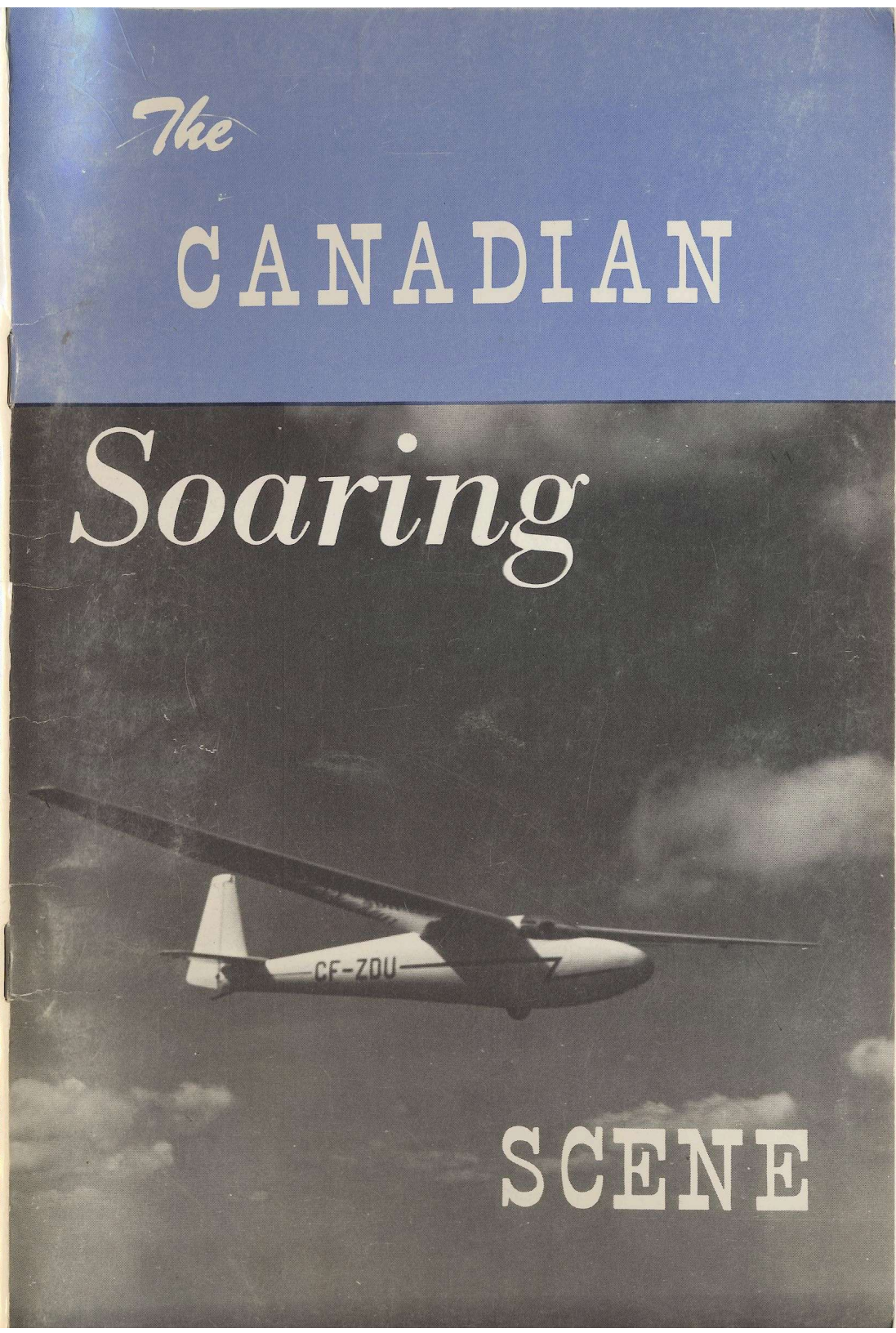
Start of the Race

Photo: Martin Jureit

The

CANADIAN

Soaring



SCENE

THE CANADIAN SOARING SCENE
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The Canadian Soaring Scene

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SOARING ASSOCIATION OF CANADA
Box 2006, Station D, Ottawa 4, Ontario.

The Soaring Association of Canada is indebted to the ONTAERO Company for its efforts to assist gliding and soaring in Canada, and is pleased to lend its support to this general information brochure on the Canadian Soaring Scene.

Soaring in Canada has come a long way since the early endeavours in 1909, the experimental primaries of the thirties, and the first serious soaring flights of the late forties. Canadian pilots now band together in twenty-three clubs across the country. Some have only a few members, others have two hundred or more. Some have one glider and a borrowed tow plane, others have training gliders, performance airplanes, tow planes, hangars, club houses and their own air fields, plus a swarm of privately owned sailplanes to populate their local thermals.

The movement is strong and healthy, and appeals to persons in all walks of life. Canada's expert pilots now place high amongst the world's best.

Soaring has come of age in Canada. It is an unusual sport enjoyed by a very special group of people. The ONTAERO Company has helped to make that group larger and better informed. The Soaring Association commends their brochure and their efforts to your attention.

SOARING ASSOCIATION OF CANADA

J. W. Ames - President

Why Soaring?

With some people it is fishing, with others it is golf, or hunting. With us it is flying, but not just ordinary flying. Just as with bowling, where you have indoor bowling and lawn bowling, there is general aviation and soaring. Not for us sitting in an aircraft and going from A to B, not for us booking an aircraft by the hour and knowing in advance where and when we go; nothing will do but that we must have the challenge, the uncertainty of extracting the energy to power our flight from the very element we fly in, like an airborne version of Jules Vernes' Nautilus, alive in a living element.

It is not generally known that the Wright brothers, the recognized fathers of flying, did over a thousand glider flights before the history-making flight at Kitty Hawk. The first successful pilots in the world learned to fly gliders, and since that day no pilot has existed, and probably never will, who would not be a better airman for having some experience in powerless aircraft. It is not for nothing that it has been said gliding, and its modern development soaring, are the means to turn pilots into airmen, men who operate controls into men who fly; it is not for nothing that soaring has been described as the elite of sport aviation.

The most powerful source of energy known to man is the sun. In ages ago, it created the oceans of oil and the beds of coal that we are still using. It still provides indirectly the power to drive the hydro-electric power stations, the immense concentrations of power in the great hurricanes that are said to contain more energy than all the atomic bombs man has yet made, and the refreshing summer shower. It provides the energy to drive the engine of the atmosphere, and by doing so, it provides the energy for the soaring pilot to sustain his flight.

On a warm summer's day, when the sky is spotted with the "haystack" type of clouds, even the casual observer will have seen some corn husks, or some scraps of paper floating upwards. What carries them aloft? It is no ordinary wind; it is what is known as thermal updraft, or thermal for short. With ordinary wind, these scraps may get carried along, close to the ground, but will keep sinking down again. There are some vertical air currents in the lower atmosphere, where the sun heats up the ground unevenly.

In one place, where the ground is warmer, the air next to it will get warmer too, and warm air will rise. Often the conditions are such that this rising will soon come to rest; that is called stable air. On the other hand, just as often any parcel of air that has been disturbed will continue to rise, a condition the meteorologists call unstable air. An extreme case of unstable air is the cause of thunderstorms.

When the air is slightly on the unstable side, and the sun is warm in the afternoon, the sky is a clear Technicolor blue speckled with dainty white puffs of clouds, and the day is one to gladden the heart of any soaring pilot who ever drew breath. He knows that he will find rising air under each of those beautiful white clouds. By circling like a hawk, and perhaps in company with one, he will be carried aloft until he almost enters the cloud. Then he will straighten out, point the nose of his silent aircraft in the direction he wishes to fly, and make speed to the next white cloud. In this fairy-tale world, smooth and silent, mortal man feels the gentle strength of

Photo: Martin Jurgeit

Now, don't go to sleep up there. Reclining position reduces frontal area and drag, and is comfortable. Sailplane is the Swiss built Diamant.

Mother Nature, feels the touch of his Maker's hand. This is flying such as many dream of, wonderful, utterly fantastic. In this world, yesterday's troubles and frustrations seem remote and petty; all that matters is the world of one's wings, the sun and the soft whisper of the wind.

This is known as thermal soaring, or thermalling. It is the most common kind, and the finest for the pleasure pilot. By this means, flying from one thermal to the next, using these as stepping stones in his progress across the countryside, the pilot can put behind many a mile. Flights of 500 miles have been done many times, and at the time of writing, the world distance record stands at over 640 miles. When the pilot can find no further source of lift, no fresh thermal, he must land, and looks for a meadow, as large and flat as possible. If need be though, he can put down his motorless craft in a field as short as 150 yards, but he prefers a larger field, as this is safer. Also, he does try to avoid any field with anything growing in it.

Besides thermal soaring, there is ridge soaring, sustaining one's flight in the wind blowing over a hill, or a ridge of cliff, hence ridge soaring. In this case the wind is deflected upwards, and the sailplane rides the sloping wind. This method was very popular in the early days, when the early gliders used to ride the ridge for hours, but it does not meet the modern man's quest for higher altitude and the opportunity for flying cross country. The discovery of thermal activity some thirty-five years ago, and the development of modern high performance sailplanes have freed the pilots from the ridge, allowing them to strike out across the country.

Then there is the most modern development, wave soaring. Where a steady wind blows over a great mountain range, the atmosphere layers higher up are disturbed also, like the surface of a stream over an underwater rock. Just as it is possible to imagine a microscopic surf board riding the ripples on the surface over such a rock, so does the sailplane ride the waves in the upper atmosphere, being carried up to great heights. The world's altitude record for sailplanes was set in this way, when one pilot soared to an altitude of more than 46,000 ft.

To the power pilot, these air currents are mysterious, even dangerous. Mention clear air turbulence over mountains to a power pilot, and his hair will stand on end, even though he himself never has experienced any. A soaring pilot, on the other hand, even though flying a transport aircraft, will be familiar with the phenomenon, will know how to avoid danger, and even to use the natural forces to his advantage. A sailplane in the hands of the expert pilot is a

remarkably efficient probe in meteorological problems, such as solving the mystery of average turbulence distribution in a thunderstorm. When the probable details of this are known, it will be safer for a transport aircraft to penetrate thunderstorms, which have claimed many victims in the past. This is only one of the ways sailplane experience can help aviation.

Familiarity with the atmospheric engine will bring the soaring pilot nearer to understanding many of the natural phenomena that are accepted without being understood by the man in the street. Some authorities have proposed that a certain class of pilot's licence should be acceptable as one of the credits required for Grade 13 standing; proficiency as a soaring pilot should be equally as eligible, due to the knowledge in aerodynamics, meteorology and natural science it encompasses.

Over the years, many sports have been commercialized, are no longer as pure as in the early days. It can be said that soaring for sport will never lend itself to commercialization, by its very nature; as a sport, it will always remain pure, regardless of what developments come in existence to use the natural forces to our advantage. Also, unlike with some sports, there is no opponent to be bribed to play to lose — one cannot bribe God to give one different weather.

It is true to say that the soaring pilot flies by solar power, the most modern method of propulsion. All that is necessary is to do some research in the field and develop it to a point where some certain routes are reliable enough for transport use, and we may have the most economical method of transport possible. Even now, the possibility of transatlantic sailplane flights is being seriously discussed. If and when such a flight is done, it will almost certainly take off from Canadian soil, due to meteorological advantages. The first pilot to attempt one will face more problems than Charles Lindbergh did, but he will have more efficient support organization.

Until then, soaring will remain the sociable, companionable sport that it is now, a sport that depends on cooperation and yet allows for individual achievement. Until the natural forces can be used as reliable transport, the only commercial connection to soaring will be the sale of equipment and the training of new pilots, and it is still a sport that is within the reach of the working man, even though it looks to be very expensive.

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Cross Country Soaring

By John A. Kelley

Although the great majority of soaring flights take place entirely within easy gliding distance of the starting point, sooner or later almost every glider pilot gets an urge to turn his back on the familiar local scene and see how far his soaring skill will take him. This "cross country" flying offers many new challenges to the glider pilot. Not only must he locate thermal upcurrents to keep the sailplane aloft, he also has the task of trying to read a map in a not overly spacious cockpit. At the same time he must keep a watchful eye on the countryside beneath him, for sooner or later he will have to land, and if no airport is within range this landing will take place in a farmer's field, the bigger and flatter the better.

Ones first cross country is an adventure, and a thrill only equalled by the first solo flight and the first soaring flight. Before the prospective cross country pilot can be permitted to venture forth on his own he must satisfy the Chief Flying Instructor not only of his soaring ability, but also his ability to land the sailplane safely in a confined space and his judgement in selecting a suitable landing field. Cornfields are very inhospitable toward gliders, and farmers do not take friendly to having their crops damaged. Once this hurdle has been overcome our budding aerial Columbus has only to persuade some kindhearted member to return him and his glider to the starting point. This may not be easy since many glider pilots are not too favourably inclined toward spending a good soaring day driving along crowded highways towing a 25 - 30 foot trailer behind them. The married pilot with a well trained wife, or husband, has a great advantage over his or her less fortunate, single, brethren.

Finally all that remains to be done is to select a Goal. This has two purposes. It saves a lot of time if your retrieve crew knows where you are aiming for, as they can leave the airport as soon as they have seen you depart. In many cases they will reach your landing point shortly after you have arrived. The second reason for naming ones intended landing place ahead of time is a psychological one; it is far more satisfying to aim for, and arrive at, a preselected spot, than to wander haphazardly all over the countryside. It also enables one to tell tall stories when one gets back to the clubhouse.

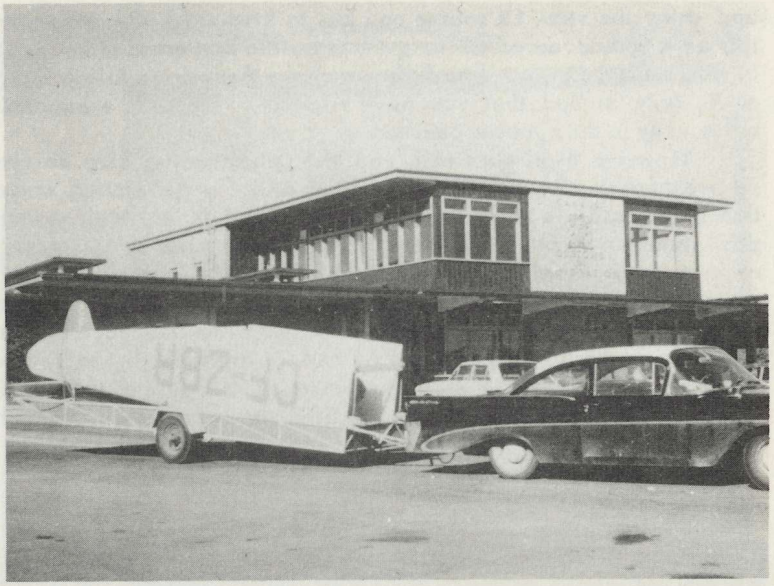


Photo: R.D. Robinson

When the pilot lands in a distant county or province, someone has to take the trailer and bring back him and his sailplane.

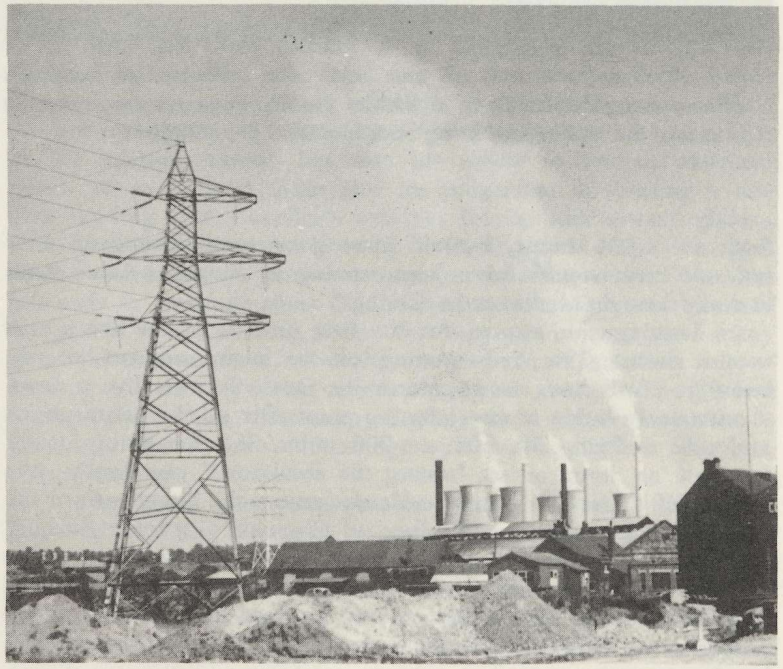
Such as — "Of course, I could have gone another hundred miles but my crew would have been waiting at X, and I didn't want to make them do all that extra driving."

Leaving the airport for the first time is a little like a visit to the dentist. You keep putting off the fateful moment but you know you will have to go eventually. One will never live it down if one tamely lands at ones starting point after all the preparations and talk of flying 50, 100, or 200 miles. So, after flying locally for half an hour or so, "testing the conditions", one finally says to oneself, "this is it", and resolutely points the glider toward the Goal. This burning ones bridges, so to speak, is a bit frightening as one knows that one may be landing in a strange field within the next half hour or less. However as one will have climbed as high as possible before setting out, another thermal will almost certainly be found before the necessity for locating a good field becomes urgent.

After a couple of thermals have been utilised to restore the height lost gliding from one to the next, one can begin to relax

and enjoy the view. Of course one has to keep track of ones position as it would never do to get lost on the first cross country. It is a good way to lose friends fast to have them drive to meet one at X, only to find that you have come to earth at Y, a hundred miles away in the opposite direction.

However if all goes well, and one remembers to keep an eye on weather conditions ahead, so that one can go around areas that look "dead" or likely to be devoid of thermals, one will eventually make an exciting discovery. This will come about as a result of having measured the remaining distance to the goal, and found that one has enough height to get there without needing any more thermals. In other words it is "in the bag". This final glide, if one has allowed ample extra height in case of unexpected downdrafts or areas of "sink", can be the most enjoyable part of the flight. If it is a good day and one has been climbing to 6000' above



A "thermal factory" in full production. A power station coolant system produces a lot of warm air.

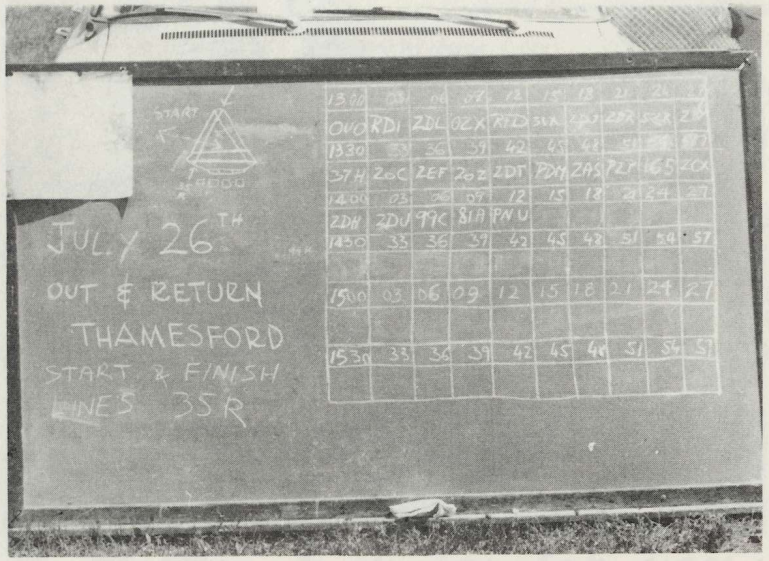


Photo: Martin Jurgeit

"The task for the day is . . ." Contest flying makes the pilots put their best foot forward.

the ground one can relax for the best part of half an hour, only checking to see that one stays on course. At the start of the final glide the goal may still be 25 miles away, but soon the airport will come into view and will slowly creep down from the horizon. At last you are in the circuit and keeping a sharp eye out for other aircraft you line up for the approach. By the time you have coasted to a stop in front of the control tower you are eagerly looking forward to "next time" when you will go twice as far, twice as fast.

The type of cross country flight described above is relatively simple as it is usually carried out in a direction which will have the benefit of a helpful tailwind. More advanced cross countries involve flights returning to ones starting point. This may be either a flight to a goal then returning, or a flight round a triangular course. No benefit from the wind can be expected on this type of flight as the wind will be a help on one leg but a hindrance on another. For this reason the longest closed circuit flight done in Canada is not much over 200 miles, while several straight distance flights have gone well over 300 miles.

Photo: R.D. Robinson

In she goes! Trailers, like dogs, come in all shapes and sizes. Sailplane is Polish built FOKA.

Triangular flights are usually flown over distances of 100, 200, or 300 Kilometers, as National and International records are kept for this type of flight. Here, the object is speed, and good soaring conditions, high performance sailplanes, and a high degree of soaring skill are all important. One error in judgement can mean the difference between a new record and just completing the course. Or, in a contest, it means the difference between winning and being an "also ran".

Cross country soaring appeals to different pilots in different ways. For some it is an exhilirating change from the usual local flying. For others it is a challenge, to achieve a goal despite unfavourable conditions, and for yet another breed of pilot it is the competitive aspect that is appealing, breaking records or winning a race. No matter what enjoyment one gets out of soaring, cross country flying gives it an added dimension.

* * * * * * * * *

Student Days

By Christine Pattinson

Once upon a time, my favourite expression of denial was, "I'd as soon do that as fly." I still say it, and it is always with a jolt, that I realize that I do fly! Heights have always terrified me and the idea of motorless flying as a hobby was something best left to freaks and non-swimmers — sailing was the only sport for the summer; so nobody could have been more surprised than I was in the summer of '63 when after two or three flights, 'just for fun', I found myself addicted to gliding.

It appeared that a mere girl was most unlikely to become a reputable pilot. Oh, a few had tried it previously, but most had left their names in the annals of the registry office rather than those of the Soaring Association of Canada. In Europe, women pilots have been accepted for many years and hold records for height, speed and distance, comparable with those of the other sex. However, these 'Happy Few' are seldom if ever mentioned in Canada and surprisingly, Canadian women don't seem to mind this ignominous state of affairs.

Since I was both unwilling and unable to cure my addiction, I attempted to enter this male world from the ranks, bearing in mind that old English gliding expression . . . "Diamonds are a girl's best friend"*

I must have been a horrible student, because it took me twice as long to solo as the average male beginner! The instructors, I'm sure, although I never actually saw them, used to toss, to see which would be the unlucky one — even though I always asked them before take-off, if they were sitting comfortably, to put them at their ease. They needn't have been afraid, I was no match for the strong pair of masculine hands waiting to seize control of the glider should I hesitate to interpret their instructions for an instant.

The Instructors, a race of superior beings — immaculate, immitigable and immortal — or so I thought for the first six months; these men were united to make one Big Brother. No mistake was overlooked and even though I sometimes managed to execute a maneuver in the prescribed manner, it had to be done again with another of them, to prove that it hadn't been a fluke. However, when at last they reluctantly signed my log book, I realized that it was only because of their prejudice towards the female sex that

* *The diamonds meant are presumably the ones on the Diamond Badge, a worldwide symbol of achievement.*

Appearances are deceptive - this charming young lady can do more than model a parachute. She is the author of "Student Days", and holds the Canadian ladies' record for distance.

they had been so hard to please, and not because of my lack of skill! This smug thought kept me happy for quite a while, before I realized that their caution might well have been justified.

I watched the tow plane spiralling down to the airfield below me on that calm September afternoon, and started to smile. I was on my own at last. Fantastic — I gazed around me, rather mesmerised by the view, which seemed more than usually beautiful . . . well, don't just sit there like Patience. I turned, first one way, then the other; it worked! The smile turned into a laugh, and I started to sing; who would have imagined me, doing anything as marvellous as this? It seemed ages before I reached circuit height and had to pull myself together. Everything went as planned, except for the rather large bump at the end. The canopy was opened by steadier hands than mine, and after a dozen hugs — they were glad to see the plane back in one piece — I was escorted back to the clubhouse

on shaky legs to buy the traditional round of beer for all the other solo pilots. I was one of them at last!

It took several more flights, with no particular mishaps, before I realized that I really didn't know how to fly. I could glide down to my starting point fairly competently, except for the bump, which seemed to have become a habit, but there it ended. Soaring was beyond me — I couldn't go UP. Other people stayed up for hours, while I was on the ground in minutes. It soon became all too apparent that if I was to realize my ambitions for feminine equality, I had better take more instruction; obviously there was more to this than met the eye.

A whole year passed, before I was considered competent enough to leave the precincts of the airfield and fly cross country. A year, of soaring instruction, crewing, listening and taking check flights for higher performance sailplanes. The start of my third season found me keyed up and thoroughly nervous, viewed with skepticism by the 'old hands' but nevertheless determined to venture forth into the unknown.

I would try for my Silver "C" distance — a flight of 32 miles, and stay up for five hours — thus completing the first feminine

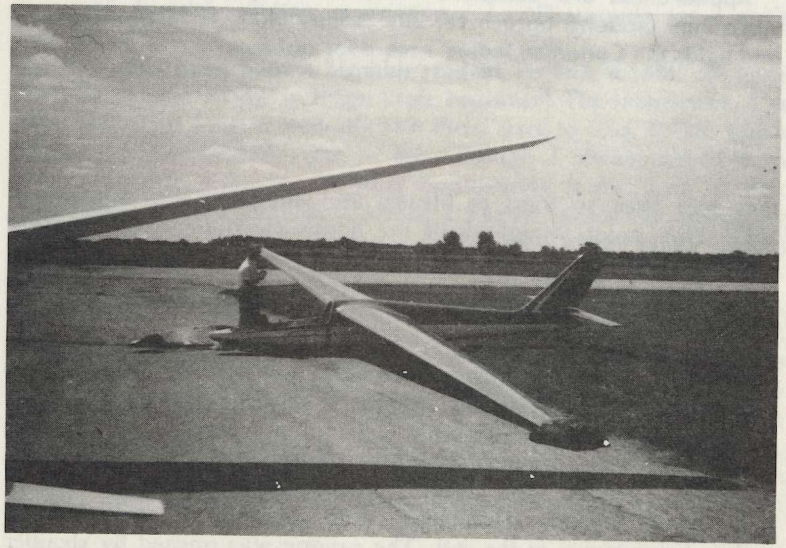


Photo: D. Parsey

"Shall I be able to stay up?" A pilot is never certain.

badge in Canada . . . well, it was a nice thought! The weather was ideal, the aircraft was mine for the day, and other pilots were already setting out; it was time to move. My crew had reached enormous proportions, either because they wanted to be in at the kill, or because they were so sure that I would never leave the airfield — for having offered their services, I would later feel obliged to return the compliment!

There is nothing more mortifying than sinking back to earth ten minutes after release on one's first cross country attempt, except to do the same thing on one's second attempt, in eight minutes! I nearly gave up completely but for the fact that there was nobody around to commiserate with me — they were all flying of course — even my crew, satisfied that I wouldn't be going anywhere that day. Nothing for it, but to try again. By this time I was no longer terrified, just very hot under the collar.

Having scraped up to 3,000 ft., I decided to turn my back on the airfield, glide downwind as far as possible and make a cross country landing, if only to make use of my crew — may they forgive me. Having made the break, I suddenly experienced a great

Photo: P.A.V.A. Budachs

Many soaring enthusiasts are enthusiasts for classical aircraft. This P — 51 Mustang is owned by two Toronto pilots.

boost to my morale . . . there was another glider at least 2,000 ft. beneath me . . . what on earth was I worrying about? He was the one in trouble. I pressed on, thermalling poorly — the barograph trace looked like a series of mole heaps on a bunny hill.

At 2,000 ft., after a losing struggle with the airsickness bag, I decided to pick a landing field. As luck would have it, all the concessions were running neatly cross wind and I had travelled several miles before I finally found a whole row of beautifully level fields lying in the right direction. All except one contained cows . . that solved the problem . . . nothing terrifies me more than cows; not even heights! I did a circuit in a thermal and arrived at the base leg, still at 900 ft. The second time around, I noticed that there were power wires in front of the wood which lay at the start of my runway — luckily the thermal was still being generous, for I had almost enough height to run into the fence at the far end of the field. It was a very well-drained field — the ditches were more like canals, almost hidden under luscious strips of grass. I climbed out and looked around hastily for help — the cows were making rapid advances towards me. It was a very long field and by the time I had ascertained that the nearest farm was a ruin and had crossed two more fields to the next one, I was exhausted. The cows seemed to be behaving themselves, but I was glad that it was a metal aircraft.

The French farmer and his numerous relatives were surprised and puzzled . . . no, they hadn't seen any plane crash, no, nobody spoke English, yes, they would telephone my English speaking crew and direct them to . . . well no, they weren't exactly sure where we were . . . It took twenty minutes to make a call to the clubhouse — 28 miles away, and another two hours before my crew arrived and I was taken to task. 'Fancy landing in a field with ruts like that, and cows, and no farm house and power lines etc. etc.!

However, they couldn't hurt my feelings; nothing could take away the fact that I was a cross country pilot and had my own crew! It was all absolutely marvellous, even if I hadn't achieved any of my ambitions this time . . . just wait till the next good day . . . just you wait!

* * * * * * * * * *

The Soaring Shutterbug

So you have decided to visit the site of your local soaring club. Of course you will bring your camera, or all your cameras if you have more than one, and you are right to do so. Load up with different sorts of film, such as black-and-white, colour negative and colour positive, for example.

Soaring is probably the most photogenic sporting activity in existence, rivalled only by water skiing and perhaps sailing. A visit to a soaring site is certain to produce lots of opportunities for dramatic shots like the "Start of the Race", reproduced on the back cover. This shot has everything: the uncertain, challenging atmosphere of the ragged clouds, the wiry, racehorse quality of the sailplane, the squat purposefulness of the old biplane tug. The challenge to the photographer is to recognize the scene and to shoot at the right moment.

It is not necessary to use very high speed film, or complicated cameras. Films like the Ilford HP3 or Kodak Plus X are quite adequate, and since the lighting conditions for the best shots will change very little, it may be as well to preset your camera for the day and leave it that way, to have it ready to shoot at a moment's notice. Focussing can also be avoided, since most of the shots will be at a range of some 60 feet or more; well in the hyperfocal range. Most movement will not be fast enough to demand the high speeds modern cameras are capable of; you may be as well off to use, say, 1/250th and benefit from the greater depth of field stopping down will give.

On the first visit confine yourself to ground shots, which can be very good indeed. A sailplane doing a long landing will pass low overhead and slightly to one side, and produce an excellent shot. Who would know it was not taken from the air? Another good moment to shoot is a sailplane landing, but avoid the common mistake of shooting too late. An outsider with a camera will take a shot and exclaim: "Great! Got it just as the wheel touched!" But how will the viewer know it was not taken when the sailplane was just poised there, being 'ground flown' in the wind, with the pilot using flying controls to balance the ship? It is best to leave some light between the wheel and the ground. If you talk it over with the pilot before he takes off, he will hold at that altitude for several seconds to allow you to shoot, as well as arrange to land at a certain place, where you will be waiting.

Another pitfall is photographing the pilot and his ship. If the whole ship is to be shown, the pilot sitting in it or standing alongside will be too small to be recognized, and if you move in to recognize the pilot, then only a small part of the ship will be visible, and will not be recognizable. If it matters that the ship and the pilot are both recognized (it usually does), it may be worth while to ask the pilot to get out and stand about halfway to the wingtip nearest to you, perhaps with an elbow possessively on the wing. Don't worry about his reaction: as a rule, soaring pilots love being photographed. Of course he will be reluctant to get out if he has just strapped himself in and is impatient to take off — who wouldn't?

With the great wingspan of most modern sailplanes perspective is another point to watch. The unwary photographer can very easily make the nearest wingtip look as large as the fuselage. One of the best angles to photograph sailplanes is from the front quarter on the side of the wingtip which is on the ground.

When the strangeness of the operation is wearing off, you can try some air to air shots. Talk it over with the pilot who will fly you in the two seater, and also of the ship you want to photograph. This last is quite important, otherwise you might have the situation where your pilot is trying to get you in a good position for a shot and the pilot of the ship you want to photograph is doing his best to keep his distance; unpleasant for both and producing

. . . Ask him to stand halfway to the nearest wingtip. Sailplane is the Polish built FOKA.

no good photo. When both pilots know exactly what the other is going to do, some very good shots will result. It is possible to photograph another sailplane from head on and approaching, at a distance of some three hundred yards, although such things do rather shorten one's life expectancy, and should *never* be attempted unless both pilots are very competent and know exactly what the other one will do, and when.

Do not hesitate to talk over your intended photographs with other persons at the field. Most will talk photography with pleasure, and a surprising number are very competent. You might find yourself talking to the man who runs the local colour laboratory and will develop your work!

Be careful though, not to expose yourself to the soaring bug too deeply, lest you get bitten. You may find yourself devoting more time to soaring than to your photography. Experience has shown that by the time a man has sampled his first solo thermal, he is irretrievably gone — nothing will do but he must keep on soaring. Such is the hold the sport has on its adherents.

Above all, keep that camera handy, and keep it loaded. As the old FBI saying goes, 'It is difficult to fire the gun that is back home in the desk drawer' — it is equally true of a camera.

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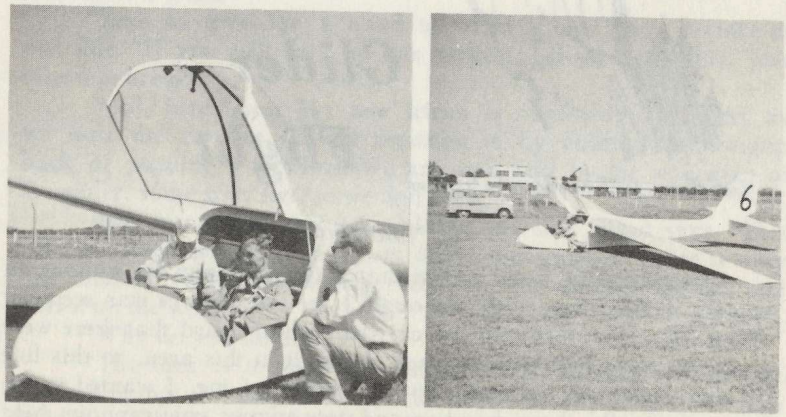

Photo: Ontaero

The modern high performance 2 - seater trainer with side by side seating is a rarety — only one design is in production in the world. We had to go to England for these photos of the Slingsby Capstan.

My First Glider Flight

By "John Doe"

It has long been known that it is possible to fly without an engine, without any fuel, although I for one always was sceptical about how far this can be carried. I had heard that there were some of those half-bird humans doing it in this area, so this fine Sunday morning curiosity got the better of me. I wanted to see how people fly those bamboo-and-tissue-paper comtraptions held together with baling wire. Perhaps I was somewhat bloodthirsty too, as I took my camera, hoping to catch some of those crashes. I mean, everyone knows a glider can't fly more than half a dozen times without crashing.

So I turned down the lane marked Gliderport. Going along it, I wondered why they are usually operating so far from the city, somewhat like the nudist clubs. Might be they don't want the public to see those crashes. I parked my trusty old Thunderbird, picked up my camera, and continued in the direction of the arrows.

Going in through the gate, my attention was caught by this sleek aircraft. Must be one of those long-range, high-altitude jets they use for spying over Russia — so that is why they keep out of the way, they also have a secret Intelligence base here! Poor security though; no barbed wire, no guard dogs, no machine gun towers. Just look at that plane — isn't it graceful! All sleek shapes and smooth surfaces, and look at those slim wings! But it must be damaged, as one wingtip is on the ground, and somebody has even put an old auto tire on it.

As I walk toward it, I think this is surely too beautiful to be a military machine. Now I am looking down through the long, smoothly curving canopy, which is only chest high. There are two seats in it, one behind the other. But surely this is the simplest jet ever — no maze of dials, no forest of control handles. Even I, a non-flyer, could easily master those half a dozen instruments and three or four control handles.

I step back for another general look, and then something odd strikes me. No air intakes for the jet. I look down toward the tail, and see no tail pipe either. The sides taper smoothly to a point.

It is then the penny drops, with quite a shock for me: I am looking at a glider!

"Like to give me a hand to wheel it out?" says a voice at my side. "If you will pick up this wingtip, I'll take the other. Just take that tire off.

Well, here goes. My new friend is obviously an expert, as we turn the corners without realizing it, by holding one wingtip back or pushing it forward. We are separated by the wingspan of the glider, some sixty feet, so we don't talk.

After some five minutes walking, my new friend says, "This will be good enough", and puts down the wingtip. There is only one landing wheel, that is why. And he finds another old tire and puts it on the wingtip.

"Why do you do that?"

"The idea is to keep one wingtip on the ground, prevent the wind flipping the ship over on the other wingtip, might damage it. Like to come for a flight?" he adds.

Me, go for a flight, in a glider? I remember those thoughts about a crash every half a dozen flights, and yet, this sleek aircraft is all metal, and seems to be very soundly built. Quite a

"... One of These High Altitude Jets..."

temptation.

"Is it safe? I mean, do you often have accidents?"

"Well, we did have one, about a year ago, put the ship out of commission for some three months. It wasn't with this type though."

"Anyone killed?

"Goodness, no," he says, quite shocked at the suggestion. "It has to be a really bad crash to kill anyone. In this case the pilot only had a cut on his hand and a couple of bruises."

"Well, I don't mind trying anything once." Temptation has won.

"Attaboy", says my friend, "well, get in then. The front seat. You are lucky in that we are not too busy right now, otherwise you would have to wait your turn."

So I get in, and my friend helps to adjust the seat, and secure the safety harness. He turns out to be a Government-authorized flying instructor. (Government authorized flying instructors, in gliders? Curiouser and curiouser.) Next I am shown the controls, told what they do, and what the instruments mean. (Surely I am not going to be the pilot?) As if sensing my anxiety, my friend adds that he has exactly the same controls and instruments in the rear cockpit.

While all this is going on, some more people have gathered round, and a light power aircraft has taxied out and stopped some two hundred feet in front of us. Somebody stretches out a rope between it and us, somebody else holds our wings level, my friend gets in the back seat and closes the canopy over us. Somebody starts to wave his arm in front of the power aircraft. The rope tightens, the wingtip holder runs a few paces and then drops back, and I feel the ship smoothly leave the ground. Why, this is smoother than a jet liner takeoff! The airfield slips by rapidly as we gain height, the towplane in front seems to be glued on the horizon, and there is the thin red line of the towrope, apparently holding it there.

After a few minutes there is an audible click, the towplane drops out of sight, and we are turning to the right. Were my fears justified, are we going to crash? Are we in a spin? "What happened?" I ask with trepidation.

"Sorry, I should have warned you," comes the calm reply from the back seat. "Nothing happened, we just released from the towplane and did a turn to the right, according to normal practice. Now the towplane pilot knows where we are, and since he turns to the left and descends, we know where he is. Now that we are on our own, we can start to really fly."

Well, the turns make sense, anyway, but what does he mean we can start to really fly? Haven't we been doing just that until now? What better flying does he want?

Then I feel the glider sway slightly, and my friend the pilot starts a gentle turn. Once round, twice, and still circling. The view from here is really fantastic, you can see a distant lake some thirty miles away. And with the towplane gone, it is so quiet, and smooth.

A row of matchboxes dragging along a black ribbon can be recognized as a train. There is a puff of white steam from its engine, and a second later I can hear the whistle, such is the quiet here. There are some black spots scattered on a green handkerchief of a field, and after a few seconds puzzling I recognize them as cattle in a pasture. Yes, I am beginning to appreciate what my friend meant by "really fly." The glider sways slightly from time to time, and somehow the distant lake seems to have drawn nearer, although I can still see our takeoff field directly underneath.

There are a few things I want to ask my friend the pilot. "Why do you call this soaring, not gliding, and why sailplane, not glider?"

"A very good question," he replies. "Gliding is still involved, but take a look at your altimeter. You will see that we are now nearly four thousand feet high, and if you noticed, we released from the towplane at two thousand. If you watch the altimeter you will see that we are still climbing. Gliding is a gradual descent through calm air, sliding down a hill of air as it were. Soaring is climbing in air currents that move upwards, and to the enthusiast this is the delightful part. The other part of your question, why sailplane, not glider, is more technical. Some types are still called gliders, but those are more of utility type, not as sleek as this one, with lower performance. The dividing line has never been definitely laid down, but usually any ship with wings braced by external struts is called a glider, while one with cantilever wings, that is without outside bracing, is usually called a sailplane. Now, will you put your feet lightly on the pedals, and take the stick lightly, and follow me through on the controls as we do a gentle turn to the left?" I comply. "You see, just a gentle touch of left stick, and left rudder, and round we go. Centralize the controls, and we straighten up. Now one to the right. Right stick and rudder - together again - and round we go. Now you try one."

What, me pilot a glider, on my very first flight? Still, he is a Government authorized instructor, and if he says so, it must be safe. Well, here goes one to the right. Feels all right, guess he is actually flying it from the back seat. Straighten up again. Oops, that was a bit clumsy; he isn't after all! Try one to the left. Must have pulled back too far on the stick that time. The nose comes up higher than normal, things get even quieter if that is possible, and I feel my friend in the back seat pushing forward on the stick, saying, "Nearly stalled that time."

"What would have happened if I had?"

"Nothing much, really," comes the reply. "The nose would go down on its own, and we would lose a couple of hundred feet

height in a dive to recover flying speed. Follow me through on the controls and we'll do one as a demonstration. The nose comes up, speed drops off, stick comes farther back to keep the nose up, and then it won't stay up any more. Down we go. Ease off the stick - not too far - and as we recover speed by diving, the nose comes up again. Move the stick forward to the normal flying position as we come to the level attitude. Now, if you look at the altimeter, you will see that we have lost just over two hundred feet of height. Because of that, we avoid stalling at a low altitude. Otherwise a stall is a normal practice maneuver. So is a spin, but let's not do that this time."

Then I do another few turns, better this time, and try some straight and level flying, some changes of flying speed, with my pilot friend in the back seat gently correcting me on the controls when I mishandle them, and advising me on what to do. All too soon the distant lake has dropped out of sight as we sink down toward the gliderport. The instructor takes over again for the landing, and with a barely perceptible bump we come down to the freshly mown emerald carpet, just a half hour after taking off from here.

"Nice flight, thank you," comes that calm voice from the back seat, "you are handling the controls very well for the first flight."

Something else is pressing on my mind. "Tell me," I blurt out, "if this is as safe as you say, and as pleasant as the flight I just had, why doesn't everyone do it? And why do you people keep hiding away, so far from the city? What's the catch?"

"Yes, that all ties in. More people don't take up soaring because they don't know how easy, safe and pleasant it is. They also think it is very expensive, as it looks, but actually it isn't. They don't know, because we don't operate close to cities for safety reasons. We don't want those jets buzzing around our heads. Legally we have the right of way against power aircraft, but they are bigger than we. Besides, our operation is not suitable for supervision by an air traffic control centre. So we usually operate outside controlled airspace, where we have our beloved freedom of the skies. That usually means a fair distance from the city."

"But surely, jets fly much higher than you?"

"Not always. On your flight we went to just over four thousand feet, and very often we go a good deal higher than that. A jet may be down to our altitudes as much as twenty miles from the airport. And we may go to jet cruising altitudes at any time if the conditions are right. The sailplane altitude record stands at over forty six thousand feet, and I don't know of any commercial jet so far in service that normally operates as high as that. So we prefer to keep outside the official airways, if possible."

A half hour flight. It seems to have been the shortest half hour in my life yet, but it was so crammed with new sensations and experiences that it was also the longest. I walk back to my car with my mind reeling: all metal sailplanes; speeds up to 150 miles per hour; hearing a train whistle a mile up in the sky; altitudes up to forty six thousand feet! And above all this incredible smoothness and silence.

Gliderport, you haven't seen the last of John Doe yet!

* * * * * * * * *

Photo: V.A. Budachs

A family of visitors pose for the camera by the two-seater in which several of them have had an introduction flight.

Soaring Clubs In Canada

Aero Club of British Columbia.
Glider Wing, Box 100, Pitt Meadows, B.C.
SAC Affiliated

Air Trails Soaring Club.
1667 Arthur, Windsor, Ont.
SAC Affiliated.

Buckingham Gliding Club.
Buckingham, P.Q.
SAC Affiliated
Base of Operations: Buckingham Airport, 3 mi. N.E. from Buckingham, 20 mi. E. from Ottawa, 6 mi. N. from Ottawa River. Turn off Highway No. 8 at Masson, proceed N. to Buckingham 3 miles, then N.E. on road to Mayo — Long Lake.
Club: 1 two seater, 2 single seaters, towplane.
Contacts: Brother Hormisdas, St. Michael's High School, Buckingham. 986-5882 (Chief Flying Instructor)
Mr. Raymond Bastien, George Street, Buckingham. 986-2292;
Mr. Gerard Gauthier, Gauthier Hardware, Main Street, Buckingham. 986-2800.

Chatham Pioneer Flying Club.
96 Stanley Ave., Chatham, Ont.
SAC Affiliated.

Canadair Soaring Club.
c/o CERA Office, Canadair Ltd., Box 6087, Montreal, P.Q.
SAC Affiliated; Member of Montreal Soaring Council.
Base of Operations: Montreal Soaring Council Airfield, Hawkesbury, Ont. Lat. & Long. 45° 37' N, 75° 41' W. On route 17A two miles west of Hawkesbury between Highways 17 and 17A.
Club: 2 single seaters.
Private: 2 single seaters, 2 two seaters.
Contacts: Mr. N. Swettenham, 308 Alfred Cres., Pincourt, Ile Perrot, P.Q.;
Mr. J.D. Agnew, 4475 Rolland, Pierrefonds, P.Q.;
Mr. O.J. Estebany, 921 St. Aubin, St. Laurent, P.Q.

Champlain Soaring Association.
875 — 54th Ave., Lachine, P.Q.
SAC Affiliated.
Base of Operations: In the area of St. Jean, P.Q. — not finalized.
Club: 2 two seaters, towplane.

Private: 2 single seaters.
Contacts: President and Chief Flying Instructor, Mr. D. McCormick, address as the Association. 637-9763.;
Secretary: Mr. Willie Hallen, St. Mathieu, Co. Laprairie, P.Q. 643-8562.
Treasurer: Mr. Jim Gillanders, 77 St. Louis Street, Pointe Claire. 695-2771.
Membership Director: Mr. Jean Bruneau, 618 Dorchester St., St. Jean, P.Q. 348-3292.
Public Relations: Mr. Ron McCormick, 2182 Girouard Ave, Montreal

Cu Nim Gliding Club.
Box 204, Calgary, Alberta.
SAC Affiliated.
*Base of Operations (*primary): Ex-RCAF Airfield at De Winton, Alberta. Approx. 20 miles S.E. of Calgary, near the junction of the Bow and Highwood Rivers. Turn E. off No. 2 Highway at the Government Weigh Scales (approx. 6 mls. S. of Calgary) and go 7 miles on gravel road. Turn S. 1/4 mile to the entrance to the field.
Base of Operations (occasional): Cooke Airfield, Pincher Creek, Alberta. 1-1/2 miles N.E. of the town of Pincher Creek.
Club: 2 two seaters, 3 single seaters, towplane.
Private: 2 two seaters, 3 single seaters.
Contacts: Mr. Eric Steisslinger (President, 1966), 1014 — 34th Ave., S.W., Calgary. 243-2131;
Mr. George Blunden (Chief Flying Instructor, 1966), 6012 Elbow Dr., Calgary. 252-2197;
Mr. George Rying (Technical Advisor) 2116 — 6th St. N.E., Calgary 277-1788.

Edmonton Soaring Club
P.O. Box 293, Edmonton, Alberta.
SAC Affiliated.
Base of Operations: Cooking Lake Seaplane Base, Lat. & Long. 53° 26' N. 113° 08' W. 15 miles east of Edmonton on Hwy. No. 14. Turn left 1/4 mile, right 1 mile to seaplane base.
Club: 1 two scater.
Private: 1 two seater, 3 single seaters.
Contacts: Mr. Ross Grady, 9547 — 81st St., Edmonton, 466-2949;
Mr. Gordon Prest, 10231 — 115th, St. Edmonton, 488-2336;
Mr. Eric Erickson, 11921 — 37th St., Edmonton, 479-7743.

Gatineau Gliding Club.
P.O. Box 883, Ottawa, Ont.
SAC Affiliated.
Base of Operations: Pendleton Gliderport, Lat. & Long. 45° 29' N,

75° 02' W. Approx. 32 miles East of Ottawa, South of Hwy. 17. Turn South off Hwy. 17 at Plantagenet, follow Gatineau Gliding Club signs through Curran toward Pendleton village. Gliderport is one mile North of village. Route is well marked.
Club: 2 two seaters, 2 single seaters, 2 towplanes.
Private: 9 sailplanes, 2 light power aircraft.
Contacts: Mr. Don Bennett, (President). 621 Windermere Ave., Ottawa 13, Ont. 729-6857;
Mrs. N.B. Tucker, 786 Chapman Blvd., Ottawa 8, Ont. 733-2165;
Mr. John Soulsby, 267 Milton Rd., Beaconsfield, P.Q. (Montreal) 697-2246.

Lakehead Gliding Club.
Box 161, Fort William, Ontario.
SAC Affiliated.
Base of Operations: Kakabeka. 2 miles E. of Kakabeka, 15 miles W. of Fort William. Turn N. off Hwy. 17 by school corner.
Club: 1 two seater, winch. Aerotowing available.
Private: 1 two seater.
Contacts: Mr. J. Zirnsak, 683-8088;
Mr. Herb Schafer, 622-1404;
Mr. Paul Mudryk, 344-8203.

Montreal Soaring Council.
P.O. Box 1082, Montreal 9, P.Q.
SAC Affiliated.
Base of Operations:
Hawkesbury Aerodrome 2 mls. W. of Hawkesbury, Ont.; 36 mls. W. of Montreal. Proceed west along the main street in Hawkesbury for 2 mls. The airfield is on the south side of this road.
Club: 3 two seaters, 2 single seaters, 2 towplanes.
Private: Approx. 14 sailplanes.
Contacts: Mr. Fred Cooper, 526 — 39th Ave., Lachine, P.Q.
Mr. Oscar Estebany, 921 St. Aubin, St. Laurent, P.Q.

Moose Jaw Soaring Club.
P.O. Box 2, Mossbank, Sask.
SAC Affiliated.

Quebec Soaring Club.
P.O. Box 276, Quebec 10, P.Q.
SAC Affiliated.
Base of Operations: Paquet Airfield, Lat. & Long. 46° 53' N 71° 50' W.
Club: 1 two seater, 1 single seater, 2 power aircraft (towplanes)
Private: 2 single seaters.

Contacts: Mr. Claude Rousseau (President) Res: 653-1761, Office: 524-4366, 843 de la Colline, Quebec 10, P.Q.;
Mr. Keith R. Park, Res: 527-8437, office: 844-3731, ext 279, 840 Eymard Ave., Quebec 6, P.Q.

Queens Gliding Club.
c/o Mr. H. Janzen, 172 College St., Kingston, Ont.
SAC Affiliated.
Base of Operations: Gananoque Airport, Lat. & Long. 44° 24' N 76° 15' W. 6 miles N. of town of Gananoque, 17 miles N.E. of Kingston. Turn N. off Hwy. 401 (M — C Freeway) on Hwy. 32, approx. 5 miles, watch for Airport sign, turn L. toward village of Springfield, follow Airport signs.
Club: 1 two seater, 1 single seater, towplane.
Private: 1 single seater. Chief Flying Instructor.
Contacts: Mr. H. Janzen, Chief Flying Instructor, at above address, (613)-546-9281;
Mr. W.J. Piercy, Assistant Chief Flying Instructor. (613)- 546-9937, 184 Churchill Cres., Kingston,, Ont.;
Mr. D.J. Panton, Secretary, (613)-546-7321, 191 Park St., Kingston, Ont.

Red Deer Soaring Association.
3409 — 41st Ave, Red Deer, Alberta.
SAC Affiliated.
Base of Operations: Red Deer Airport, 5 miles W. of Red Deer on Hwy. 11
Club: 1 two seater.
Private: 3 single seaters.
Contacts: Mr. K. Bissell, Res: 346-3438, office: 346-2021, 3520 Spruce Drive, Red Deer;
Mr. F. Holman, Res: 346-5213, office: 346-2021. 4013 — 41st Ave.,, Red Deer;
Mr. W. Speer, Res: 346-5284, office: 346-5284, 3409 — 41st Ave., Red Deer.

Red River Soaring Association.
Box 1074, Winnipeg, Man.
SAC Affiliated.
Base of Operations: near St. Agatha, Man., which is 17 miles S. of Winnipeg on Hwy. 75. From St. Agatha drive E. across Red River for 5 miles to miccrowave tower, then 1 mile S. to gliderport.
Club: 1 two seater, mobile winch.
Private: 2 single seaters.
Contacts: Mr. D. Marshall, Apt. 5, 742 Dorchester Ave., Winnipeg. 475-4719;

Mr. Paul Krauss, 426 St. Annes Rd., Winnipeg. AL3-5095;
Mrs. P. Dawson, 863 Sherburn St., Winnipeg. SP5-6127.

Regina Gliding and Soaring Club.
P.O. Box 406, Regina, Sask.
SAC Affiliated.

Saskatoon Soaring Club.
P.O. Box 1704, Saskatoon, Sask.
SAC Affiliated.

Sky Sailors Soaring Club.
111 Boulevard des Laurentides, Pont Viau, Montreal, P.Q.
SAC Affiliated.

Southern Ontario Soaring Association.
P.O. Box 172, Brantford, Ont.
SAC Affiliated.
Base of Operations: Sheffield — Rockton Gliderport (under construction) Lat. & Long. 43° 20' N 81° 13' W. On N. side of No. 8 Hwy. from Hamilton to Galt. Pass Rockton heading N.W. (bypass road), 4 miles on watch for filling station on N. side and nurseries on S. side. Take small road North for 1/4 mile.
Club: 3 two seaters, 4 single seaters, 2 towplanes.
Private: over 14 single seaters, 2 power aircraft.
Contacts: Mr. A Sorlie, 55 Bevdale Rd., Willowdale, BA1-2857;
Mr. G. Newman, 431 Willard Ave., Toronto 9, RO2-2764;
Mr. E. Ketonen, 83 Robinson St., Apt. 2, Peterborough, Ont. 742-9540;
Mr. P. Trounce, 333 N. Russell St., Sarnia, Ont. 344-4167.

Toronto Soaring Club Inc.
P.O. Box 192, Stn. C., Toronto 3, Ont.
SAC Affiliated.

Van Isle Gliding Association.
P.O. Box 337, Courtenay, B.C.
SAC Affiliated.
Base of Operations: Nanaimo Airport, Vancouver Island, 14 miles S. of Nanaimo on Island Highway.
Club: 1 two seater, winch.
Contacts: Mr. Ross Hansen, address as above. 334-2136;
Mr. Garey Cleland, 917 Green St., Victoria, B.C. 385-3638;
Mr. Walt Green, 417 Seventh Ave. S.,Port Alberni, B.C. 723-9123.

Victoria Soaring Club.
c/o 4231 Wilkinson Rd., Victoria, B.C.

Virden Flying and Soaring Club.
Virden, Manitoba.
SAC Affiliated.

Windsor Gliding Club.
233 Belle Isle View Blvd., Windsor, Ont.
SAC Affiliated.
Base of Operations: Chatham Municipal Airport, 1 mile S.E. of Charing Cross, which is approx. 8 miles S.E. of Chatham, Ont. Turn S.E. off Hwy. 98 at Charing Cross intersection. Proceed approx. 1 mile and turn onto gravel road. The airport is located approx. 1/2 mile from the corner.
Club: 1 two seater, winch.
Private: 2 single seaters, towplane available.
Contacts: Mr. Mert Musselman, address as above, 945-3734; Mr. Henry Herrdegen, 3818 Vaughan St., Windsor, Ont. 256-4456; Mr. Timo Siimes, 399 Jarvis St., Windsor, Ont. 753-4172.

Winnipeg Gliding Club.
P.O. Box 1255, Winnipeg 1, Man.
SAC Affiliated.

York Soaring Association.
P.O. Box 153, Don Mills, Ont.
SAC Affiliated.
Base of Operations: Caledon Airport. Lat. & Long. 43° 54' N 80° 01' W. Approx. 3 miles S.E. of Orangeville, 30 miles N.W. of Toronto. From Toronto, take Malton Road (Mono Rd.) – approx. 3 miles N. of Caledon East, on top of hill, turn L. at caution blinker – travel approx. 3 miles – small airport sign on left side of road pointing north – take side road approx. 2 miles – airport on right side.
Club: 2 two seaters. 1 single seater, towplane.
(7-day-week operation planned for licenced pilots)
Contacts: Mr. W. Chmela, 46 St. Clair Ave. E., Toronto 7, 925-5571 (bus.);
Mr. G. Parcell, 37 Compton Drive, Scarborough, Ont. 759-0207;
Mr. R. Mitton, 62 Haileybury Dr., Scarborough, Ont. 266-4380.

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