think it would also get back to measuring each pilot's ability instead of the current system that rewards the large teams.

Competing at the WGC requires a huge amount of support for the pilots. At this contest, each pilot had two crew members and the team captain, five support people for the two pilots. We also had amazing support from the Canadian soaring community in terms of donations to the team and support from followers of the blog. I would like to thank all those who supported us for this WGC, we really could not have done it without you. Also, a final thank you to my spouse Virginia who, again, kept the glider spotless and looked after me during the contest and tried to keep me mentally balanced and focussed so that I could concentrate on the flying and not worry about the small stuff. ❖

Elko to Valemount – and back too

Tim Wood, York



DR. JACK'S 9-10 July 2014 forecast for the Columbia Valley in BC was favourable for a long cross-country, with predictions of strong thermal updraft strength and a nice +10 kt westerly breeze. I organized myself for an attempt to break the Canadian territorial record for 500 km speed to a goal in my 15m DG-400, C-GETW, flying from the beautiful, almost secret Elko airstrip in southeastern BC to Valemount, straight up to the northnorthwest. To my knowledge this Elko – Valemount flight was going to be a "first", although at least two other glider pilots had traversed the inaccessible stretch of Kinbasket Lake south from Valemount in the past.

Two things added to the usual demands of doing a big cross-country flight in the Canadian Rockies: firstly, I was going to fly over 200 km of inaccessible and unlandable, though stunningly beautiful terrain at the last part of the flight, and secondly, I had virtually no ground support if I was fortunate enough to get to my declared destination.

I managed to fly over 90% of the distance from Elko to Valemount without turning. It was ridge flying much similar to the Pennsylvania Ridge, but with a times-eight vertical scale, and with less symmetrical terrain. It was crucial to follow the right line to succeed with this kind of flying – always being in that small corridor of lift along the upwind side of the line of the peaks around 8200 feet. I made only two mistakes in this regard on this particular flight, resulting in two lengthy delays to regain altitude by "rock polishing". This happened at Fairmont, where I got very low, and then again after crossing Bush Arm on Kinbasket Lake (in the foreground of the photo above). I got off to an inauspicious start there as I entered the "no-man's land" of inaccessible, unlandable terrain between Bush Arm and Valemount.

As I progressed north along the east valley wall above Kinbasket Lake, the mountain scenery became breathtakingly beautiful, and the soaring conditions happily improved steadily. Soon I was feeling quite secure at 12,000 feet. After about an hour of flying through this region, I had passed Sullivan, Wood's Arm and the Mica Dam, and then to a final glide to Valemount. Conditions remained strong and I was able to finish at my declared TP, a few kilometres past Valemount airport, high on the east wall of the main valley. After many turns around my finish, "just to be sure", I landed at the fine paved runway of Valemount airport. I had broken the record, with an average speed of 93.3 km/h in a flight of 5:24 hours between "start" and "finish".

The airport was deserted when I landed. I manhandled my glider to the tie-down area and secured it with rope that I had brought with me. Thankfully, there was a pay phone. Rick Korejwo, proprietor of Yellowhead Taxi came to my rescue and drove me into town to the Super 8.

Now the realities of my situation came into play as a retrieve would mean two day's driving for someone; that is, two days driving after picking up my van and trailer at Elko. My ground support was at Pincher Creek, a two hour drive from Elko. I was reluctant to impose so heavily on any of my friends at Pincher.

So, I decided to try to retrace my path to Elko the next day, 10 July. This needed some elaborate preparation: find breakfast (quite a feat), buy a fuel container, find suitable fuel and synthetic oil, find a way to re-inflate my soft rear tire, find a take-off witness and a wing runner. All this had to be done quickly to let me get on my way early enough to reach my destination while soaring conditions held up. My new friend Rick expedited all of this logistical detail and even ran my wing at take-off. In the haste of my pre-takeoff preparations, I unfortunately screwed up my flight declaration. Too bad, because I had a northwest tailwind on the flight and had a stellar average speed back to Elko.

This return flight was a great thrill. Everything went my way, and I traversed Kinbasket no-man's land without incident, though aided by fervent prayer. I landed at Elko after about 5 hours and did an average speed of 107 km/h, compared with 93.3 km/h northbound flight. Both flights are posted on OLC for 9 and 10 July. I set a new 500 km speed-to-goal record of 93.3 km/h, compared to the previous 77.1 km/h set by Charles Yeates 47 years ago. Congratulations are due to Charles for setting such a durable record which stood the test of so much time.

I think that my back-to-back Elko/Valemount flights may go unsurpassed for a while too, not so much because of their technical difficulty, or the duration of the flights themselves, but because of the logistics of setting it up and executing without screw-ups. Anyway, it was a huge thrill. Please share my enjoyment by checking out the flight tracks, which are on the OLC. Also, a video of the 9 July flight, professionally edited by our own Mark Araujo has been posted on Vimeo *(go to http://vimeo.com/105752572)* and share my enjoyment of the flight and the stunning scenery of the Columbia Valley. ❖

Taking on this sport

Justin Butler, *from Sailplane & Gliding*

THERE COMES A TIME when we start to realize that the inherent sense of health and wellbeing that we enjoy as young men and women is starting to ebb. The stresses of life take their toll, our bodies start paying us back with interest for the punishment we've dished out to them; we get older. The more thoughtful amongst us detect these changes and think very hard about what we really need and want from our lives. Even rewarding work doesn't complete the picture.

Having just hit the tender age of 40, I began to look for something that could fulfil my need for adventure, personal growth and achievement. I have travelled the world, worked as a professional diver from the Middle East to the Caribbean, and an aid worker in pretty lawless developing countries. I must confess that it takes quite a lot to stir my pulse beyond sixty beats per minute these days (I keep fit too of course, which helps). So when my birthday came around last year, after hours of deliberation, I realized that what I wanted was a new experience. I remember lying on a hillside one distant summer ago and watching in awe as a gaggle of gliders circled and soared above me – before gently drifting away on the wind – and wishing I could do that.

Enter my not-so-long-suffering wife, who presented me with a gliding experience voucher for my birthday. Outstanding. I have always been adventurous, but firmly terrestrial. I have never done a parachute jump, neither would I like to. I do not bungey jump – that's for crazy people. But I really wanted to try gliding and my trial flight was at Lasham airfield.

I quickly came to see that there is a kind of mischievous dry wit that prevails amongst experienced pilots and instructors that belies great strength of character and, during the briefing for my flight, my instructor waited for precisely the opportune moment to deliver the line ,"if you should find yourself outside the aircraft for any reason… and we're not on the ground… pull this". I still laugh when I think of it.

The first launch was a revelation. As I sat in the cockpit of a rather agricultural looking K-13, I had the strangest feeling of apprehension. People were calmly swanning around outside doing what they had to do. Inside the cockpit I could see the drogue chute and cable laid out ready for us; I was comfortable, but strangely alert… no, nervous is what I was. We hooked on, up slack, and all out. What a very apt phrase that is too. We seemed to hurtle forwards and into a steep climb far quicker than my senses could cope with. I could see only the sky and could not turn my attention to anything else. My instructor was talking, I think, but we were both still inside the aircraft, so I didn't listen.

The steep climb of the winch launch lasted for at least ten minutes, or it felt like it. I spent the entire time convincing myself that forces such as these must surely make the wingtips touch each other above the canopy before ripping the hook out of the bottom of the aircraft. Happily neither happened and we positively floated off the top of the wire. Okay, pulse at least 100 now, mission accomplished. I had a great flight, I flew the glider! The views and sense of uniqueness in that experience were incredible. What a rush – I was absolutely hooked.

After a couple of days at Lasham, I decided that training at a smaller club would suit me better. I wanted to get to know people and make friends and, whilst that's possible at Lasham, it has a huge membership. I took another flight, this time at Shalbourne Soaring Society. It was equally great, and lasted for 40 minutes. I came away with a real sense of achievement, and flying has been pretty much all I can think about since. There are so few things in this day and age that leave you with a feeling of real value for money and value for your time, but it seems that gliding is just such a thing.

Twenty flights in to my training now and my pulse still dances around on the winch launches. I recently took a training flight with the deputy CFI and suggested that I quite enjoyed spin training. He treated me to a couple of chandelles and must have read my responses to them because two loops later I realize two things. Firstly, my face looks and feels like it does because gravity makes it so, mess with gravity and I don't look or feel the same any more. Secondly, gliding can be whatever you want it to be, from the adrenaline charged cutting edge of adventure to the more relaxed floating around the clouds on sunny days. Gliders are incredible machines, I am amazed by what they can do.

I am very struck by the uncommon generosity and goodwill that exists within gliding clubs. I cannot think of any other sport where training is free. I am a qualified instructor of several different activities, and I recognize high quality teachers when I see them; everybody helps each other in a very giving way within the club environment. It's such a refreshing change from the usual 'business-is-business' approach to things.

In July 2013, I went on a five-day course at Cotswold Gliding Club. My instructor for the week was CFI Mike Weston. I much prefer a 'doing' holiday than a lazing around holiday and this was exactly that. It was very hard work; I camped and ate at the airfield and flew 37 flights over five days. Somehow, Mike managed to drag me kicking and screaming to the finish line and my last two flights in the club PW-5 were solo! Slipping off the wire at the top

of the launch without anyone to tell me what to do next was a feeling I will never forget. The sense of responsibility and freedom at the same time, and not wanting to let your instructor down by getting it wrong! Somehow, I managed what is probably one of the best landings I have ever done, after an entirely acceptable circuit. Mike was pleased, I did it again.

I am still realizing how much I learned on that course. By February 2014 (a year after my first flight at Lasham), I had 120 flights in my logbook, 60 of which were solo. I was still completely obsessed – and now fully convinced that the midlife crisis I said I would never have had arrived. 2014 has been an incredible year so far – it's been spectacular. I have become the proud owner of an SZD-30 Pirat – an aircraft that leaves me feeling delighted every time I fly it. I have successfully taken and passed my Bronze badge with Shalbourne CFI, Phil Morgan. Finally, I have passed my cross-country endorsement at Windrushers GC.

There was only one thing left then, the thing that started it all, to be the glider I saw thermalling overhead before drifting off on the wind all those years ago. On 2 July this year I did just that, a 50 km cross-country flight from Rivar Hill to Aston Down. I had been studying the weather for a week; conditions were going to be promising and, when I turned up at the airfield, other more experienced pilots were rigging, Colin Baines amongst them (more about him later). I rigged and then did a stint on the winch. I lasted about an hour doing cable retrieves before I couldn't resist taking a launch.

It was about 1300 hrs and I was back on the ground from a 1300 ft launch in six minutes. I felt very deflated; the lack of headwind was sabotaging the launch heights for everyone. The sky and cloudbase was also falling short, with cloudbase at about 4000, and stratus above that blocking out the heat and taking the predicted kick out of the day.

The next launch was no better, but somehow I managed to scratch away in a slow climb to 3000 feet. I decided to "just have a look" in the direction of the M4. There was a definite point where I realized that I couldn't see Rivar Hill anymore, but knew that I had enough height to get back. Faced with a stark choice between going home unsuccessful or to the next fluffy white cloud – I decided to go for it. I did this in the knowledge that if my chosen cloud wasn't working, it was going to be a very short flight indeed.

Here's Justin going solo at Aston Down after a 5-day gliding course.

The cloud was working, and I slowly recovered the height I'd spent getting to it. However, I sensed that I still wasn't absolutely committed to the task yet. It didn't help that, looking in the direction that I wanted to go, I could see potential lift, but also deteriorating conditions. It wasn't going to be an easy day and "get high and stay high" kept popping into my head. I can't describe the moment of instant "development as a pilot" that happens the first time you are out of range of your home airfield. Whatever happens after that moment is entirely your responsibility.

My own decisions were all that mattered now and I had to get them right if I wanted to reach my goal. I estimated that I had enough height to overfly Swindon without breaking any laws, but unless something good happened, I would be picking a field on the other side! To my complete surprise, as I got over Swindon there seemed to be weak lift everywhere. I was elated as I reached 4000 feet again.

About 5 km further on my course I hooked in to a brilliant thermal. As I was spiralling up, *XCSoar* flashed up the 'above final glide' message. I wasn't going to be fooled by that nonsense, but it was reassuring nevertheless. I had to skirt around Kemble, as I didn't have enough height to comfortably overfly it. Then finally, after about an hour and a half, Aston Down came into view. I did a good circuit and landed very well if I do say so myself. A 57 km flight in an hour and 50 minutes.

I chose Aston Down because I had landed there 37 times last summer; why make it hard on your first cross-country flight, after all? To my surprise, who should I see after jumping (literally) out of my glider? The CFI, Mike Weston, who had sent me solo there almost a year ago to the day. The circle is complete. It was an amazing flight that I will never forget, and I was so wired afterwards that I didn't sleep that night. Just brilliant.

I put a lot of thought and planning into that flight; not so much into the retrieve. In my naivety, I honestly expected to relaunch and fly home. Not a chance – I was too tired and the flight had taken much longer than I expected – not to mention that the sky had gone flat. I phoned Rivar Hill to let them know that I had arrived safely and when they said "have you arranged a retrieve?" the penny dropped. Fortunately, Colin Baines agreed to come and retrieve me. We didn't get back to Rivar Hill until 9 pm that evening; a very long day for us both as Colin had also flown a considerable cross-country that day.

I feel like the world is pretty much my oyster now. All I can think about is the next opportunity to get back in the air and go somewhere. There is something very unique about the gliding community and I love being part of it. What next? ❖

Lake Placid – a moist wave day

Dan Daly, GGC

Dan Duclos

I'M RECALLING that, "It's better to be on the ground wishing you were flying than flying and wishing you were on the ground", as the gap in the clouds beside and below me gets narrower and narrower, keenly aware that at least five other gliders are in my immediate vicinity – one without PowerFLARM, and another with a bad configuration file… in the best wave you've seen in years. What would you do?

Welcome to the 2014 Lake Placid Wave Camp. The previous day (5 Oct) had had southerly winds (one runway 32/14 in LKP) and we operated off 14 (not normal), with decent thermal soaring flights up to 150 km. I didn't fly and played field manager for the day. After dinner, we looked at the TAF for Saranac Lake (KSLK) and saw "… FM060000 22004KT P6SM OVC 35", although *XC Skies* said there would be strong southerly winds… with a front with (more) rain coming in. Certainly unlikely conditions for wave, so we planned for a normal start time.

Forecast winds when I got up: 12 hr forecast – Summary for Plattsburgh, NY. Forecast is valid 10:00 am to 7:00 pm (EST), 6th day of this month.

Altitude (msl)	*Direction*	*Speed*	*Temp*
3000	180	33 mph	No data
6000	220	35 mph	35 °F
9000	230	43 mph	26 °F
12000	230	48 mph	15 °F
18000	230	67 mph	-4 °F
24000	230	81 mph	-25 °F
30000	230	93 mph	-49 °F
34000	220	112 mph	-47 °F
39000	220	118 mph	-52 °F

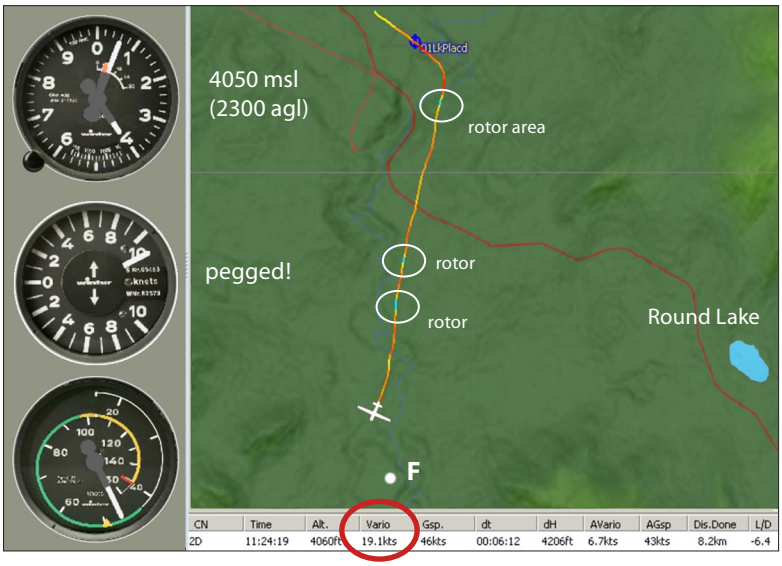
Not a huge increase from 3-6000 feet (local mountaintops are at 4500), but much higher winds than last night's TAF suggested. There was doubt we'd get to fly at all with a 20 knot 90° crosswind, gusting higher. The Lake Placid field elevation is 1745 feet.

No lennies so off to breakfast at the Main Street Diner. At the airfield at 0900 it's blue and windy; much discussion about whether to assemble. Many hold off. Then at 0917 a lennie appears and there's a rush to rig…

… a lennie appears …

Dan Daly

At 1030 we towed to the north end (2 miles) and had a quick pilot meeting – 90° crosswind – a towplane would do a test flight to see if it was manageable or not. Answer – yes, but plant the glider tailwheel to roll straight… First tow was by the MSC L-19 with the MSC Duo Discus behind. The tow didn't look bad. Nicholas Moreau was next behind the GGC Pawnee, again, no problem. I was third in my SZD-55 behind the MSC L-19 at 1120. The tow had occasionally moderate turbulence with some light



chop (I lived in California and Colorado for eight years and have a lot of rotor flying experience).

A picture is worth a thousand words, so there it is above: point "F" is a corner of the wave window, and Round Lake is on the right. To see what rotor looks like, you can download my IGC file from 6 October and run it in *SeeYou*. Look at the MSC Duo trace also, which was affected more on its tow (-400 fpm to +1100 fpm over a short span).

Climb rate of about 1900 fpm (the SZD-55 behind an L-19 is usually about 800 fpm); I got off tow at 4000 (5750 msl). I got established in the wave about 1150. Here's a photo taken at 1201, looking southwest at 8400 feet.

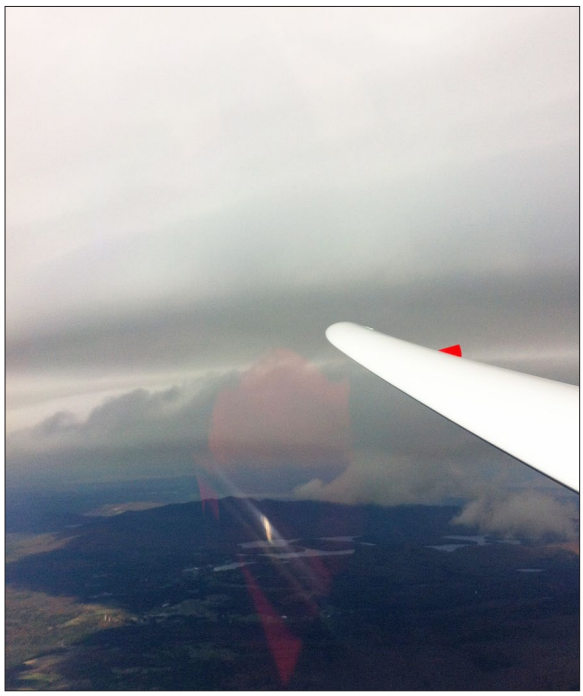
Climbing through 10,000, we called Lake Placid Glider Ops and asked for the wave window; about 20 minutes later, they responded that the window would open at 1315 local to FL 260 until 1700. We had climbs from 3–6 knots, and now had an hour to kill. I amused myself exploring where the lift was, and running over to other gliders I saw on my FLARM to see what the wave was like there. FLARM is useful for contacting the wave, as it displays altitude difference and the other glider's climb rate. PG doesn't have FLARM, but I could still use his transponder data to sort out where the wave was – while looking out, of course.

Dan Daly

Let's see – where's the wave? Oh yeah…

As I climbed, I manually adjusted my oxygen system. I use a basic Aerox constant-flow system with oxymiser cannula, with a 22 cu ft bottle, and have an Aerox mask good to 30,000 feet for flights above 18,000. Others have the automatic EDS systems, which use much less oxygen (MSC Duo, for example). I use a portable system that I strap to the back of the seat, but am investigating a built-in system, which probably means moving to a smaller bottle and EDS.

While waiting for the window into Class A airspace to open, it was obvious that the cloud coming in was going to be an issue.



Dan Daly

Looking back to Lake Placid (under right wingtip), a lot of moisture is coming in at 1219. It's getting murky.

The wave gap started to close, from southeast to northwest. I moved southwest to continue climbing in what was rapidly becoming the only cloud-free area around. I didn't have time to take any more pictures… "Aviate, Navigate, Communicate, then take pictures". Just before noon, PG called Boston Center and negotiated an earlier opening to the window. I was about 17,500, and climbed briefly, but the wave gap in my area was closing – quickly. I made a brief excursion into Class A, and did a 20 knot descent to about 9000 feet to stay clear.

Rob Williams in the GGC Puchacz also moved to the clear area. At 1330 there are still Foehn gaps, but not many. The area between Hart Lake and Round Lake is closing in rapidly; several gliders move to a gap in the Keene Valley. I elect to rapidly descend in place to stay VFR. This is only my second wave flight at Lake Placid, and I am a fairly conservative pilot. We didn't have anyone watching the satellite photos – a mistake… we assumed that this moisture was the leading edge of the front we expected, therefore, we did not expect it to remain flyable.

There are still Foehn gaps in the right places. In the Hart Lake/Round Lake area, there is rain, snow, turbulence, cold… it had it all. I lose my mental picture of which glider is where, and put the nose on the airport since the forecast says once the rain comes, the day is done. At 1350 I decide to land (14 km away), at 1357 I am rolling up to my trailer in the rain, followed by three others. One person was distracted by the big crosswind, turbulence, rain, and so on, and landed gear-up; the ground is grass with gravel, and the result was a white gelcoat stripe, and some damage to ego but not any visible to the glass fibre. Don't let a change in conditions distract you from checks…

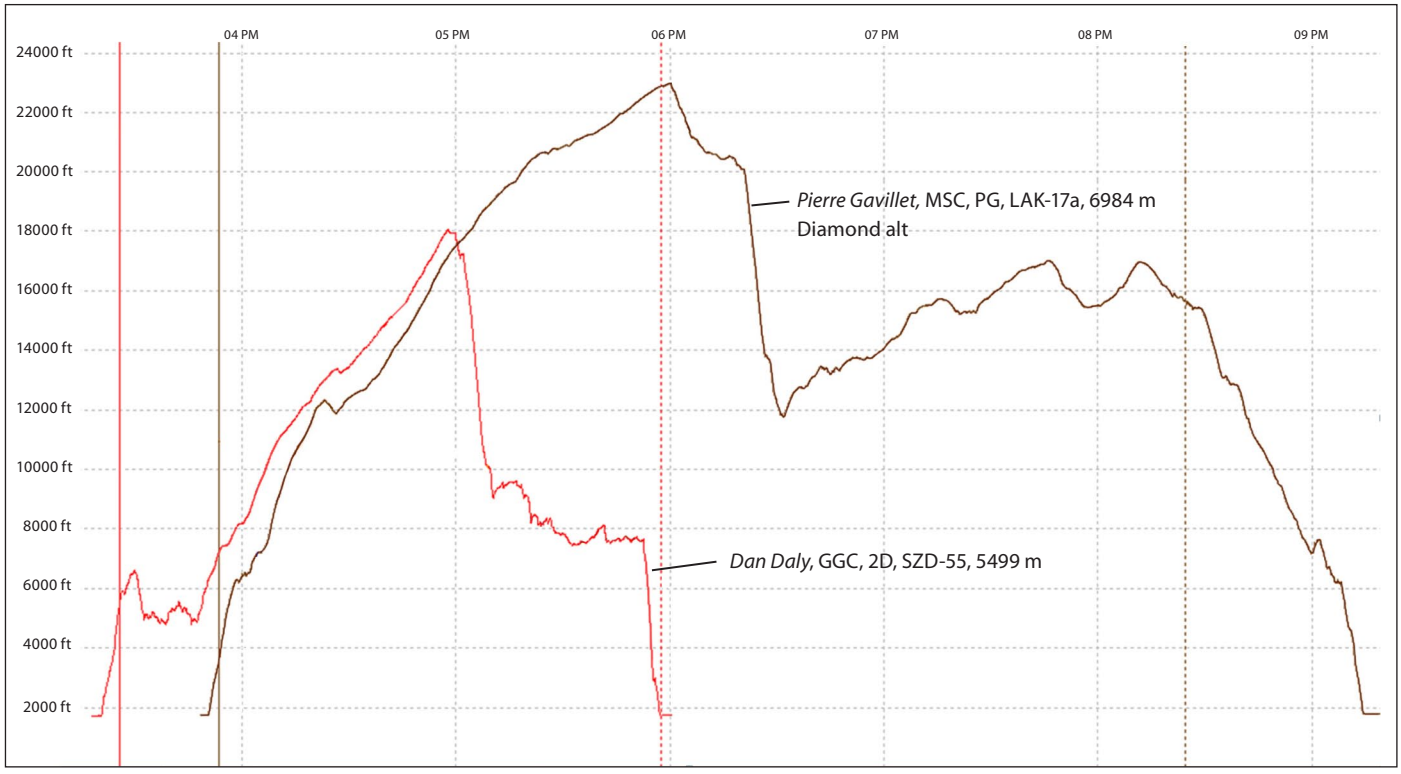
At 1415 Foehn gaps open to the southwest (glider in the box – nice and wet). 1530 – of course, most of us have now landed, but Pierre Gavillet has stayed up in the Duo and he gets his Diamond! A glorious blue sky with lennies; my wet glider is sitting in the trailer… sigh.

So, what did we learn (lessons seen again):

- Always be ready, just in case.
- Use a checklist (recorders, oxygen, etc). Have a check going above 18,000 feet and going back down, so you don't forget to switch to mask from cannula.
- Consider one of the inexpensive blood oxygen saturation meters – they cost under $30 at Walmart, and let you know how well your oxygen system is working.
- Once there's wave, call Boston to get the wave window ready (it takes an hour).
- Be ready, the earlier the better – if we had been ready an hour earlier, really no problem getting at least three more Diamonds.
- Have a clear plan for converting a strong wave airtow into a strong wave climb (but do not forget to notch) – see André Pepin's OLC trace for 6 Oct for a great example of how to do it right. See mine for how not to (slight electronics problems after tow). If you wander around without a clear plan, the strong wave sink can quickly send you back to the airport. A moving map display is very handy to give you a mental picture of what is going on.
- Lake Placid is a place where you can stretch your capabilities as a pilot if you are careful and prepared.

Having flown my wave in a very dry desert climate, I was surprised at how quickly it filled in… Having a sacrificial pilot on the ground monitoring the satellite photos as they come up would make the whole thing safer, I think. The Lake Placid FBO has wireless and is the "owner" of the wave window, and putting someone there to watch the day develop would be smart.

Lake Placid is a gem; there is a town a kilometre away with great eating and shopping (important for the better half if so equipped), you can camp if you are equipped for fall camping (showers, etc. are available at the FBO, and if not, rooms are available for a reasonable price (about $40/night single for basic accommodation), and the fall flying is superb. The FBO is very friendly, MSC has been coming here for years, and so has GGC. ⇨ **p30**



***Patrick McMahon**, York*

WHEN JIM FRYETT (York Soaring's new president), called me in early April to ask a favour, I was immediately apprehensive. The favour was in line with the club directors decision that we should organize glider competitions at the club as a way to improve soaring opportunties for our members. But I accepted, and became the 2014 Provincials manager, even though I had never competed in, or run a glider competition before.

With help, I assembled a crew I was confident would run a great contest. I received mountains of information and guidance from Virginia Thompson who has much contest experience and has managed the very popular Seniors Nationals in Seminole Lake, Florida. As my most recent event-organizing expertise was running keg parties in university, I hoped that the knowledge required to put on a gliding contest was … mostly there.

I had two goals: first, that we provide a challenging, safe and enjoyable event for the participants with no unnecessary restrictions to club flying. And second, that we would introduce members to the various roles required to successfully run a gliding competition and generate some enthusiasm for the more competitive aspects of our sport. In nearly all cases, from direction to scoring to first time managing, we had new faces taking on the needed positions.

Registrations trickled in, and my worries about low numbers were quelled by those in the know who assert that "glider pilots always wait to see what the weather will be like". On the eve of the first practice day we had eight signed up, five from York and the three not from York had withdrawn – things were looking bleak. But, just like a thermal in the blue on a precarious final glide, two enthusiastic pilots from Toronto Soaring showed up unannounced – now seven.

After the Day 1 briefing (no flying to be had), awkward comments on number of participants were behind us. We accepted the field and carried on with a great sense of camaraderie. Impressed by how things were running, I decided I would enter the contest bringing the number of participants to eight in a single class.

Day 2 was a flying day. Special consideration was given to a nearby hang gliding club who were also hosting a competition through the weekend. Contest Director Ed Hollestelle and the task committee lead by Tony Firmin designed a task that would bring pilots back from the southwest to hit a final turnpoint 10 kilometres east of York (Grand Valley) that kept contestants out of the hang gliding airspace. It would end up being the only day of competition with a 2-hour Assigned Area Task (104 km min, 235 km max) from Arthur to Fordwich, Stratford, Grand Valley with a 1000 agl finish 2 kilometres out of York Soaring.

Pilots launched with a few raindrops at cloud base and lots of hang gliders in the area. The gate opened and away we went. It was interesting for me – participating in my first contest – how quiet the radio was, not a single transmission from pilots on course, very different than typical cross-country days. We expected the weather to deteriorate from the west throughout the day.

The winning pilots went high (north) into the first cylinder and went as deep as they could into the Stratford cylinder before assessing the deteriorating conditions and heading home, riding the crest of a soupy air mass that was chasing them. All the pilots landed back, though two couldn't make the Grand Valley turnpoint and ⇨ **p28**

	pts	*ID*	*Pilot*	*Glider*	*km/h*	*Dist.*
1	913	4B	Chris Razl	LS-4B	79.0	164.5
2	831	K2	Wilf Krueger	DG800	72.0	155.2
3	661	KO	Stanislaw Maj	SZD-55-1	57.3	128.7
4	655	CD	Pat McMahon	G-102	56.7	129.4
5	646	Z1	Stan Martin	Mini-Nimbus	49.2	170.4
6	503	JF	Jim Fryett	LAK-17-15	–	132.3
7	417	42	John Brake	Kestrel	–	108.5
8	124	1M	Zbigniew Sobolewski	Jantar	–	27.4

Tobogganing
on the invisible hill

There is only one real problem about learning to land a glider, you only get one landing per flight … it takes practice to be able to see the subtle changes which indicate whether the glider is approaching accurately … it seems so difficult at first to gauge exactly where the glider will land. Derek Piggott

Dr. Dan Johnson, from SOARING

IT WAS AN OVERCAST DAY. Will arrived at Air Sailing for a week of soaring at this wonderful gliderport north of Reno, Nevada and, after assembling, decided to make use of the poor soaring conditions to fly some circuits to get used to the field and to get the dust out of his own feathers.

Floating downwind, he gazed east, past the Red Rocks to beautiful Pyramid Lake. He looked down at the sage, and the long intersecting runways, with buildings tucked into the southwest quadrant of runways 03-21 and 17-35. The north-south runway is almost a mile and a half long, a brown sliver in the desert, decorated with a smaller 20x1500 feet strip of asphalt in the south end to keep sand out of the towplane's prop.

Flying north, downwind, he didn't quite feel comfortable. He was used to a short and wide grass strip, bounded by trees, flat agricultural land and buildings extending off into the hazy distance. He tried to guess his glide, tried to figure out where he should turn downwind to base. It seemed like a good thing to use the north end of the runway, to keep out of anyone's way who might take off.

The ground beneath him sloped up to the north and to the east, then rose sharply to form small towers and clefts of red rock.

He flew past the north end of the runway, and when it felt about right, announced turn to base, then studied the runways again. He turned final and announced. He felt low, but realized that the sloping ground might be deceiving. He picked an aiming point close to the end of the runway, and modulated his spoilers to make the descent look and feel right.

He tobogganed down the invisible hill, over the sage toward the runway's end. Suddenly, he felt alarmed. Something wasn't right! He was really too low! He stowed the spoilers and put some back pressure on the stick – but he only descended faster.

He felt sick. He could see he would land about 50 feet short of the runway! He touched down; sage crackled; he bounced violently across the bumps. Just as he reached the verge, there was a loud crack and the glider jerked suddenly to a stop.

He sat in the cockpit for a few moments until the dust and his nerves settled; humiliation and grief flooded his soul. He could see a small ditch passing beneath his cockpit. The gear must have dropped into it. He didn't want to think about the damage. He wanted to go into the biffy and forever latch the door. A runway measuring 7600 feet, and he couldn't get there. What a week of soaring this was going to be! He was already dreading the friendly, "Well, honey, how was your week at Air Sailing?"

What happened?

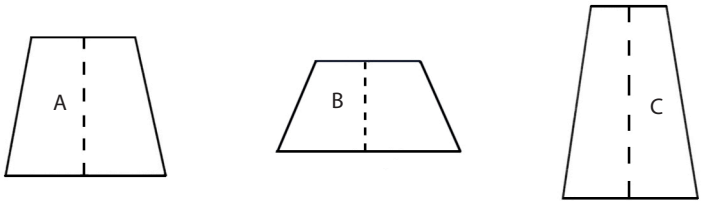
First, let's repeat the principle governing this column. Really good pilots unintentionally do things that look stupid to the "lookenspeepers" because the operating characteristics of the human perceptual system are prone to particular errors. Any one of us could end up in Will's shoes. Let's march through the particular errors that might delude us in judging our final approach.

Ambient cues Visual ambience – the feeling and character of a place – creates a pattern in our brain. If we only fly out of one airport, then the cognitive pattern evoked by "landing" (the procedure itself, not the word), is highly specific.

As we gain experience by flying into a variety of airports, the cognitive pattern becomes more generalized, and our brain can decay the specifics of home – the tall trees near the end of runway 30, the cluster of buildings on the northeast – and can enhance the features common to every airport, creating a generalized airport "gestalt".

It is always possible that a new airport will not fit our airport cognitive pattern. Because our unconscious brain tries to fit the "feeling" of any approach to landing into the appearance of the airport pattern, we should be concerned if we feel entirely comfortable during the approach to a brand new place.

Does this make sense to you? Let me say it the other way. That feeling of mild discomfort or slight anxiety that we often have in the pattern to an unknown airport is desirable because it signals that our brain is unable to fit its cognitive pattern labeled "airport" around the new place. This creates appropriate alertness and caution. If we feel comfortable during the approach to a new airport, especially one with unique features such as Air Sailing, this means that our brain has subconsciously found a way to ignore its uniqueness, and is comfortably fitting the square peg into a round hole, to coin a phrase.



This inappropriate comfort increases the risk that our perceptual judgement may be distorted, possibly causing expensive embarrassment like Will's, or injury, or damage, or death.

False horizons, false surface planes Mountains create a false horizon; mountainsides and sloping valley floors create false surface planes. This creates errors of judgement regarding aircraft attitude and rates of climb or descent. This seldom causes accidents, and often creates pilot-induced awkwardness.

For wave soaring, it's useful to know that the horizon descends in our field of vision as we fly higher. The angular depression, in degrees, is equal to the square root of the altitude in kilometres. This can lead to inadvertent errors of airspeed control when we reflexively lower the nose to the "right" angle, and is compounded by the large difference between indicated and true airspeed at high altitudes. (If you can calculate the square root of your altitude in kilometres, you are definitely not hypoxic. On the other hand, if you think you ought to try the calculation, you probably *are* hypoxic.)

There are two particular ambient cues that consistently cause trouble for pilots on approach: size and shape constancy.

Size constancy Runway width is a very important cue in deciding when to flare for landing. It also is a cue to how far away we are from the airport.

In my teens, I had been taking lessons at a paved strip 3000 feet long by 25 feet wide; one day my instructor had me fly to a controlled field, where we were assigned runway 12. It just happened that this runway was a WWII relic, about 2500 feet long and about 300 feet wide. A more extreme change could hardly be imagined. I descended into the vastness of this new runway, began my flare. The instructor shouted, "What are you doing!?" as he shoved the yoke forward hard. I had begun my flare at about 100 feet altitude! This was an interesting introduction to the size-constancy illusion years before I read about it.

On the other hand, a narrower than usual runway makes us feel high when we flare; a wider runway makes us feel we're low. This feeling operates subliminally, and may guide reflex actions inappropriately while our frontal cortex is worrying about the crosswind.

Shape constancy Most runways are long rectangles. Of course, we do not see a rectangle during the final approach, we see a very tall trapezoid.

We may be used to the particular trapezoid (A) of a level airport. If we then land at an airport with a down-sloping runway (B) of the same length as at home, it will seem shorter than it actually is, and will make us feel lower than we really are. So if our approach feels right, we may arrest our descent inappropriately and land long. It is not a good idea to land long on a down-sloping runway.

An up-sloping runway (C) looks narrower and longer than a level runway of the same length. Gliding down to it, we feel like we're too high, and may increase our descent, which creates a risk of hitting the end-marker lights, or landing in the ditch just before the approach end, creating financial and possibly medical embarrassment.

"Slope" constancy I do think that a factor distorting Will's perceptual judgement was the sloping ground. This is really very difficult to judge from above. It is well known, from accident data, that a pilot descending over down-sloping terrain is deluded into feeling that the approach is too shallow (not descending fast enough), and steepens the descent. The landing is then short. This is one of the factors that probably fooled Will.

A pilot descending across up-sloping terrain feels that the approach is too steep (approaching the ground too fast) and thinks it's necessary to pull up. The aircraft then lands long.

"Tree" constancy The size of vegetation surrounding an airport gives an important clue to elevation. During approach to a runway over tall trees, the aircraft's altitude feels too low, and the runway flanked by trees seems narrow and short. This leads to the pilot arresting the descent and landing long. One of my favourite Wisconsin airports is like this, and I have to really focus carefully to make a proper approach. Conversely, during approach to a runway surrounded by short vegetation, the pilot feels high, and steepens the approach. This leads to a tendency to land short. This also was probably a factor in Will being fooled.

The focal point We are all taught that the thing that doesn't move across the canopy is the thing we're going to run into. This is true whether it's an airplane flying nearby or a part of the airport – or, on the ground, the bicyclist approaching the driveway or the baseball hit straight at us.

The only thing that is always the same, at every airport, is that there is an aiming point on the runway, and this point should not be moving across the canopy. The ambient geography – the lights, the slope of the land, the tall trees, and, ironically, the lack of markings on the grass strip – are simply distractions that can distort judgement.

If we adjust our descent so that the aiming point on the runway stays at a constant point on our canopy as we slide our winged toboggan down the invisible hill, then we will begin our flare at that correct point. It does not matter then whether the runway is wide or narrow, long or short, sloped or flat. We will arrive at this aim point. ❖

Common glider accidents in training – avoiding the stall-spin

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

- Teach that the glider will spin if stalled with a yaw component (even a small amount of yaw) so understanding is the first step to prevention. Unstalling the glider before a spin will prevent the spin.
- Teach students to feel how the glider is flying and what it is doing, not just what they see (instruments/attitude). Practise speed control with air speed indicator covered, but emphasize that feeling airspeed is unreliable near the ground so constant reference to airspeed indicator is needed after base turn.
- Emphasize the seven indicators of an approaching stall and that correct recovery in any attitude is to reduce angle of attack by lowering the nose. Explain that indicators may occur very quickly in some scenarios so prompt recovery action may be required. They may not notice a warning indicator.
- Make them familiar with the twelve spin scenarios in gliding and how to avoid them.
- Practise turns with tailwind and x-winds to get accustomed to illusions created by drift and correct techniques for coordinated turns. Some minor slip is better than any into turn extra rudder at low altitudes.
- Gusty conditions require extra air speed to maneuver safely.
- Practise spin recoveries in simulator first and then in glider until student is comfortable handling them. Low altitude scenarios can be practised in simulator.
- Practise correct approach speed and maintain correct speed in the circuit (see POH for glider). If speeds are not identified use the technique identified in the *SOAR* manual.
- If no type specific spin recovery technique identified in aircraft manuals (POH), use standard recovery technique in the *SOAR* manual.
- Slightly slipping turns are safer than even a slight overuse of rudder in turns.

Dan Cook

It never happened before!

In recent years, we have heard expressions similar to the following from licensed pilots, "I made a hard landing, bounced, lost control, and went off the runway. I've *never* bounced before. It never happened before." Another, "I got slack in the rope and had to release. It never happened before." "The rope broke at 300 feet off the end of the runway. It never happened before."

The key to the above experiences are not what happened, but the expression, "It never happened before." If it never happened before, perhaps we instructors should ask, "Why?" As instructors, we pride ourselves in teaching the correct way. Perhaps we are putting too much emphasis on always doing what is right during initial training. Maybe we are trying so hard to teach the correct methods that we forget that someday when the student is a licensed pilot he may have to cope with some basic mistake that he hasn't encountered before.

We should simulate mistakes and be teaching how to cope with them, as well as the correct way to fly. If the student never had to cope with mistakes during his training, then how can we expect him to handle problems after licensing? In my 6000 hours of instructing, I have tried to introduce mistakes as well as teach correct methods. I seldom hear, "It never happened before," but if I do, I ask why.

The following are some examples of this approach. Remember that this is not a complete list of possible mistakes, but only a beginning.

- Teach actual slack lines on aero tow and have the student make the recovery. Have the student fly too far to the outside during a turn, then return to the correct position ... too far to the inside of a turn, actual wave-off, etc.
- Teach broken rope techniques on takeoff between 200-300 feet above the ground where a 180° turn back to the runway is applicable (also at 400 and 600 feet). Teach stalls from flat turns and with crossed controls, not just from coordinated flight. Show the results of improper flaring on landings. Sooner or later a pilot will make an improper flare, rounding out too high, too late, or perhaps ballooning because of incorrect use of dive brakes. How to recover from these and make a good landing is extremely important to the new pilot.
- When teaching how to return to the airport with the correct altitude, why not do maneuvers down to such a height that the student will have to make a pattern other than a normal one? Perhaps he will have to land directly from base leg, on a straight-in, or from downwind.
- Teach the effect of flying too fast back to the airport, and how the uncompensated rate-of-climb instrument may show 1000 ft/min down, while best L/D speed may show a normal rate of descent.
- Show the student the effect of various speeds in the pattern. Approach intentionally too fast, so that the student will see problems with such an approach and landing.

Many instructors are already integrating this method of teaching into their syllabus of basic instruction. Many are not. Too often, we are hearing, "It never happened before."

If you feel that the above will make your course syllabus longer, it won't. It can be integrated so that when the correct methods are mastered, the corrections for mistakes will be mastered too. Thus, to be sure that YOU have taught the correct way, include at least some of the basic mistakes. If you do, seldom should you hear, "It never happened before."

Richard Sayer, *from SOARING*

Why we don't thermal down low

An e-mail correspondent asked me to explain why low-altitude thermalling is apparently so dangerous. After all, he (and I) have never unintentionally spun at high altitude, so why is it so bad to thermal down low? He suggested the answer might be of more general interest, so here it is.

It's not really "more likely to spin" but surely, "more likely to get into big trouble". Thermals form in very small little bubbles and streams down low. These coalesce together between 500–1000 feet to form the larger structures we use. Many of the little streams and bubbles die out. The lower 500 feet is (you hope) super-adiabatic which means unstable in both directions. If a little bubble tries, a bigger bubble nearby can push it down and quash it. At any rate, lift down low is much smaller, gustier, rattier and less reliable.

In the bottom 500 feet you are in the turbulent boundary layer, just like in the last

millimetre of your wing. This means there is lots of wind-induced turbulence, lots of little gusts and eddies. Many that feel like thermals will vanish and turn in to sink and tailwind when you turn. The overall gustiness is greater in general.

Ground illusions are very strong. Just at the moment when you are really busy you have to deal with a totally different view out of the cockpit. When going 60 mi/h heading downwind, it is really hard for your brain to realize you're on the edge of a stall.

Add these up. You're going in to the wind. You feel a gust – which is just a gust, but you don't know it. The glider rises, the vario chirps, you feel g in the pants. Whew! You turn. As you pass 90° you're also getting the "dynamic soaring effect" that the gust is accelerating the glider. But as you hit 180, the gust turns into lull, which means you're headed downwind and lost 10-20 knots of airspeed, and the nose points down. But since you're headed downwind, the trees are going by really fast, you think you have plenty of speed, the nose is pointed down (since you just got dumped), so you pull back on the stick.

I don't think the vast majority of accidents resulting from low-altitude thermalling attempts are simple stall-spin entries in the thermal. I think crashes out of thermalling attempts are really sink/gusts. This seems to be, for example, the consensus of a crash at Ionia – the gust robbed the pilot of airspeed at the wrong moment, the glider fell out of the sky and just didn't have room to pick up speed.

The stall-spins come from very low altitude maneuvering after the thermalling attempt expires. If you try to thermal at 400 feet, you give up at 300 feet and 40 knots and pointed the wrong way. Now you have to do a lot of last minute maneuvering to get to the field. The last minute maneuvering is where the stall-spin happens – lined up wrong, changing fields at the last moment, etc.

Here too, the ground illusions set in. You left the thermal doing 40 knots, as you were thermalling. Or, you got dumped on the backside of the gust. Now there will be a big downwind illusion on your "downwind" plus a mad desire not to lose altitude – it's not often you start a pattern at 300 feet and 40 knots. Subconsciously, you will not want to give up another 200 feet to get the airspeed up where it belongs. As you make last minute maneuvers – let's *not* call this a pattern – you are still used to the sight picture of turning on a point that happens higher up. That a turn has a radius may come as a surprise. Remember, you're under huge stress here. If you don't line up with the field, and you are uncomfortable banking – now at 100 feet and still 40 knots – your subconcious will want to use the rudder. And as the nose falls, pull back … here we go.

In sum, trying to thermal below 500 feet is much less likely to work, because the thermals are much smaller and the wind gusts much worse and more tempting. The biggest danger is that these attempts will lead to a low, tight, slow pattern, and the last minute maneuvering can easily set up the stall-spin.

On a cheery note, this sort of thinking sets some safety parameters. It's more dangerous to thermal low if you don't have the landing field exactly mapped out and your approach to it, if the wind is strong, if the thermal day (super-adiabatic layer) is strong, if there are trees or hills contributing to low altitude turbulence, and if your stress level and ability to adapt to the different air and ground illusions is weaker.

Not a cheery thought but a scenario worth rehearsing. The temptation to keep trying and avoid a landout is oh, so strong, and all the ways the air is different down low not so obvious.

John Cochrane

miscellany

All about the "British Standard Thermal" and handicapping

UK soaring stars Tony Deane-Drummond and Nicholas Goodhart (both quite recently dead in their 90s) played a major role in developing the BGA handicapping system. My recollection going back 50 years is that Nick deduced the strength and distribution of the average UK thermal from two assumptions based on experience:

1 that the optimal angle of bank of a Skylark 3 to maximize rate of climb in UK conditions was 35°.
2 that the average achieved rate of climb was 2.4 knots.

From the Skylark 3 polar, Nick then deduced the rates of sink and turn radii at different bank angles. This generated an approximate lift distribution that would be valid for a range of bank angles, from say 20–50°. This "quasi-scientific" approach would make it possible then to calculate the achieved rate of climb and therefore cross-country speed for all those gliders for which reliable polar curves were available.

Mike Bird

Above, Tony D-D's system was very much guesswork based on his view of how much the gliders he flew varied in performance. It had no theoretical basis.

Nick produced a paper for the '65 OSTIV conference, where he showed that given a thermal having a parabolic cross-section, the rate of sink and radius of turn at different angles of bank could be calculated from the min sink (max Cl) and speed for min sink, and thus the climb rate in this "Standard Thermal" could be deduced. Using MacCready theory, this would then give relative cross-country speeds. He used his own actual cross-country speeds to put numbers into the equations used. Ian Strachan realized this method of calculating relative X-C speeds could be used to give mathematically justifiable handicaps. Initially this was a factor to multiply actual speed by, but this was later inverted since a multiplier less than 1 gives steps that become coarser as performance increases.

For some years, under Ian's chairmanship of the BGA Competition committee, and later mine, this method was used to calculate handicaps. The shape of the thermal was modified based on work at Reading University using an instrumented Falke (see papers by Mansfield, Milford and Purdie presented at the 1978 OSTIV Conference), and other work by Konovalov in the USSR also read at the 1978 conference.

Accurate glider performance curves are notoriously difficult to measure. I got a dirty look from Dick Johnson when I questioned (after a talk he gave on performance improvement) that all the measurements 'before' were taken on one day, and 'after' on a different day, and subsidence on high pressure days can vary by several cm/sec, thus introducing a systematic error.

Handicaps based on manufacturers polars (and other sources) were tweaked by a percentage point or two to agree with general feeling. It was completely unscientific, but the system met with broad approval (or common dissatisfaction). It became apparent that the top ten pilots on a consistent day could be used to give a useful statistical comparison of performance, and it is interesting that relative performance varies little in weak to moderate conditions. I used this for a more theoretically justifiable basis for handicap adjustment.

The international Club Class handicaps were initially based on the UK system, which was the only one with a theoretical basis; subsequently, empirical changes were made by the DAeC (German Aero Club) for its list.

Peter Purdie

2014 Nationals trophies

This year the Nationals were extended by one day to get the required four competition days in. Trophies were not formally awarded because the final results and recipients were not known at the banquet. Nevertheless, we should put the following trophy awards on record:

Wolf Mix Trophy - winner of the FAI Class
Jerzy Szemplinski
CALPA Trophy - winner of the Club Class
Anthony Kawzowicz
Dow Trophy - Best flight FAI Class
Chris Gough (94.47 km/h hcp)
Dow Trophy - Best flight Club Class:
Anthony Kawzowicz (80.89 km/h hcp)
SOSA Trophy - Best novice
Robert Zachemski

Jörg Stieber

IVSM – save the date

The USA National Soaring Museum announced in late July 2014 that the *6th International Vintage Sailplane Meet* will take place on Harris Hill, Elmira, NY, 9-16 July 2016. Jim Short, president of the VSA, will chair the event, which will be managed by the museum staff and supported, as in the past, by the Harris Hill Soaring Corporation and the Vintage Sailplane Association.

"It's our great privilege to welcome the owners and pilots of some of the most historically significant gliders in the world here to Elmira, the soaring capital of America," said Peter Smith, director of the Museum, in announcing the plans. "The significance of this event cannot be overstated," Smith continued, "It is the best opportunity we have to recognize the history of what is truly a worldwide sport. Besides pilots and gliders from the United States, we anticipate having participants from Canada, Australia, New Zealand, Japan, Great Britain, Germany, and Italy; we certainly hope to attract representatives from other countries, too."

In recent years the event has drawn as many as thirty pilots and gliders from around the country and the world. They gather to fly their gliders, discuss the history of gliding and soaring, examine the efforts each one makes to maintain and in many cases, restore gliders and take part in social events.

If you own a vintage glider, or are just interested in beautiful old gliders, put Elmira in 2016 on your calendar.

Simine Short

Suspicions confirmed?

At the 1983 World Championships in Hobbs, New Mexico, I was asked by a local service club to give a lunch talk about soaring. It was still during the practice period so I agree to do it on a non-flying day. The day arrived and I spoke to a well-attended lunch "speak and meet" session. Even a local newspaper reporter showed up.

I began the talk with a short bio, including the fact that I worked for the Canadian government, then continued with the main topic. One of my key points was that cross-country and competition soaring demanded tremendous concentration, constant decision making etc. from the pilot. As an example, I said that I could count on the fingers of one hand the number of times I've thought about work during soaring flights. The talk lasted about 30 minutes and seemed to be well received by the audience.

The next day was a flying day and our team was gathered at the pilot briefing. Bernie Palfreeman, who was crewing for me, brought a copy of the local newspaper. He mentioned that the reporter had covered my gliding talk with a nice little article.

He gave me the paper and I read the following: "… Werneburg, a longtime Canadian government employee, said that since starting soaring he can count on the fingers of one hand the number of times he has thought about work…". Naturally, I started laughing out loud and then read it to the other Canadians at the table. The result was a huge roar of laughter, disrupting all the other teams in the hall. Ah, newspaper reporters!

Ulli Werneburg

Seeding List

Rank	Name	Seeding Points
	FAI	
1	Jerzy Szemplinski	102.20
2	Dave Springford	99.82
3	Jörg Stieber	97.34
4	Sergei Morozov	95.30
5	Luke Szczepaniak	87.88
6	Willem Langelaan	82.43
7	Pierre Gavillet	77.84
8	Chris Gough	55.28
9	Nick Bonnière	37.90
10	Ed Hollestelle Sr.	35.60
11	Andrzej Kobus	34.20
12	Gabriel Duford	33.63
13	Jim Freyett	29.40
14	Emmanuel Cadieux	27.58
15	Ronald Smith	24.45
16	Jean Yves Germain	20.04
17	John Brake	17.98
	Club	
1	Krzysztof Wiercioch	90.28
2	Bill Cole	82.01
3	Anthony Kawzowicz	60.00
4	Roger Hildesheim	55.48
5	David Cole	53.80
6	Robert Zachemski	51.42
7	Ray Wood	48.17
8	Stan Martin	47.37
9	Tom Butts	46.22
10	Rafael Nunes	42.32
11	John Brennan	37.78
12	Selena Boyle	34.60
13	Hans Juergensen	21.73

The purpose of the Seeding List is to provide a ranking of Canadian contest pilots as a basis for the selection of the Canadian National Team for World Gliding Championships and other international competitions. The Seeding Scores are based on the results of Canadian Nationals, Worlds, Pre-Worlds and, with some restrictions, foreign Nationals over a three year period. For the calculation of the Seeding Scores the current year results carry 60% weight and the best result from the two preceding years 40%.

For more detailed information download the document Seeding List Rules (2011) from the SAC Website:
http://www.sac.ca/website/index.php/en/documents/competition-information/335-seeding-list-rules-2011/file

Jörg Stieber
Sporting committee chairman

SAC Youth Bursary Program

The 2014 soaring season has once again proven to be a successful year in support to clubs participating in the SAC Youth Bursary Program. The seven clubs with the 23 students are listed below. The matching financial assistance that SAC gave to the clubs for the participants varied from $207.81 to $499.00 after consulting on how the club wished to sponsor their applicant(s).

Canadian Rockies – *Lewis Janzen, Damina de Wet, Hayden Pfeiffer, Patrick Dibb*

ESC Air Cadet Gliding Camp – *Christopher Aikens, Nicole Boyle, Bennett Foster, Grayden Kruk, Dylan McKenzie, Janet Ross, Rachel Stefaniuk*

Cu Nim – *Dawson Hogg*

York Soaring – *Chris Kingdon, Avery Cozes, Holly Westbrook*

SOSA – *Alan Jack (AJ) Wilson, Patrick McGuire*

Champlain – *Antoine Latulippe, Pier Alexandre Guimond, Yannick Cote-Prud'homme, Charles Eliot Delambre Audet*

Quebec – *Mizael Bilodeau, Marc Antoine Nadeau*

This SAC program started in 2009 and in its six years of operation, a total of 117 youth have received bursaries, co-funded by both SAC and the sponsoring club totaling in excess of $100,000. The awareness of the good that was being done by this program also prompted two personal and one corporate donation to the program totalling $25,000. I would like to take this opportunity to thank all at the SAC member clubs for helping make this a successful program over these past 6 years.

David Collard
SAC Treasurer

SAC Funding for the World Gliding Contest Leszno – Jul/Aug 2014

The following is a summary of the money raised by fund raising efforts of the team pilots Dave Springford and Jerzy Szemplinski and one crew member each. The team captain (manager) was Jarek Twardowski.

Fund raising by team pilots 2013/2014

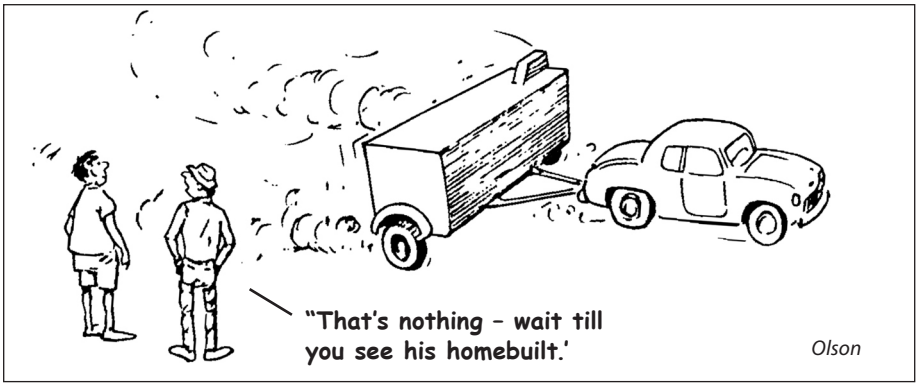
Balance forward	$8,020
Team seminar	1,187
BBQ	447
Team seminar	940
SOSA raffle	1,568
Nationals T-shirts	599
Nationals dinner	2,346
Personal donations	221
Total funds raised	$15,328
Total team expenses	$33,176

SAC funding support

World Contest Fund	$13,824.27
SAC membership	8,860.00
Total SAC support	$22,684.27

The funding support provided by SAC members is based on an amount matching the funds raised by the team to a maximum of $10,000 with a formula of $10 per paid SAC members in the year of the contest. In addition to the cash raised by the team, there were also AeroPlan miles donated which were used to offset some of the travel costs of the team attending the contest and is not reflected in the expenses above or total funding support.

David Collard
SAC Treasurer



Saskatoon Soaring Club, in cooperation with the
Soaring Assn of Saskatchewan, is pleased to host the 70th

SAC AGM

28 March, Saskatoon, SK

Details will be posted on the **SAC web site** and the **Forum** as they become available (final arrangements were not completed when *Free Flight* went to press). Significant motions affecting SAC programs and operation will be presented at this AGM – all clubs should study them carefully after they are published and give your considered vote.

Day 5 at the Australian Nationals

Imagine for a minute flying almost 500 km, and you only take five thermals (12 minutes total) over that distance, and complete the task at an average speed of 156 km/h over three hours. Your final glide is a whopping 243 km, and one hour after starting that final glide you are 200 feet above the height you left that last thermal. Your second last glide distance was a little shorter at 152 km with an L/D of 579 (a height loss of 879 feet over 152 km). What did you stop for? – an 8.1 knot thermal. You only thermal for 7% of the race.

You *still* don't win the day – that is amazing.

Responsibility and judgement

We all differ from one another – not everyone has the same ability to exercise judgement. This ability is not inborn, it is learned through our upbringing and formative experiences. We do not show better judgement when playing in airplanes than in our social or work life.

- A person's attitude on rules, and whether their rule-breaking is considered or impulsive, is important in judging whether we can trust them to be prudent when out of sight.
- A person who habitually takes others concerns seriously is someone we can trust to respect equipment and procedures.
- A person who doesn't skip over details is also someone who can be trusted to take care of training details and practice.
- A person who seems cranky and fussy, though often annoying, is characteristically someone who can be trusted with details, if not with diplomacy. Contrariwise, the gregarious and convivial club member, full of optimism and enthusiasm, is not typically the sort of detail-driven person who does well in charge of an operation.

Dr Daniel Johnson

Glider Ground School

1 March and 8 March, 2015
09:30 to 17:00 both days

Waterloo/Wellington Flight Training Center, Kitchener, ON.

For additional home study, a complete kit of materials is supplied with more than 450 *PowerPoint* slides on a memory stick.

Cost – adults $250, Juniors $75.

Further information available on the SOSA web site
<*www.sosaglidingclub.com*>

or from Course Director,
<*mcdermot@mcmaster.ca*>

SAC web editor wanted

The SAC Board is interested in hearing from you if you have an interest in taking on the editing duties for the SAC web site. Tasks include keeping content fresh and current by seeking out interesting articles and news, keeping the documents in order, and keeping links or other information updated. The web editor would also work to build new content for the web site over time and keep the SAC Twitter feed churning with interesting content. Only computer skills and keenness to learn required – much of the technical aspects can be learned by an individual with a certain amount of training and hands-on work. If you feel you would be a good candidate for this position or if there is someone at your club that you feel would make a good candidate, please send me a note at *allardyce.j@gmail.com*.

Jay Allardyce

Ontario contest from page 21

one was happy to participate but mostly stayed in the local area (arguably having the most fun). The task was challenging, using the best part of the day, but safe enough to see everyone return in time for the BBQ among friends. The winner of the day (and the contest) was Chris Razl, flying York's own LS-4B. He was the youngest participant in the field and was ecstatic with the win.

York benefited greatly by hosting this contest. Thanks to a good suggestion from Virginia, we were able to arrange for in-kind sponsorship from Labbatt's, providing beer for the weekend. Everyone seemed to enjoy themselves!

It's true, participation was low, and that was disappointing, but there are a few notes worth considering: this was a contest where the field was overwhelmingly York Soaring pilots – something that's hard to imagine in the recent past – the youngest pilot in the field won the competition against previous national and provincial champions, and the winning pilot flew in a club ship. We introduced new faces to contest organization and by all accounts the event was appreciated by contestants and members!

Overall, a really enjoyable contest, a really great set of first experiences for many, a stronger brand for the OPGC and a club with great airspace, facilities and members, never better prepared, and willing and able to do it again. ❖

competitions, new pilots, international achievements like the Schneider Cup Trophy (the Schneider Cup was an aircraft race between nations in Europe from 1913 to 1931 that established the fastest aircraft at the time, and spurred a rapid development of technology in aeronautics), visits by international personages to Canada such as Winifred Evelyn Spooner, as well as news in different areas of flying, gliding included.

Throughout the 1930s, news about gliding was featured in the column but rather as a side track. Articles equally covered rather general and more specific news. One could find news about general events involving gliding, *"Members of the glider section of the flying club are showing keen enthusiasm for their very interesting sport, and instruction is being given at frequent meetings during the week."* Nevertheless, one could also find very detailed accounts, like giving the specific glider, the number of flights made, who was involved, and the locale. Gliders were also mentioned in reports about international exhibition like the National Aircraft Show in Detroit in 1931. *The Toronto Star* described only one glider which was on display in the show representing a specific interest in gliders and gliding.

News about spectacular events involving gliders are shown as well. In 1935, the 6th National Air Pageant was hosted by the Toronto Flying Club and featured the supposedly first glider towed behind an aeroplane in Canada which was described in detail. As noted above, this would not have been the first aerotow but rather the first official one and even one which was performed by an American pilot.

Gliding steps up though, and *The Toronto Star* aviation column reports that gliding is one of the cheapest ways to get into aviation, thus stressing the point of gliding as a sport and further promoted gliding. In the end, the column tried to promote all aspects of flying and raise the awareness of flying in the minds of all people, not only people already interested in flying. It was trying to put Toronto in the middle of aviation news in Canada, *"Toronto should be the aviation centre of Canada"*. As well as raising the 'air-mindedness' of people, doing this in a different setting than, for example, the 'Canadian Glider Boosters'.

Gliding as a sport in Canada after World War II and the formation of the Soaring Association of Canada

After the war, gliding really took off as a great sport all over the world and also in Canada. However, it was not the enthusiasts of the early days that came back but people who had seen the war and were more sober and used to a structure of an organization. In the middle of the 1940s a mixture of officers, scientists and engineers, some of whom we met above, saw the need for gliding being organized with national rules and standards with national schools and national magazines which would be run by a national soaring association. Thus the carefree, enthusiastic "we just want to fly" attitude was replaced by a national effort to form an organization for gliding.

This first inaugural meeting of what became the Soaring Association of Canada (which was not yet named) took place on 21 April 1944. The aim was to "promote the art of motorless flight and to represent gliding and soaring in Canada" and was mainly pushed by members of the Gatineau Gliding Club. The committees were fully formed in October 1945 after a series of bureaucratic obstacles were overcome. With this, a national organization for gliding within the FAI was established in Canada.

This was a step to maturity, seriousness and sophistication and also one comparable to organizations and gliding in the USA and Europe. As the first president of the Soaring Association of Canada put it, it was: *"to eradicate the opinion that a gliding club consists of a group of boys who pull a primary glider around a vacant lot, and show that the real end is the high performance sailplane in use at a proper site by people who can keep it in the air most of the day. This is, of course made possible and cheap by the development of large clubs with full training facilities."*

With the establishment of SAC, gliding took off as a sport in Canada as it had earlier in Europe and the USA, and by the end of the 1940s and the beginning of the 1950s, the organization had a Board of Directors, gained licences and FAI badges, trophies and awards, had technical and type approval, established its own magazine, national records, flight training and safety standards, and got insurance. The story continues with the establishment of the different charters in different provinces, competition in international contests and soaring in general to the present day.

Conclusion I hoped to find and present the beginnings of gliding in Canada and connect the many startups of this sport. This task was accomplished and the doubts that nothing could be found were overcome, even if there is still some more work to do.

Nevertheless, the story of gliding in Canada is an intriguing story of evolution. It started fairly early with young Lesh and evolved from that to a professional, sober sport that operates internationally. This development did not happen at once but gradually over the decades.

It started with the untrained, daring enthusiasts in the 1910s and 1920s and spread over the whole country. Their "we can do it" and "everything for gliding" attitudes were not stopped by obstacles like accidents or lack of finances. However, when these people were joined by more professionals who were part of a scientific community, gliding took another step further to a scientific level. Even though the basis of knowledge in aeronautics and gliding was not very wide, people like Loudon and Etkin managed to establish gliding within the surrounding of the universities and an academic environment. At the same time they were joined by others also at a high level of professionalism coming from the aerospace industry.

These two groups initiated the evolution of gliding to a professional sport because they brought the scientific and competent aspect into the "can do" attitude, changing it into a more proficient attitude towards gliding.

The outbreak of the war in Europe had two sides to the coin of gliding as a sport in Canada. On one side, at the beginning of the war, glider clubs were closed and diminished throughout the country. On the other side, at the end of the war and shortly after, the people and pilots who came back from the war were used to a more professional level with strict rules and regulation. This seeped into the establishment of the Soaring Association of Canada, taking gliding to the level it is on today – a sport with international rules that can be enjoyed by every Canadian who wants to let their dream of soaring be real. ❖

Maria Niklaus is studying the History of Science and Technology at the Universität Stuttgart and spent the last two semesters at U of T. She has a glider pilot licence and loves flying, hence her focus on the history of gliding. In a conversation with Herrie ten Cate, who helped to get this project started, she decided to submit this paper to Free Flight as readers might be interested in the story.

I have edited the structure of Maria's paper to be less formal and have removed a plethora of footnotes and appendices. If you wish more info or have any questions related to this article, contact Maria at <maria.niklaus@ymail.com>.

Tony

FAI badges

Walter Weir

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These badges & badge legs were recorded in the Canadian Soaring Register during the period 20 September to 24 November 2014.

GOLD BADGE

339	Jean-Yves Germain	Quebec	

DIAMOND ALTITUDE (5000 m gain)

	Pierre Gavillet	Montreal	5135	LAK-17	Lake Placid, NY
	Patrick Pelletier	Winnipeg	5203	DG-300	Cowley, AB

DIAMOND GOAL (300 km goal flight)

	Robert Zachemski	SOSA	306.7	SZD-55	Rockton, ON

C BADGE (1 hour flight)

3040	Shayda Sobhani	ACES	1:11	1-34	Arthur E, ON
3041	Jack Mika	Great Lakes	2:03	Ka6	Colgan, ON
3042	Grayden Kruk	Edmonton	2:10	L-33	Chipman, AB
3043	Bennett Foster	Edmonton	1:22	Puchacz	Chipman, AB
3044	Bailey Griffin	York	1:19	2-33	Arthur E, ON

Badge & badge leg statistics, 2005–2014

	05	06	07	08	09	10	11	12	13	**14**	5 yr avg	% of avg
1000 km	0	0	0	1	0	1	1	0	1	**0**	0.6	-
750 km	1	1	2	1	0	2	1	0	0	**0**	0.6	–
Diamond	1	0	1	0	0	1	0	0	1	**0**	0.4	-
Gold	5	1	2	3	4	2	2	3	2	**3**	2.4	125
Silver	17	13	16	9	10	9	11	9	7	**13**	9.8	133
C Badges	33	19	27	21	23	19	27	38	17	**20**	24.2	83
Badge legs	47	60	90	40	55	58	36	58	42	**54**	49.6	109

54 badge legs – 11 Diamond, 6 Gold, 37 Silver

Three pilots earned all 3 legs of their Silver badge in one flight in 2014:

- *Bruce Armstrong* flying an ASW-15 from Starbuck, MB
- *Steve Hogg* flying an ASW-20B from Invermere, BC
- *Kyle Tiessen* flying a PW-5 from Invermere, BC

soaring services

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

High Performance Sailplanes Dealer for Antares gliders, ClearNav Instruments, soaring computers and varios, SAGE mechanical varios, Strong parachutes and Cobra trailers. For product details visit <*www.langelaan.com*> or email <*willem@langelaan.com*>, (647) 236-1286.

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

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

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

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

Lake Placid

from page 20

We see friends from RVSS, Champlain, and SOSA too. There is an active social life at the airport, with nightly fires beside the log cabin lean-to to enjoy the stars.

When the season is winding down in southeast Ontario, it's heating up at Lake Placid. Oxygen fills are available at a reasonable cost, there are at least two towplanes, and everyone is willing to help suitably trained and qualified pilots. Several of Gatineau's students came down for a few dual flights to see what the fuss is all about… You can read more on the GGC blog, *"This week at GGC"*, on the GGC web page, or the MSC Lake Placid Blog. MSC generally positions a towplane at Placid for the wave season.

Gatineau brought the club Puchacz and a club ASW-24 (both oxygen-equipped), and private owners brought three SZD-55s, a DG200/17, and an ASW-20. MSC brought a DG300, Duo Discus, a LAK-17a, and a PIK-20. An SZD-55 from Champlain also attended, and had some very nice flights.

If you come, try to make one of the club briefings that cover all you need to know to operate safely at Lake Placid (the MSC web page has a lot of info). Be aware that Class IV medicals are *not* currently recognized by the FAA, so you'll need either a Class III medical or an opportunity to fly dual (the club 2-seaters are in great demand).

With the single runway, interesting topography near the field (it sits on a plateau), and high winds on wave days, Lake Placid isn't a place for rusty or inexperienced solo pilots. Gatineau requires club ship pilots to be cross-country or Bronze badge qualified, and a field check (preferably on a wave day) is mandatory (same for private owners). The flying is great, but the margins for safe operation are narrower than on a flat land site like Pendleton. It is amazing to have a great wave site only 200 kilometres away.

I have my Diamond height, but transitioning from the rotor into the eerie laminar smoothness of the wave is always a very compelling experience, and then watching the earth just fall away will keep me coming back. ❖

SAC Clubs SAC Clubs SAC Clubs

Eastern Zone

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

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

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

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

Eastern Ontario Zone

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

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

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

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

Southern Ontario Zone

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

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

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

GREAT LAKES GLIDING
NW of Tottenham
www.greatlakesgliding.com

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

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

Prairie Zone

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

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

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

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

Alberta Zone

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

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

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

EDMONTON SOARING CLUB
North of Chipman
www.edmontonsoaringclub.com

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

LETHBRIDGE SOARING SOCIETY
Lethbridge, AB
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Pacific Zone

ALBERNI VALLEY SOARING ASSN
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http://avsa.ca

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

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

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