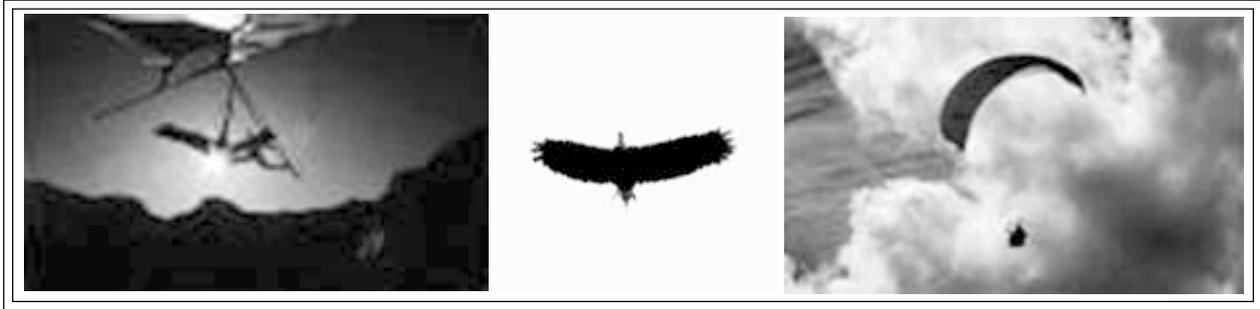


Nov.  
'99

# a i r

The Official Publication of the Hang Gliding and Paragliding Association of Canada

*f l y*



*f r e e*

-World Hang Gliding Championships-Canadian Paragliding Championships-Western Canadian Hang Gliding Championships- Bagheera and Allegra Review-Willi Muller Challenge-Cochrane Ambassadors of the Year-Feeling Blunt on the Blunt-Is it dangerous up there?-

# HPAC Executive

**President: Kevin Thomson**

30 Thistledown Dr., Kitchener, ON N2E 3C3  
519-742-5744 e-mail: kwglide@ibm.net

**Vice President: Chris Walters**

16 Woodbine Ave., Cornerbrook, NFLD A2H 3N8  
705-785-2697 e-mail: hpan@nf.sympatico.ca

**Treasurer: Martin Polach**

Box 1442, Cochrane, AB T0L 0W0  
403-932-3680 e-mail:  
polachm@mail.cadvision.com

**Administrator: Gerry LaMarsh**

#13 1370 84th Ave., Surrey, BC V3W 0T6  
604-507-2565 e-mail: hpac@istar.ca

**Ratings: Lucille de Beudrap**

#11 603 Youville Dr. East NW  
403-461-3240 e-mail: tandl@planet.eon.net

**Instruction: Chris Muller**

Box 2, site 13, RR#2, Cochrane, AB T0L 0W0  
403-932-6760 e-mail: mullerhg@cadvision.com

**Competition: J.C. Hauchecorne**

Site 12, RR#4, Box 71, Calgary, AB T2M 4L4  
403-241-3129 e-mail: hauchecj@cadvision.com

**XC & FAI: Vincene Muller**

Box 2 site 13, RR#2, Cochrane, AB T0L 0W0  
403-932-6760 e-mail: mullerhg@cadvision.com

**CIVL/FAI: Stewart Midwinter**

213-24 Ave NW, Calgary, AB T2M 1X2  
e-mail: midtoad@globalserve.net

**Insurance: Gregg Humphreys**

2388 Epworth, Victoria, BC V8R 5L1  
250-592-8428 e-mail: Gregg  
Humphreys@gems8.gov.bc.ca

**Transport Canada: Michael  
Robertson**

RR#5, 865, Conc.7, Claremont, ON L1Y 1A2  
905-294-2536 e-mail: flyhigh@inforamp.net

**Accident Review & Safety  
Committee:**

**Fred T. Wilson**

7604 Kidston Road, Vernon, BC V1B 1S2  
250-545-2004 e-mail: fwilson@junction.net

**Air Editor: Chantal  
Tranchemontagne**

6659 Sherbrooke West #42, Montreal, QC H4B 1N8  
514-486-3277 e-mail: cayoosh@cnwl.igs.net



## Provincial Associations

**British Columbia Hang Gliding and Paragliding  
Association**

P.O. Box 37035, Lonsdale P.O. N. Vancouver,  
British Columbia V7N 4M0

**Alberta Hang Gliding and Paragliding Association**

P.O. Box 2011, Stn M Calgary  
Alberta T03 0M0

**Saskatchewan Hang Gliding Association**

303 Main Street South, Moose Jaw,  
Saskatchewan S6H 4V8

**Manitoba Hang Gliding Association**

200, Main Street, Winnipeg,  
Manitoba R3C 4M2

**Ontario Hang Gliding and Paragliding Association**

1185, Eglinton Avenue East, North York  
Ontario M3C 3C6

**L' Association Quèbècoise De Vol Libre**  
4545 Pierre de Coubertin, C.P. 1000, Succ. M,  
Montréal, Quebec H1V 3R2

**Hang Gliding & Paragliding Association of  
AtlanticCanada**

16 Woodbine Ave, Corner Brook  
Newfoundland A2H 3N8

This newsletter is produced by the Hang Gliding & Paragliding Association of Canada/Association Canadienne de Vol Libre (HPAC/ACVL) and is published and distributed quarterly to its members. The views expressed in this newsletter are not necessarily those of the HPAC/ACVL, its directors or the editor. The Editor reserves the right to edit contributions. Contributions may be sent in on an IBM disk or via e-mail, as a text file or in any of the major word processing formats. Written and typed contributions are also accepted. Disk and photo's will be returned if requested and accompanied with a stamped address envelope.  
Send submissions to: HPAC/ACVL Editor, Chantal Tranchemontagne 6659 Sherbrooke W. #42, Montreal, QC H4B 1N8 514-486-3277 e-mail: cayoosh@cnwl.igs.net

# IN THIS ISSUE

## AIR CONDITION

19

Is there anything up there?

by: Peter Bowle-Evans

12

Glider Review- Apco Bagheera and Allegra

by: Brett Hazlett

## AIR TO AIR

New flock kicked out of the nest

by: Mark Tulloch

23

Classifieds

4

Editor's note

From the president, Kevin Thomson

# 6

## Faraway Flying

Suja Rathichandran talks about the 1999 World Hang gliding Champs in Monte Cucco, Italy

# 8

## Golden Glory

Results and photos of the 1999 paragliding championships at Mt. 7

# 10

## Feeling Blunt on the Blunt

John Kelson's tale of crashing, burning and recovering near Hazelton, B.C.

# 14

## Zippy and the Pigs strike Gold

Karen Keller talks about the 1999 Western Canadian Hang Gliding championships in Golden B.C.

## AIRWAY

5

MacCready's Optimized Flight for the People

by: Brett Hazlett

13

S.O.G.A.'s long week-end meet

by: Mike Gates

16

Giving Credit-Muller Hang Gliding and Paragliding named Ambassadors of the Year

Willi Muller XC Challenge

## AIR RAID

15

Cross Country Records

by: Vincene Muller

18

To err is human, to glide divine

by: Andrew Blanchard

Hello all!

I'd like to start off by thanking everyone for their contributions. Their hard work made this issue of AIR exciting to read.

About the flying around here - can't say I've done any with my busy school schedule but I have taken the time to check out a few sites.

When I first announced my move to Montreal, I received an e-mail from Andre Gallant, a paraglider and hang glider from Montreal. He invited me to come check out the flying sites near St. Paul d'Abbotsford. After finally getting settled in to my new home, I gave him a call.



We managed, despite my rusty french, to set up a time and place to meet.

I was expecting a fun & full day out of the city. What I got was a rollercoaster car ride ("You don't mind my driving do you," Andre said as we sped down the highway at mach speed) and a look at the amazing flying community that has emerged in the

region.

We first went to Distance Vol Libre, a school and the meeting place for those who are members of Les Corsaires flying club.

What I saw and learned, partly from being there and partly from what Andre had to say, was the diversity and comraderies of fliers in this area.

Spanish, French and English were spoken. Didn't matter. What was heartwarming too was to see, up at launch, paragliders and hang gliders helping each other set up and take off in the strong afternoon conditions. No quarrels, no bitching, just plain old flying fun. Isn't that the way it should be?

(note: I promise more details for the next issue.)

# From the president

## FAI Fees

### Kevin Thomson

**F**AI fees were discussed and documented on the AGM or Online BOD meeting site. Go there to check out all the gory details.

Here is an excerpt:

For the past four years there has been a growing dissatisfaction within the Aero Club of Canada (ACC) over the fairness of the fee structure. Some organizations were paying significantly more than others for no clear reason. At the ACC BoD meeting held in Brampton, ON on Saturday Nov. 7th, the BoD finally came up with what we all believed was a fair formula. Unfortunately not all BoD members liked the end result as far as their fees were concerned. Even so, they had to agree that the way they were calculated was fair. The HPAC was one such association that got negatively hit.

The main expense comes from our annual FAI fees. These are calculated based on the Gross National product of each member country. As you know, Canada is a wealthy and prosperous nation

in comparison to many others.

As such, the percentage of our population who has access to and can participate in one or more areo sports is large. Therefore, so is our portion of the fees. Since most of our ACC fees are paid in French franks we are thinking about charging each association in Franks to eliminate the exchange rate risks.

In order to calculate our fee structure, we decided to use the 1997/98 budget (in Canadian dollars) as our bench mark starting point. This would allow us to calculate a ratio or percentage of the budget that each association would be responsible for paying. We came up with the following.

BASE FEE of \$1,500 This would be the entry price for all associations and would cover their first 100 members  
Plus \$10.00 for the next 100 members (i.e.. 101 through to 200)  
Plus \$4.00 for the next 1800 members (i.e.. 201 through to 2000)  
Plus \$0.75 for all subsequent members after 2000

Using these figures, the resulting fee ratio worked out to this:

AC	\$ 1,500
CBA	\$ 2,500
CSAA	\$ 1,500
CSPA	\$ 9,300
HPAC	\$ 4,900
MAAC	\$17,460
SAC	\$ 6,260
total	\$43,420

This means that the HPAC is on the hook for 4900 / 43420 of the ACC

budget (of which 75% is FAI fees).

As for the rest of the ACC's budget, it looks like this:

Administration	\$2500
Bank Charges	\$125
Internet expenses	\$400
Merchandise	\$200
Miscellaneous	\$200
Office	\$1000
Postage and courier	\$700
Printing and stationary	\$400
Professional fees (the auditor)	\$1000
Telephone and fax	\$600
Travel and meetings	\$4875 (eg. sending people to FAI meetings)

# MacCready Optimized Flight for the people - Part 1

**Brett Hazlett**

Most pilots have heard or read something about 'Speeds-to-Fly' but most feel that it is far too complicated to understand or use. In a series of articles I hope to eventually demystify this often misunderstood and underestimated flying tool.

MacCready Theory applies to anything that glides- paragliders, hanggliders and sailplanes, for example. It is useful not just to competition pilots and record breakers but any pilot who is possessed with the desire to extract the full performance potential of his/her equipment.

In order to use MacCready Theory you will at least need to be able to measure sinkrate and preferably airspeed and groundspeed. A GPS will give groundspeed, a variometer will provide sinkrate and an airspeed indicator will, of course, read airspeed. While GPS units and variometers are quite accurate, airspeed indicators tend to vary in accuracy depending on the design and where they are mounted. To verify that an airspeed indicator is reading correctly perform this simple test. Fly directly upwind at a steady airspeed and by comparing the groundspeed reading from the GPS to the airspeed reading, determine the strength of the wind.

For example, an airspeed of 50km/h but a groundspeed of only 40km/h shows that there is a 10km/h headwind. Next, do the same flying directly downwind. If you do not get the same wind strength in each case then the airspeed indicator is reading incorrectly; calibrate the indicator accordingly or at least be aware of the error.

"The theory is useful not just to competition pilots and record breakers but to any pilots who is possessed with the desire to extract the full performance potential of his/her equipment."

*-Brett Hazlett*

## Example

Upwind leg: Airspeed- 40km/h, Ground-speed- 30km/h

Calculated wind= 30km/h – 40km/h= - **10km/h** [headwind]

Downwind leg: Airspeed- 40km/h, Ground-speed- 45km/h

Calculated wind= 60km/h – 40km/h= **+20km/h** [tailwind]

The calculated winds are different so the airspeed indicator is reading incorrectly; in this case it is reading too low. The strength of the wind is actually 15km/h; when the airspeed indicator shows 40km/h you are actually going at 45km/h.

If you do not have or prefer not to use an airspeed indicator then perhaps 'Positions-to-Fly' is the method for you. Instead of using an airspeed indicator to know what your airspeed is, you relate the position of the basetube to airspeed.

For paragliding you would relate toggle position or accelerator position to airspeed. Borrow an airspeed indicator and record the airspeed at different positions then either memorize them or make a compact chart to refer to in-flight. An even better way is to assume/guess an airspeed for a particular position and then perform a test similar to the airspeed calibration test described above.

## Example

Upwind leg: Position- basetube level with clavicle, Assumed Airspeed- 40km/h, Groundspeed- 30km/h  
Calculated wind= 30km/h – 40km/h= - **10km/h** [headwind]

Downwind leg: Position- basetube level with clavicle, Assumed Airspeed- 40km/h, Groundspeed- 45km/h  
Calculated wind= 60km/h – 40km/h= **+20km/h** [tailwind]

The calculated winds are different so the assumed airspeed is incorrect; in this case, with the basetube level with your clavicle you are actually going at 45km/h.

For paragliding, examples of positions that you could use would be brakes level with shoulders, ° brake travel or J accelerator, etc.

Now that we have a good idea of how fast we are moving through the air both vertically and horizontally, we are ready to move on to the two applications of MacCready Optimized Flight- 1) to maximize distance flown in variable conditions and 2) to maximize cruise speed over a course. These will be the topics of part 2.

# Faraway flying

1999 World Championships, Monte Cucco, Italy

Suja Rathichandran

**hang gliding:** sport of gliding while being suspended from an airborne frame controlled by one's movements.

**World Hang Gliding Championship:** a gathering of hang glider pilots from around the world trying to figure out just how Manfred Ruhmer manages to get to goal an hour and a half ahead of the rest. The answer is still not clear so the next gathering will be in Spain, 2001.

**Team Canada:**

Chris Muller –Wills Wing Fusion 150  
Brett Hazlett – Moyes CSX5

The championship was held in the small town of Sigillo, about two and a half hours north east of Rome. Chris, Brett and I drove from Munich through Austria and into Italy via the Autobahn. It was rather exciting going at the speeds we only dream of when travelling along Trans Canada Highway. We stopped in Innsbruck where Wills Wing Europe and Moyes Europe(M2) are located to have a look around. From my understanding, Innsbruck is central to many flying sites. If you want to know more, ask the boys about them.

We arrived in Sigillo four days early. One of the most memorable times was the first time going up to Monte Cucco launch north). I was thrilled to bits to find that the road right to the top was paved; for Chris it was a good skateboard road. It was late in the evening and with smooth ridge lift it was a great time for the boys to test fly their gliders.

As they were setting up, I saw a

number of competition gliders in the sky all in a row flying straight out into the valley and then return to launch, top land and launch again. This happened a few times. I found out later, that they (Manfred Ruhmer, Oleg Bondarchuk, Gerolf Heinrichs and others) were doing performance comparisons and when they realized that their gliders were not going as well as others, they would top land, make some adjustments to their gliders and try it again. It was rather funny from my point of view as I thought these guys just wanted to log in as many flights as they could.

The next few days were too windy to fly so we took the time to settle into our apartment, which was located in the countryside surrounded by sunflower fields. We soon found out that our neighbors were the Dutch, Venezuelans and the Colombians. This only meant one thing: FIESTA!

The opening ceremony was held at night in Sigillo. There was a big feast to start the evening. We all later marched into the town square where there were some great performances done with huge helium balloons with chesty woman hanging from them, dancing like fairies. This of course was a big hit with the male pilots, all 185 of them. The night ended rather early as the competitors were gearing up for Day 1.

The competition was divided into two classes: flex wings and rigid wings.

For flex wings (Class 1), there were 38 countries being represented with 169 pilots total. For rigid wings (Class 2), there



*Tre Pizzi Launch*

were 9 countries represented with 25 pilots total. There were approximately 10 female pilots. Among the frontrunners for Class 1 were Manfred Ruhmer, Gerard Thevenot, and Oleg Bondarchuk. For Class 2, Johnny Carr was the talk of the town. He was flying a Swift.

Brett and Chris appointed me team leader. I was rather suspicious when they explained to me the great honor of being team leader and when Day 1 came, I found out why. Team leader meetings were at 9am every morning, rain or shine.

Day 1 was cancelled due to strong winds. Day 2 called for southeasterly winds. Monte Cucco faced west so Tre Pizzi launch was called. Tre Pizzi is located about an hour from Sigillo. The task was 86.6km. No one from the Class 1 made goal but Gerard Thevenot of Luxembourg (Topless) flew the furthest with 77.6km.

Class 2 had a slightly shorter task, which was as expected, debated at the next team leaders' meeting. Johnny Carr made goal in his Swift.

Chris flew 46km and his position for the day was 38<sup>th</sup>. Brett flew 33.7km and his position was 77<sup>th</sup>.

Day 3 and Day 4 were cancelled due to thunderstorms in the afternoon. The weatherman was very accurate about his predic-

tions right up to the hour of the arrival of these thunderstorms.

We met up with the Mexicans and Venezuelans and drove to the independent republic of San Marino about two hours north of Sigillo. The two-lane highway had a speed limit of 130km/h. Our rented Opel Vectra was a great station wagon and did rather well on the highway. The big thing that just hit Italy was the new Audi Roadster. We saw an Audi Roadster touring team, which consisted of about 20 to 30 Roadsters driving past us, fast! We, of course, stopped at McDonalds and fuelled up with burgers and fries. Brett bought a toy crossbow in San Marino for about \$10 for something to play with when the weather was bad; when he opened the package it turned out to have a 50lb bow! It was a definite hit amongst the pilots that we were staying with during those lazy evenings, after dinner. Brett and Chris set up a shooting range and everyone had a chance to vent their anger if they felt they had a bad flight that day.

Day 5 took us back to Tre Pizzi, which I was not too fond of. We had to hike up a big hill to get to launch from the parking lot. That just meant I could not have my siesta in the car because I had to be ready on top for the pilot's meeting. The task was similar to Task 1 with an extra turn point. The total distance for Class 1 was 89.4km.

There were five launch corridors with Class 2 taking up one corridor. With 194 pilots

launching, I must say it was civilized. Then came a gaggle flying right above launch. The English language became the universal language for swearing in the air. It is safe to say now that when learning a new language, one always learns the bad words first. Even with turn directions stated, there were many close encounters in the sky due to pilots trying to make the most out of the weak thermals near launch. I even heard a pilot say that while he was thermalling, he felt a wing tip hit his harness. I kept an eye on Brett and Chris and it was nice to see that they were far away from the chaos right above launch. A start gate usually located about 4km from launch determines the pilot's start time. The shape of the tarp was changed every fifteen minutes. Manfred Ruhmer of Austria (Icaro Laminar 14 ST) was first into goal with a time of 03:09:44. His average speed was 26.82km/h for the total distance of 89.4km; he arrived at goal about an hour and a half ahead of the next pilot. The next pilot in was Gerard Thevenot whose time was 03:54:55 with an average speed of 21.66km/h. Andre Wolf of Brazil (Icaro Laminar 14 ST) came in third at 03:57:01 with an average speed of 21.47km/h. Chris came into goal 11<sup>th</sup> with the time of 04:21:25 and an average speed of 19.46km/h. Brett made a distance of 24.7km/h and was 88<sup>th</sup> for the day. 13 pilots made goal that day.

Day 6 was cancelled due to strong winds. Day 7 took us to Tre Pizzi. The task was 80.5km in distance and took the pilots all over the countryside, which was rather interesting for the drivers. The turnpoints took the pilots north of Tre Pizzi and then north west of Sigillo. Goal was at Costaciarro located at the base of Mt. Cucco. Manfred Ruhmer was first into

goal with a time of 02:05:46 with an average speed of 35.92km/h. Oleg Bondarchuk (Aeros Stealth KPL 14) came in second. His time was 02:05:56 with an average speed of 35.88km/h. Chris came into goal 21<sup>st</sup> with a time of 03:03:25 with average speed of 24.63km/h. Brett was 8.7km short of making goal and came in 44<sup>th</sup> for the day. 30 pilots made goal.

Day 8 took us to the north launch of Mt. Cucco. The task was a triangle with a distance of 76.3km. Ron Richardson of the United Kingdom (Avian Cheetah) won the day with a time of 2:46:05 and an average speed of 26.01km/h. Brett made a distance of 38.8km and came in 44<sup>th</sup> for the day. Chris made a distance of 32.1km and came in 102<sup>th</sup> for the day. 24 pilots made goal.

Let's take a break from all this and talk about my driving experiences. Well, it was fabulous. First of all, we had a great car with air conditioning. Brett bought me a Game Boy Tetris for the trip; many Tetris records were broken on this trip. I spent a lot of time with the Mexican and Venezuelan ground crew, which made the driving quite exciting. We were called "Team Maple" pronounced "Ma-pe-le", by the Mexican team; in return we called them "Team Tortilla". The Mexican team leader, Beatrice had a really good set up with her team. Her teams' GPSs were hooked up to their radios which then transmitted a signal to her radio/GPS; she knew their positions all the time.

Brett and Chris' radios would occasionally work. Chasing them was interesting but as the competition progressed the communication got better and retrieving was easier. With over 40 retrieve vehicles driving around, there was a good

chance of getting retrieved by another vehicle. Headquarters for the meet was in Costaciarro, about 3km north of Sigillo. Team leaders were asked to report their pilots' positions every task day by 19:30hr or rescue operations would be ordered. There were many pilots that did not have retrieve arrangements. Fortunately, the organization had a number of vans with drivers available to accommodate these pilots.

One thing interesting about Italy is that shops close between 1pm and 4pm. That was usually the time I would head down from launch and would have some free time to shop (clothes, not groceries!) before retrieving the boys. Maybe Brett had something to do with it. Actually, the real reason is to allow town folk to nap during the hottest part of the day.

Day 9 took us to Mt. Cucco (south launch). The task took the pilots south to Mt Serano as the first turnpoint and then west to Assisi Basilica and back to Mt. Cucco landing field. The Assisi turnpoint was a corner of the Basilica where the tomb of the well known San Francesco (St. Francis of Assisi) is located. The total distance was 114.8km. Manfred Ruhmer won the day with a time of 02:47:58 and an average speed of 39.69km/h. Second in was Betino Schmitz of Brazil (La Mouette Topless) with a time of 03:03:07 with an average speed of 36.40km/h. Chris was 15<sup>th</sup> for the day making goal with a time of 03:28:16 with an average time of 32.01km/h. Brett came into goal with a time of 04:57:40 with an average speed of 22.39km/h. He was 52<sup>nd</sup> for the day. 60 pilots made goal that day. Day 10 took us to Mt. Cucco (south launch). The task had four turn points and goal was Mt. Cucco landing field. The total distance was 77.8km. The task took the pilots down the

mountain range and back up to the middle of the valley and then to the next mountain range located west of Mt. Cucco and back to Mt. Cucco. Many pilots had trouble making the third turn point. Manfred Ruhmer won the day with a time of 02:35:19 and an average speed of 28.63km/h. Andre Wolf of Brazil (Icaro Laminar 14 ST) came in second with a time of 02:38:33 and an average speed of 28.04km/h. 31 pilots made goal and Brett was last into goal and 31<sup>st</sup> for the day. His time was 03:51:34 and his average speed was 19.20km/h. Chris made a distance of 36.9km and came in 84<sup>th</sup> for the day.

Mt Subasio was takeoff for Day 11. The task distance was 110.6km. Sandy Dittmar of Venezuela (Wills Wing Fusion 150) won the day by 13 seconds with a time of 03:27:21. His average speed was 30.79km/h. Jim Lee of the USA (Wills Wing Fusion 150) trailed Sandy closely with a time of 03:27:34 and an average speed of 30.76km/h. I was not at the goal field but people were talking about how Sandy and Jim were seen far away stuffing the bar (hang gliding jargon I picked up from Brett!) coming into goal. Brett was watching all of this while crossing the valley going to the last turn point. 55 pilots made goal. Brett was 50<sup>th</sup> for the day making goal with a time of 04:46:22 with an average speed of 22.29km/h. Chris made a distance of 93.2km and was 64<sup>th</sup> for the day. Since the Venezuelans were our neighbors, we celebrated Sandy's victory that night.

Day 12 took us to Mt Cucco. The task was similar to Day 9 with an extra turn point. The task distance was 132.8km. Gerard Thevenot won the day with a time of 4:16:41 and an average speed of 30.18km/h.



*Darren Trudeau gets help from the launch ladies*

# Golden Glory

1999 Canadian Paragliding Championships, Golden B.C.

**Randy Parkin, Meet Director**



*Bernard Winkelmann and Randy Parkin*

Sixty-one competitors flew 2 tasks in this year's Nationals at Golden's Mount 7.

An Open Distance day and south winds on Saturday saw most pilots going north. However, Bernard Winkelmann won the day with a 77.6km flight south followed by Chris Fitzner at 53km. Sunday was rained out. Monday's race to Harrogate was marked by lots of scratching in close due to high pressure stability. Fifteen pilots made goal with Glenn Derouin finishing the 42 km's first just one minute ahead of Bernard.

**WINNERS**

**OPEN CLASS:**  
Bernard Winkelmann  
Glenn Derouin  
Chris Fitzner

**INTERMEDIATE CLASS:**  
Charles Warren  
Mathew Willox  
Alan Polster

**NOVICE CLASS:**  
Jean Paul Lafleur  
Nisbet Patfield  
Scott Stolberg



*Bob Gardner taking off*



*Bob Gardner*

**You can get the full results  
by going to:  
[http://www.keyinc.com/  
GoldenPG/meet\\_week\\_99.htm](http://www.keyinc.com/GoldenPG/meet_week_99.htm)**



*Glenn Derouin(2nd place Open Class) coming into goal*



*Bernard Winkelmann*



*JP Lafleur, 1st place Novice*

## Thanks again to our wonderful sponsors...

Muller Hang Gliding and Paragliding (Vincene and Chris Muller)

APCO Aviation (Anatoly Cohn)

Paraglide Canada (Glenn Derouin and Wayne Bertrand)

Take-Off Paragliding (Mike Chroma and Zdenek Erban)

Revolution-Air Paragliding Corp. (Brian Fell)

Canadian Paragliding (Lenka and Stan Drdla)

Mt. Begbie Brewery (courtesy of Alan Polster)

Love Your Car (Bob and Natalie Gardner)

Holly and Lyle Johnson

Mark and Debbie Fraser

Country Garden Restaurant (Rob and Staff)

Nicholson Store>Macleods in Golden

Golden Site Fund (Peter Bowle-Evans)

Key Consulting Group Inc.

Thank you to the volunteers for their hard work: Vincene Muller, Ted deBeauDrap, Mike and Barb Spencer, Lyle Johnson, Bob and Natalie Gardner, Alan Polster and Peter Bowle-Evans.



*Randy Parkin*

# Feeling Blunt on the Blunt

John Kelson



**F**rom my flight log.....

#177. July 16, 1999 The Blunt with Mike, Murray, Max and Graham. Launch @ 8278' and got to 2408' over. Max 6.5m/s climb, 5 m/s sink. Perfect clear day, launched around 2:30 pm. Wind <5 knots from N. Toplanded after 1 hour 57 min to avoid sinking out.

#178 Re-launched from ridge. Scratched around and got whacked in gulley behind and above launch. 1 hour 12 min. The rest of the story should be written somewhere else.....

The Blunt. An awesome south facing 10K long ridge in northwest B.C. between Moricetown and Hazelton. It's mostly rounded alpine ridge top is punctuated by a few peaks and surrounded by neighbouring peaks which offer plenty of cross country potential.

The weather has sucked this summer - global warming, La Nina, whatever - but finally this day seemed great.

By early afternoon, there was still no real cloud development, a high ceiling was evident from tiny little tufts several thousand feet above the summits of a few of the mountains.

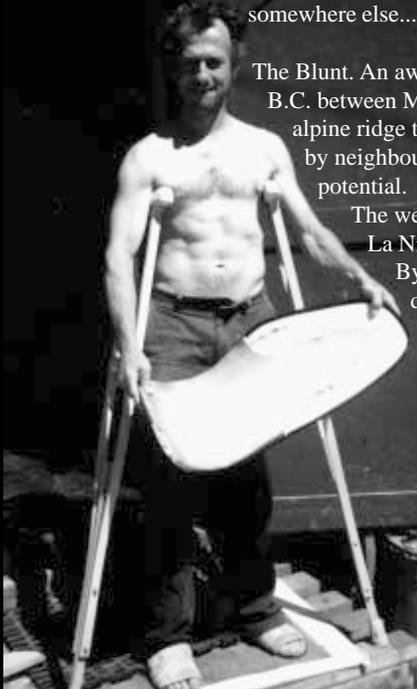
Max and Graham had flown it once before. For Murray, Mike and I it was the first time. We were all pumped to fly the mountain we see every trip down the highway. It is a true northern objective. Last time they flew the Blunt it had taken Max and Graham 2 hours to hike to a lower launch. But this trip a new not quite sub-alpine cutblock shortened our bushwalk to the top of the ridge to 1 1/2 hours.

The hike went quickly, no one talking much. We were just rabid to get to launch. The view

from the top was spectacular. Wildflowers and mountain goat trails everywhere. You gotta love the north. Mount Brian Berue across the Bulkley Valley. Hudson Bay above Smithers. Roche de Boule (and Hagwilget??) above Hazelton. And the Suskwa Valley reaching to the north. Lots of mountains to the N with awesome cross-country potential, as long as you don't sink out in the roadless backcountry.

On the top of the ridge, we found a very light N, definitely less than 5 knots. We had planned on flying the sunny S side and the light wind over the back seemed acceptable. As the top of the ridge probably sucked thermals it would also swing periodically to W. But the wind was light and the thermal cycles were strong on the S side. Smithers Airport Flight Services had predicted it would die off to nothing by 1pm. We thought the N would probably even create some convergent lift over the ridge.

Max tried to launch first from a small knoll, without much success. Mike found a better spot - a wide and grassy knoll with a caribou antler to hold up a piece of flagging for a windsock. The wind was strong and smooth straight up from the W. Off and up went Max. Then Murray. The two of them were flying in good thermals over the ridge in front of launch. Mike and Graham next. Then me. We all climbed quickly above



launch enjoying big smooth thermals without much of a wind component. We worked the thermals above launch up over the ridge, then along it. I found good lift and climbed to over 2000' above the ridge.

Everyone went their own way. I saw Max and Graham on the E end of ridge. Max crossed over into Luno Creek Valley but didn't go to the other side. Mike and Murray were boating around. Getting our fix, high with lots of lift. Having a big flight.

I thought I'd try and jump over Luno Creek, and maybe fly to Moricetown. Hung around a big pinnacle beside the valley, flying back and forth over a rock knife-edge and soaring around a jagged little peak. I decided it was too sinky to cross over, and I was a little worried about possible rotor behind the pinnacle. Mike came over and said it was trashy in the valley, and he headed back towards the main ridge. I followed. But he didn't make the ridge and headed out. I tried to make it back to the main ridge; failing that I decided to land and climb in a better cycle.

It was hours since we'd launched and the thermals were dying off, but there was still usable lift and I flew back down the ridge towards the first launch. I was starting to feel a little zoned. Mike and Murray were down, and I couldn't see Max. Graham and I were hanging on. The two of us started up in the same thermal. He got above the ridge again. I tried to fly back towards the pinnacle away from launch, but didn't get much and turned to follow Graham. Scratched back W to launch.

I was getting more intimate with the mountain. Flying continually lower and closer. Trying to hook into these punchy rippers blasting up the scree and snow-filled gulleys to ride them back over the ridge. I was scratching a bit too hard. But I was full of confidence in my big fat safe Quantum's (beginner glider) reliability and greedy optimism that I could climb back up over top of this ridge. For about a half hour I flew more or less in denial of the lee side rotor potential. While I was often less than 100' from the ground, usually I flew even with - a little above, a below - the top of the ridge.

The thermals were not strong enough to over-ride the wind over the back very much anymore. Flying over a gully a little below the sharpest part of the ridge, my canopy did a sudden 180 degree turn. It spun me around as the risers unwound. Just as the thought "uh ohh, that's probably rotor" arrived in my brain, I got whacked. About 150' above the ground, I had a 90% closure to the right. Brain switched to autopilot. Steer and clear. Bang - it re-opened. Cool!!

Whacked again immediately. Closed to the left. Tried to steer but felt it going negative. Quick acceleration, spinning faster negative,

looking for the ground. No time, or no reflex, to bother tossing the reserve. Too close to the ground but hopeful. Fairly certain I could fly this thing once I got a better look at it. Mostly I was just hanging on watching the steep scree. Spinning really fast backwards. Still negative. No fear, just complete concentration on trying to fix the problem. Hoping it'd fix itself. I remember thinking, not in words, before words, that the ground was getting kinda close.

I opened my eyes. I was laying on my back, feet slightly higher on bowling ball-sized rocks. First thing I did was to record the time and turn off my vario. The lens in the vario was cracked - even though it was on the front of my leg and I was on my back. Weird. No evidence of tumbling. No scratches or rips on my front. There were three twists between my harness and the canopy laid out nicely in front of me. I tried to figure out what that meant, but it was too complicated. For some reason the harness allowed me to lay out flat. Why? Couldn't say.

Next, I tried to assess damage. Hip dislocated. Crack in back of head. My back was in constant spasm, but all body parts seemed to be working. My elbows were sore. I undid my harness and took off helmet and hat. No brains - skull intact, only blood. My hip was pretty painful. The right foot was turned out kinda ugly.

I had no real plan, but turned my foot to right place, put my knees together and sort of scrunched up squeezing thighs towards butt. My hip popped in. This did not exactly cause elation but it did give me a sense of some progress.

Laying down for a second I felt thirsty. Without realizing how out of it I was I stood up and tried to walk 15' to a snowpatch to eat some snow. Pretty steep ground so I crabwalked over to the snow. The sun was still quite high, even though it was after 6pm. I was trying to form a plan. It seemed to me there was no way those guys were going to see me up here on the summit of this mountain. I thought the best thing I could do was to self-evacuate. It seemed like a good idea; self-evacuating is usually the right thing to do. Looking for a place to launch I crabwalked back to the glider. I thought about launching off the snow in the gully but was worried I might slip and slide down the gully and I didn't feel like any more abuse. But below me about 100m there was a grassy roll that would be perfect to fly off.

I bunched up the glider. Put on the harness. But I couldn't manage a step at all. The weight made the hip too painful. It just wouldn't work. So I tried to bum slide down the scree. The leading edge of my glider filled with rocks. Even though I saw this happening it didn't seem to matter. After

bum sliding lost it's appeal, I decided to take the canopy off the glider and to throw the harness downhill. It worked OK, but after bouncing down a short distance the pocket on the harness ejected the glider bag. I continued to drag the canopy through the scree until I got to the glider bag. Stuffing it into the bag most of the rocks fell out of the canopy. So I chucked it down the slope, along with my helmet.

Once everything was at the bottom of the slope, I teetered - the harness and helmet on - back to my intended launch spot, about a 100' away. As I went back for the canopy, the wind was nicely up, and launching still seemed feasible even though it had been 3 hours since I'd crashed, and it was now after 9pm. When I tried to reunite the canopy with the harness the lines were completely snarled. So I took all the lines off the risers and began to untangle. This was going to take a while, but there was no questioning my plan. I pictured landing without running, just dumping it onto my side, as practice. When I took a break from untangling, I attempted to remove the bigger rocks from inside the cells. I shook a big one out of a hole in the trailing edge. By the time I finally looked down to the landing field there was a helicopter flying straight at me. Seeing the chopper I relaxed and suddenly became completely exhausted. When it landed I could barely stand up.

As a result of this crash the fiberglass harness backplate is completely crushed and seatboard broken, there are about 15 small holes in the top of the centre cells of my canopy and about 2 lines with stripped sheaths. I got 5 stitches, an ear that rang for 3 weeks, a sore hip which should be almost perfect in 16 weeks, sore ribs, bruised elbows, and the hope that I learned a necessary lesson with a minimum of permanent damage. That is, to fly smart and humble. Get a new harness with more modern technology. Maybe an airbag. Get back on the horse.

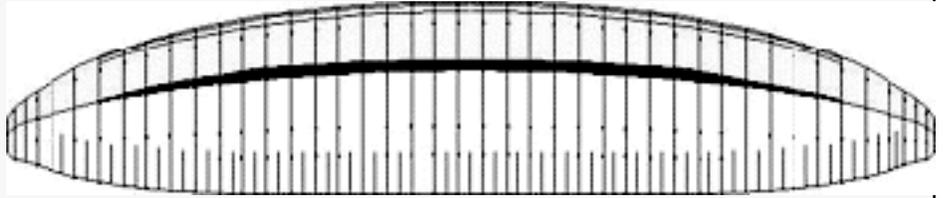
In retrospect, a few things come to mind. Aside from the obvious and essential lesson, not scratching in lee conditions, I should have realized I was unable to fly right away. The other guys saw me eventually with binos, and couldn't figure out why I seemed to be walking around. This delayed calling the air ambulance for quite a while. I had three flares with me which I could have fired off. I should have had my radio (which was in storage in Vancouver) with me.

P.S. Next flight, a month later, was an absolute jitter-fest. I was light on a borrowed wing and when it bounced and wiffled around I just about ...But I did the conservative thing and flew out and landed. Next flight, when my old wing is patched, things should be back to normal, only a little wiser.

# Glider Review

Apco Bagheera & Allegra

**Brett Hazlett**



## Bagheera

believe to be close to reality.  
 Flat area: 28.2sqm  
 Flat aspect ratio: 5.9  
 Total weight range: 85-105kg  
 Vmin: 21km/h  
 Vtrim: 36km/h  
 Vmax: 50km/h  
 Min sink: -0.9mps  
 Best glide: 8.6:1  
 Certification: AFNOR "Performance", DHV 2



## Allegra

Flat area: 29.1sqm  
 Flat aspect ratio: 5.5  
 Total weight range: 85-105kg  
 Vmin: 21km/h  
 Vtrim: 35km/h  
 Vmax: 46km/h  
 Min sink: -1.0mps  
 Best glide: 8.1:1  
 Certification: AFNOR "Standard"

There has been a lot of talk this season about two new gliders from Apco -the Bagheera and Allegra.

Recently, I had the opportunity to fly both these gliders in the medium size courtesy of Muller Hangliding and Paragliding and FlyBC Paragliding. The following are my impressions of the gliders and performance figures that I

The Bagheera and Allegra share some design philosophy. This is seen on the ground, in the air and from the "feel" the gliders give while thermaling.

Spreading the gliders on launch, one notices the unique texture of the sail material. From what I have heard, the P.U. coated and double siliconized cloth offers

exceptional performance and durability. Apco's 3year/250hour warranty seems to be consistent with that claim. I also appreciated the quality of construction and attention to detail that was evident after having a close look at the wings.

Both gliders were straightforward to launch and easy to land.

When test flying a glider, hanglider or paraglider, I try to let go of thinking about specifics about how a glider flies and instead I try to notice overall impressions, particularly while thermaling, as one usually spends about half of a cross country flight thermaling.

Both gliders were similar in that they were very responsive to weight shift, required very little adjustment with the brakes to follow wandering thermal cores

and with active flying the wings felt solid in turbulence. The Allegra was a little different in that brake pressure was slightly higher and while thermaling the glider felt less lively or more dampened. This implies a higher level of safety as expected from its certification.

Thermaling these gliders did not require much effort and by comparing climb performance with other pilots that I often fly with, I found these gliders to have a large "thermaling capacity". If you like thermaling, this means a lot of airtime; if you like cross country flying, this means a lot of distance; but this will always mean a lot of FUN!

Now as far as performance is concerned, the Bagheera and Allegra perform very similarly at lower speeds with the Bagheera

having a definite advantage while accelerated. However if you fly a Bagheera but do not spend much time accelerated during a cross country flight then an Allegra would likely be able to keep up with you. Remembering that the Allegra is "Standard" rated makes it a very appealing glider indeed.

They are both really nice gliders so how should one choose?

If you are interested in serious cross country flying but not competing then an Allegra is the glider of choice. If you want to compete seriously then I would recommend either; the Allegra if you want the safety that it has to offer, the Bagheera if a little extra performance is important to you.

# S.O.G.A.

Southern Ontario Gliding Association - August Long Weekend Competition

## Mike Gates

First off I would like to thank all the people who helped during the weekend competition. Cudo's to Pam and Graham for the first rate pancake breakfast!!

A special thank-you to Gary for taking on the headache of scoring and retrievals. And to all the people who assisted with the line duties, a big thank-you, thanks to you all we had a record number of tows with no safety related problems!!

Many pilots exceded their personal bests during this comp. with club records being made as a result,so by any measure we can call the event a success. All pilots flew safely, with no broken tubes even during the spot-landing phase!!

With only two full x.c. days available Martin Mcloud came in first with 967 points followed very closely by Glen Coombes with 942 points. Kevin Thompson finished third with 224 points, Rick Hines fourth with 233. Yours truly in fifth place with 157, John Popp sixth with 128, Gary Hall seventh 112 and Joe Hockin eighth with 77points.

In the spot landing a spirited rivalry ended up with Gary Hall taking the first place trophy, I came in second with Martin again running off with the hardware for third place. Ken Kinze came in fourth, Steve Younger fifth and John Popp sixth.

Just as a note, Glen Coombs

flew the first day all the way to Burlington to land at his home!!

The second day he seemed to again have first place wrapped up with an exellent flight to just west of Kitchener just north of the 401. All this from a guy who just made his fourth and fifth EVER X.C.!!! Martin pulled off an incredible flight on Monday to cinch the first place trophy, by flying to Simcoe on lake Erie!!! Kevin held on to third by flying to Guelph at six o'clock after flying tandems all day and not a single "cumie" in sight!!

Some other notable flights, Gino Cianno, Lee Bogseth, Peter Wahl and Greg Bags all made their first ever x.c.'s this weekend so congrats to all. Last

but not least we should all send a big thank-you to Steve Younger and Greg Baggs for operating the tug for the weekend. Without them none of this would have been possible. Steve was given an award donated by Brad Fallowfield for his efforts during the competition and the year. This will be a 'safe pilot award' and will be given on a yearly basis with Steve as the first recipient. Thanks Brad.

A lot of fun was had by all . Next year's competition. will be very interesting with all the exellent new pilots we are developing this year.

Again, congratulations to all involved , well done everybody!!!

**CANADIAN PARAGLIDING, LTD.**

www.cpl.ca / VISA / MASTER CARD / AMERICAN EXPRESS

- PRO-DESIGN Vector DHT 4.5L from \$3190 CAN.
- PRO-DESIGN Vector tandem from \$5599 CAN.
- PRO-DESIGN Vector DHT 5.5L from \$3299 CAN.
- PRO-DESIGN Target DHT 2.5L from \$3199 CAN.
- SUPAIR over 30 types of harnesses
- Repairs to paragliders and accessories
- MADE-IN-CANADA
- DESIGN Vector / DHT harness, air bags and accessories

1007 Bloor St. E. Hamilton On L8K 1B6 Canada  
 call (905) 547-8897 or toll free 1(888) 858-8935

Visit our web-site: <http://www3.sympatico.ca/canadian-paragliding>

# Zippy and the Pigs strike gold

1999 Western Canadian Hang Gliding Championships, Golden, B.C.

**Karen Keller**

The Rocky Mountain Hang Gliding League again hosted the 1999 WCC at Golden, B.C. this year from July 31 to August 2. There were 20 registered pilots. We would like to thank everyone for coming and hope our Brazilian and American pilots had a great time.



thank Peter Bowle-Evans for the ongoing site development that he oversees. He's taken on a huge project and does a great job – Thanks Peter.

Don't forget to book now for the **2000 WCC**. Doug and Karen Keller are running this one. Doug will be the Meet director so it will run a lot smoother next year. We're going to blow this one out. Mitch already has the T-shirt designed. See you there.

## DAY 1:

It was a wet cold week but it looked better on Saturday so the competition was on. There was only light cumulus development so the Tower Peak (Parson)/return task was called. It was a challenging day and many pilots fell short but all three team members of Zippy and the Pigs made goal; George Borradaile, Tyler Borradaile and Martin Dennis.

### Standings for DAY 1

1	George Borradaile	713
2	Tyler Borradaile	712
3	Martin Dennis	628
4	Barry Bateman	498
5	Joe Cox	461

**DAY 2:** Wet and cold weather and the day was called. Looked like a good day for the Beer Bash and door prize draws. A truck parked near the railway track and a group of mountain goats entertained us in the afternoon. The beer bash was a success with door prizes for everyone. Thanks to Rick Hunt and Doug Keller for helping out. Rick manned the prize table and I was grateful for the great job he did. Mitch Nixon and Simon Kurth brought their guitars out and a paraglider joined in. They were awesome - thanks.

### Standings for DAY 2:

1	Joe Cox	238
2	Rick Hunt	128
3	G. Borradaile	121
4	Jim Scoles	112
5	Jamey Meier	110



**DAY 3:** It was sunny but light on launch with little development so Tower Peak/return was called again. The paragliders weren't getting up so only Joe Cox from Brazil braved an early launch. After waiting and waiting there was the usual rush to get off before the window closed and unfortunately not everyone did. Joe was the only one to make goal today.

I'd like to again thank everyone for coming. A special thanks goes to the officials that donated their time. Doug Keller who blew a launch earlier in the week was immediately grabbed for the landing judge, giving Jackie Freeman a well-deserved break this year. Jeff Runciman did the scoring and Jackie the data input. Thanks to Ron Docherty for bringing the beer out. Gotta

### Final Results:

1	George Borradaile	834
2	Tyler Borradaile	712
3	Joe Cox	699
4	Martin Dennis	628
5	Jim Scoles	546
6	Mark Dowsett	519
7	Barry Bateman	498
8	Jamey Meier	493
9	James Lintott	464
10	Christy Huddle	383

Winning Team: Zippy and the Pigs

### Thanks also to our sponsors:

**Muller Hang Gliding:** Sky Adventures book, hats, hook knives and an Air Pirate T-shirt

**Random Art Design:** Custom T-shirt  
**Mountain Equipment Co-op:** Fifty dollar Gift Certificate

**Maptown:** Topo Maps – Kananaskis

**The League:** Vintage T-shirts

**Angle of Attack:** Grippy Gloves and Attack Tubes

**Integral Manufacturing:** Siltarp  
**Skyward Sport Aviation:** Two "Free Tow" days

**Yarek:** Glider bag

**B.C. Association via Rick Hunt:** First aid kit

# Cross Country

Canadian XC Flights

**Vincene Muller**



**paragliding**

Max Fanderl, BC is still on top of the list with three flights over 100km and a three-flight total of 402km. He has nearly 1100km this season, all in the Valley. Bob Gardner, AB with a three-flight total of 350km follows him. Hugo Tschurtchenthaler, BC [346.90km] and Garth Henderson, AB [295km] rounded out the top four.

Chal Hale, AB had a 116-km tandem flight just after the Paragliding Nationals and has two Canadian Tandem Records pending approval.

Max Lautenbacher, BC and Lyle Johnson, BC had flights over 100km the day after the Nationals. They joined the growing list of Canadian Pilots who have achieved this milestone.

Bernard Winkelmann, AB 1999 Canadian Paragliding Champion flew 77km into a 25km headwind on Day 1 of the Nationals. He was low at the end of Mt. 7 and again at Parson where several other pilots were 'flushed'. At Parson he noticed a hang glider pilot 'in orbit' out in the valley. Bernard flew out to join him and was able to reach cloudbase and continue South. Bob Gardner made it to Parson, didn't think he could get too much farther in the South wind, flew back to Golden and then up the Blaeberry. He was scored 33km for the day but in reality it was more like 93km! Chris Fitzner, AB struggled on South and made it almost to Brisco.

Meanwhile a group of pilots headed

North. A flew pioneered a new route up Kinbasket Lake. Glenn Derouin, BC had the longest flight of 48km, the longest flight so far North from the Golden launch. Yo Yo Tarnowski, AB flew 15km from Golden during the Nationals for her first XC.

The season in Golden may have been slow to start but Friday, September 3rd was another great day. A group of Swiss pilots flew downrange from 70-110km. Former World Record Holder, Urs Harri said that Golden was "awesome!"

Peter MacLaren, BC and Chris Muller, AB had some interesting flights East from Golden. They were not long flights but the scenery was spectacular. (Must persuade these guys to fly with cameras in future.)

## hang gliding

Eastern Canada has provided all the long flights this summer. Armand Acchione, Ont finally achieved the magic 100-mile flight with 188km on aerotow from Brussels, Ontario. Armand is in hot pursuit of Roger Nelson, AB and trails him by only a few km. Armand said that he had to land due to trees. Roger replied that he only landed on his first 100 miler of the season because he was hungry. Armand's reply is "next year Roger will have to pack his lunch!" Karlo Apro, Ont also had long flights from the Brussels Aerotow site and Normand Michaud, PQ reports long flights from the Mt. Yamaska Aerotow Park.

Flights from the hang gliding competition run by the Kitchener/Waterloo Club are also listed.

In Western Canada most of the hang gliding flights in Golden were out & returns. Km's flown at the Western Canadians and the Canadian Nationals are not included as I haven't received them yet.

Gerry Grossnegger, MAN sent in a flight from May of 65km from truck tow in the Qu'Apple Valley, Sask. Gerry and Barry Morwick, MAN both towed up and both flew 65km but didn't see each other during the flight and didn't land near each other.

The XC Season will soon be over. Don't forget to send in your flights for the XC list this year. The list is updated regularly on our home page. A complete listing will be published in the Air Magazine early in 2000.

## canadian records

a0-2 General Category [Hang Glider with a Rigid Primary structure and movable control surface(s)]

Stewart Midwinter, AB - Brightstar Millennium

Speed Over 100km Out & Return Course - 33.13km/hr

a0-2 General Category [Hang Glider with a Rigid Primary structure and movable control surface(s)]

Stewart Midwinter, AB - Brightstar Millennium

Out & Return Distance - 107.124km

a0-3 Paragliding

Lucille de Beudrap, AB - Apco Sierra Female - Open Distance - 33.7km [New Record]

a0-3 Paragliding

Brian Fell, BC

Tandem - Open Distance - 26km [New Record]

a0-3 Paragliding

Chal Hale, AB

Tandem - Open Distance - 116km

a0-3 Paragliding

Chal Hale, AB

Tandem - Flight to Goal - 54km [new record]

a0-3 Paragliding

Brian Fell, BC

Tandem - Triangle Distance - 25km [new record]

## pending records by Canadian pilots - world records

0-2 General Category [Hang Glider with a Rigid Primary structure and movable control surface(s)]

Speed Over 100km Out & Return Course

Stewart Midwinter, AB - 33.13km/hr

## badges

Mike Spencer completed the Silver Eagle Altitude Gain at Golden.

**Send flights to Vincene Muller**

**Box 2, Site 13, RR#2**

**Cochrane, AB TOL OWO**

**Fax (403) 932-6760 or**

**email:fly@muller-hang-paraglide.com**

# Giving Credit

Muller Hang Gliding and Paragliding



Parade team:(L to R)  
Chris Muller, Mallory Pollach, Delona Butcher, Jenna, Tihi Bukvic, Vincene Muller

Muller Hang Gliding & Paragliding were voted the 1999 Ambassador of the Year by the Cochrane Chamber of Commerce last February. They took part of the Annual Labor Day Parade. Note the Wills Wing Falcon on top of the limo.

The limo, glider and all the candies that were thrown to the crowd were a bit hit. The Parade lasted 1hour-15minutes.



# Willi Muller XC Challenge

July 24-30, Mt 7, Golden, B.C.

**Randy Parkin**

Though the flying was not as spectacular as previous years, we had another successful meet. 33 PG's competed in 3 classes established using wing rating, longest XC and total hours as criteria. 6 HG's competed for the first time and were all placed in one category.

Product prizes for PG's were donated by Anatoly Cohn of APCO Aviation; HG prizes by Rob Kells of Wills Wing. The competitors sincerely appreciate the support provided by these great guys and their companies. I'd also like to thank Vincene Muller for her help and support.

The winners, and their prizes, were:

Novice PG:

1st - Andrea Gagel (AirXtreme Flight Suit and \$100)

Intermediate PG:

1st - Charles Warren (APCO Harness and \$100)

2nd - Florian Ghiban (\$150)

3rd - Ian Mitchell (\$75)

Open PG:

1st - Chris Fitzner (APCO Helmet and \$100)

2nd - Dean Lienweber (\$150)

3rd - Mike Chroma (\$75)

Open HG:

1st - Paul Thordason (\$100 and Prize Pack)

2nd - Terry Thordason (\$50 and Prize Pack)

3rd - Martin Polach (\$25 and Prize Pack)

You can see the full results by going to [http://www.keyinc.com/GoldenPG/meet\\_week\\_99.htm](http://www.keyinc.com/GoldenPG/meet_week_99.htm).

Manfred Ruhmer was second in with a time of 04:18:58 and an average speed of 29.91km/h. 19 pilots made goal. Brett landed 3.7km short of goal and was 27<sup>th</sup> for the day. Chris made a distance of 102.1km and came in 40<sup>th</sup> for the day. I picked up Chris first and when Brett landed, he radioed us telling us his position. He described a field with sunflowers, horses and a farmhouse on a hill. Chris and I wondered if this boy realized he was describing the Italian countryside. Well, eventually we did find him.

On the last day of the competition, we were sent to Mt Subasio, only to find that the winds were too strong. All the gliders were set up and everyone was just lounging around waiting for the day to be called off when suddenly we heard all this cheering at the front of launch. I think most of the pilots decided not to fly and that meant the new 1999 World Hang Gliding Champion was Manfred Ruhmer.

Well, that night was filled with dancing and lots of wine. At the main party place, Manfred shaved off his sail maker's hair. Manfred had obviously won a bet with his new title.

Manfred's overall score was 5198 points. Second was Brazil's Andre Wolf with 5210 points. Chris' position was 34<sup>th</sup> with 3386 points. Brett's position was 39<sup>th</sup> with 3318 points. Canada's two-man team came in 25<sup>th</sup> out of 38 countries. Brazil won the championship with three of their pilots in the top five.

My overall experience was absolutely great. Brett and Chris were great company and were always looking after me. So, besides thanking Italy for a great time, I also have to thank them both for those three amazing weeks filled with lots of fun and memories of wine, cappuccinos, gelato, Tetris tournaments and speeding through the countryside.

k

# New flock kicked out of the nest

---

**Mark Tulloch**

---

Despite the wonderful weather of 1999, Junetober followed by Julyvember, students have been finding time to learn and solo at Aerial Adventures, Canada's largest aerotow flight park and school.

The advantages of learning with tandem instruction from a set location have really shone this year as most days throughout the spring were a mix of rain and sun. Lots of time was available for theory in the class and when the sun broke through and the rain stopped it would only take a few minutes to get the student and instructor airborne for the next lesson!

Rob Stagg was first out of the nest in 1999. Rob recently moved here from Calgary where he had started lessons with Muller Hang Gliding who recommended he call on us as soon as he moved west. Rob soloed on April 6 and is now flying a UP XTC.

Bernie Moore of Abbotsford was next off, soloing on May 9. Bernie has been racking up the hours on his Icaro Mars 170 ever since!

Bill Sheppard of Everett started lessons the same day Bernie soloed, soloing himself less than two weeks later. Bill has been trying to learn from part-time instructors for almost three years using slope training but found they were always off elsewhere when he was available to learn. Bill is now the proud owner of a Pulse 11m. When you see him next ask him how his mouse is doing!

May 30th was the big day that

Zbigniew Baryla (call him Zibby) had been working towards. Zbigniew had a few set backs that kept him from completing his training in 1997. Hard work made him the fourth student to solo in 1999.

Andrew Blanchard of Calgary wanted to be soaring at Golden this summer not just doing sled runs. Rob Kells of Wills Wing had suggested he come visit us and he arrived June 21 after having to cancel an earlier reservation. Three days later Andrew was up there on his own, confident, competent and looking forward to heading south down the Columbia Valley!

At the same time Bill was soloing, Curtis Stewart of Sherwood Park Alberta arrived. Curtis had seen Aerial Adventures featured on the Outdoor Life Network and saw a far quicker route to advance his instruction. Working a shift that gives him four day weekends and having the in-laws living in Surrey makes it easier to convince the wife to drive to Vancouver for a few days! While coming close to soloing after his first three days, Curtis had to make a second trip and soloed on the morning of July 4.

That same evening Evan Smith of Sidney, B.C., also flew his first solo. What is special about Evan's flight is that on July 1, he turned the ripe old age of 13! You will spot Evan hanging about the Aerial Adventures site in Fort Langley working for credits to pay for his next tows. If you want your glider set up or broken down I

am sure for the right price...

Scott Whitehouse of Surrey was one of the last out of the nest for the first half of our season. Scott started out quick in May but had to take a break through June and then soloed July 9.

Last year we were visited by a Japanese tourist who went for several tandem flights. He just couldn't get enough and he went home with plans to take lessons. The lesson plans did not work out back in Japan and he contacted us earlier this year with inquiries into learning here. Careful planning, basic Japanese lessons, sessions with an interpreter to solidify commands and lots of drawing and Keiji was on his way to becoming a pilot. It took a lot of work with two different instructors then Keiji was able to demonstrate the required abilities. He soloed on July 10 and is continuing with his instruction back in Japan.

The next brood is on the way. Current students come from Seattle WA, Carnation WA, Vancouver, Sardis, Burnaby, Gabriola Island, Chilliwack, Langley and Vermont! See you in the air!

---

*Mark Tulloch is co-owner of Aerial Adventures Hang Gliding near Vancouver, B.C., Canada's largest aerotow flight park and school. He is a Senior Instructor, Senior Tandem Instructor and a two time Nationals Champion. He flies hang gliders, paragliders and ultralights and flew over 1000 flights last year.*

---

# To err is human To glide divine

Andrew Blanchard

My decision to take up hang gliding was one made with much forethought. It was made based upon my experience as a Private Pilot, a Glider Pilot, and the excitement of a tandem hang glider auto-tow flight. With the concrete goal of soaring hang gliders, I decided to take the leap into another new aviation endeavor. It has been over a year since I took my first course and I have yet to stay aloft for any length of time, but I am sure that will soon change.

My formal education began last spring when I took a beginner hang gliding course taught by John Janssen through Muller Hang Gliding and learned how to run with a kite on my back. I wouldn't say that I learnt how to hang glide, but it did give me the knowledge of how to run, and how to carry a hang glider back to the top of the small slope. At that point, I knew it would not be as easy to learn as my other flying had been in the past. With my goal firmly planted in my mind, I took the intermediate course.

Armed with some more theory classes and a bunch of 8 and 10 second flights I graduated the intermediate class. At this point, I can say I was gliding. Sure, I wasn't turning, or soaring, but at least I was a few feet off the ground. Shortly after my course, I purchased my own equipment and began to practice on my own; performing launch after launch and trudging back up the hills. For about half an hour's work, carrying a glider up Nose Hill, I was rewarded by

a 30-second flight. At this point, I was able to turn the glider in a shallow S turn and land more or less where I wanted.

During all of my practicing, I was in my constant contact with my instructor. He was always able to provide additional

advice, motivation and support. When he felt that my flying skills could handle it, he took me to the Cochrane flying site and tried to coach me off the hill. The weather was beyond my abilities, and John encouraged me to meet him out there when it was within my limits.

My first launch off Cochrane took place at the beginning of this season, and resulted in a satisfying one-minute flight. I was able to fly, turn right, then turn a 180 degrees to the left and land. Again, the support of John and his assisting instructors aided me greatly.

During a parachute clinic, all of the pilots introduced themselves by stating their name, glider they fly, and total airtime. After I proudly announced that I had a total airtime of six minutes, more than a few laughs followed. Shortly after the class I was talking to Rob Kells, who informed me that I might want

to look into an Aerotow park where I could quickly gain flight time and experience. He continued to say that Aerial Adventures run a tandem aerotow school in Ft. Langley, B.C. I investigated their website, made a booking, took some holidays, threw my hang glider

***“And soon I shall soar...”***

on my car, and drove to the West Coast.

Randy and Mark greeted me with much enthusiasm, and encouraged me to hop into the tandem glider that evening for some instruction. I decided that I was there for a week, so I could wait until the next day. I did get up at five in the morning and drove eleven hours to get there, so some rest was preferred prior to my flight. The next day I was greeted early by some very wet weather. Even though it rained on and off for six days I managed to log fourteen tandem flights and a solo tow. More than three hours of air time, and I can honestly say I know now how to turn the glider, not just nudge it around a corner. At 2500' AGL altitude, I was able to experience my first stall, 360, 180 and linking 90-degree turns. I am sure that performing 15 aircraft style approaches in a glider will help me in any of my future hang gliding!

The tandem method allows a student to have an instructor show them a maneuver, follow through the maneuver with the instructor as it was performed, and then allows the student to perform this maneuver on their own. All of the student's control inputs are under the watchful eye of an instructor who could quickly provide instruction or, if necessary, assistance. It was the aerotow that caused all of the above to be performed at a sufficient altitude, allowing repeated practice on the way down.

This differed greatly from slope training where you are alone on your glider and an instructor provides advice during a flight lasting a few brief moments and more advice after you have stopped. With this type of instruction, you have to return to the top of the hill to see if you can act correctly on the advice given. This is certainly a more economic way to learn, but can be quite grueling and exasperating if you are only met with limited success.

While in Ft. Langley I leaned quite a few things, and not all of them were in the air. It was good to have another instructor to gauge my flying skills, and have yet another instructor assisting my second instructor. I think everyone has different experiences, and it is only through discussion, and instruction that this knowledge is passed on to others. Armed with these newly acquired flying skills, I am sure I will enjoy my first high flight at Golden a lot more. And soon, I shall soar...

# Is there anything dangerous up there?

Tales and news from Mt. 7

---

## Peter Bowle Evans

---

This guy comes up to me in the LZ one evening and says, "I am a visiting PG, is there anything dangerous up there?"

Well... I am floored. I have just about got unzipped from another of those 4 hour jaunts about the mountain, and the ground is still swaying beneath my feet.

I mean .....You, a PG, are asking me (a HG) if there's anything dangerous?—you have got to be kidding!

There are quite a few pilots there, but they are all swallowing their thoughts, waiting for my response. They are also in curious anticipation of hearing what I think is dangerous.

Well now, let's see: if you have a blood transfusion you could get hep C; if you have sex on the ramp on a hot afternoon with a real nice stranger you could get trampled on by launching HGs, be the cause of multiple mid-air collisions from spectating flyers, get your picture on the front page of most any national daily newspaper, and subsequently get aids to boot; if you leave a camera or radio behind anywhere you will lose it; if you get your vehicle repaired by the wrong mechanic you will be much poorer and no further along the road; if you fly into a towering cu you will get sucked up, or into a violent rotor and you will get thrown down; if you are incredibly stupid you could nose dive into the river and drown, or get entangled in a power line and get electrocuted; since you are a PG, none of the PG things that would scare

anyone else half to death don't count (they are normalities for you) and then again, some of these things are not really "up there". Hmmmm...

And then about six of us got it

number of questions pertaining to things like insurance, drivers, owners, licences, ICBC, out-of-province insurance, out-of-country drivers, payment to drivers, payment for rides up,

"You see, at this point, the score for the year was Road - 3, Flyers - 0. That is 2 Suburbans and one pickup, all 4x4s, one of the Suburbans brand new, and the other 2 also in tip top condition. Totalled."

-P.B.E.

all at once - Anything dangerous up there? "YES - THE ROAD!!" I'm afraid our poor visitor did not really fully appreciate the unified cry.

You see, at this point, the score for the year was Road 3, Flyers 0. That is 2 Suburbans and one pick-up, all 4x4s, one of the Suburbans brand new, and the other 2 also in tip top condition. Totalled. The pick-up was mine, and several weeks later I am still crowding the ditches as I round blind corners, praying and instantly ready to dive right into the ditch. My pick-up and one of the suburbans compressed each other head on quite suddenly one evening, and the other Suburban simply omitted to negotiate the second half of the last switch-back one afternoon. 'Fly' was the operative word that day.

How we survive this HG/PG thing I will never really know, but we do. Everyone involved carried on the next day doing the things they normally do.

These events have raised a

and road status to name a few.

Basically, think carefully as to where your liabilities may lie.

---

## The Season

---

OK, now that I have got that off my chest, what about the season. What season? It seems I can count the proper good days on the fingers of one hand and have some left over. This has to be an exaggeration, but it does convey the idea. Spring was one weekend in early June, and summer was in August. September, at time of writing, has given us a day, but now is more like October. There is lots of fresh snow on the mountains, sudden, ripping thermals when the sun gets free, and howling winds aloft.

True, some of the good days were really good, including that some PG records were set one day. Either this, or my memory has got all fuzzed up over the years. (I can hear the comments at least as far as Medicine Hat)

---

## Accidents

---

As usual, there were some, but nowhere near as horrendous as other years. To my knowledge, nothing worse than a few cuts and bruises, DTs, sail tears, although I believe on PG canopy was toast. There were 2 emergency deployments, both by novice PGs. Again, both walked away.

Whatever else you do at Mt 7, please, ALWAYS fly with a reserve - they work !! I believe there were a few incidents I never heard any details about, that mostly involve PGs getting blown north in strong southerly flows. I gather a few of these got slammed in a bit hard at their landings in sometimes less than ideal locations. This IS becoming a regular here.

So, know this: At Mt 7, there are, on several occasions, every year, winds of such a strength that HGs penetrate no problem, but PGs do not. Obviously it will depend to some extent on the exact canopy or wing - some single surface HGs will be slower than some high performance PGs, but on the whole, here, it is PGs that have seem to have the penetration problems. If you are a PG not very familiar with the site, talk to one who is before venturing out in strong winds, particularly from the south. Best of all on the accident topic, after lack of injuries, is that no-one needed costly rescue.

The story I like best on this subject is this one. The road construction superintendent was going about his daily business one day when he notices a tree

with a PG caught up in it. Next thing, along the road comes this guy who says he is also a PG, is from Saskatchewan or the likes, and that all his life he has wanted to cut down a tree, but has just never had the opportunity.

The super finds this really novel, that someone should actually be excited about doing something to him as mundane and every day as falling a tree, that he has done almost on pennance for as long as he can remember.

So, he hands our fella a power saw, and says, "Then it's your lucky day! Here is a saw, and there is an ideal tree just around the corner with a bonus - it has a PG in it !!" Whether you want to be cut down by someone who has never felled a tree before is another matter.

---

### The Contingency Fund

---

It is thriving. As of September 8, it has \$4400 in it. This means we could cover one rescue like we had last year and still be solvent. I am sure it is a matter of when, not if, it gets called on.

With reference to some other comments I have seen on our fund, look at it this way. When something like this happens here, if you have contributed for the season, at that time, on that day, the fund, to its ability, will pay. With this set-up, rescue will be proceeded with without delay. Later on, after you have been taken care of and have settled out, if you have some means of repaying the fund - it will be to the benefit of one and all and will be appreciated.

---

### Upper Evac Box

---

I have talked about this before. It now exists. A steel box

"Spring was one weekend in early June and summer was in August. September, at the time of writing has given us a day, but now is more like October."

-P.B.E.

very much like the one at the Lookout, except it is green and above ground, in a small clump of trees at the upper PG launch. It contains the basics of spine board, basket stretcher, straps, blankets, first aid kit, and medical oxygen. More items may be added over time. A cell phone with large gel cell battery is in place during mid-season. It was flown up by Alpine Helicopters during the XC meet week - this was witnessed by quite a crowd at the Lookout.

Alpine Helicopters donated the time for this work. They looked at it as a combination of community project and search & rescue project.

Many thanks are due to Alpine and the two resident pilots, Don McTighe and Dave Morgan. Thanks are also due to two Golden PGs, Troy Vandenbilche and Jerry Delyea, who actually built the box and dealt with its installation, and to Vanderbilt Auto Body for letting the boys fabricate the box in the shop.

Other costs with this project - equipment and the box itself - were payed for from the Willi fund. There is a lock on the box - same as the one on the Lookout box. Your key fits both.

---

### Willi's Peak

---

As a longer term project, this is going quite well. I got a very useful response to my 'Expres-

sion of Interest' from Geographical Names BC, with some very direct instructions as to what I should obtain to include with the full submission. Some items I know we have support for, while some might be a little more challenging.

In the mean time, Roger Nelson of Map Town has produced maps with Willi's Peak marked right on it.

---

### The Nicholson LZ

---

Status is unchanged - as good as ever.

---

### The Monument

---

It is a large boulder, silica - very hard - from the 8 mile mine, about 2 refrigerator size, with a big flat face, the engraving to be mounted on the front face and a windsock pole attached behind. This boulder was physically hauled up and installed in place , September 14.

---

### The New Road

---

It is finished. The old road is no more up to the access road to the radio towers. The gunbarrel is history. My whole piece from the spring on "Trucks", prepared before I had heard anything about the new road, is now no longer relevant.

Don't get me wrong now - it is still a 3800 foot climb, and the last two kilometers are still unchanged - but it is in a different class. Speed is likely to be the biggest problem.

---

### Balance of the Old Road

---

As to the last 2 kilometers - it was regraded and the drainage reinstated yesterday. All told, the road has never been so good. The upper 2 kilometers to the upper parking lot are for another day. I inspected it yesterday, and it will need some attention before too much longer. Yes, yesterday was a busy day.

There will be bills from the operations, but there is a certain degree of flexibility built into the arrangements.

---

### Ramp

---

There has been a suggestion to extend the most southerly leaf of the front ramp to meet the ground to the east (left as you look down).

The concept is to eliminate what is sometimes dead space and a stalled left wing on launching there, while the right wing is flying and lifting. It makes sense to me, and the person who worked on the ramp extension before is receptive to taking on this little project. This may happen after the road is done, if the weather is still cooperative. If not, then it goes to next year.

---

### What now?

---

Some of my friends are going to Arizona for a trip - sounds like a good plan. Much as I love skiing, it never seems time for winter to begin.

# Classifieds

**Glider for sale:** Wills Wing Sport (Euro) 167sq.ft. Immaculate condition. Always stored indoors. Well looked after. An excellent recreational class glider. Perfect upgrade glider for novice pilots. Comes complete with Owner's Manual, Batten Diagram and spare parts kit. Price: \$1800 (CAN)

Contact: Gary Ticknor email: [gticknor@golden.net](mailto:gticknor@golden.net) or call (519) 742-9351.

**Moyes CSX 153** topless hanglider, new in May '99, \$5800.

- 14:1 glide at 50km/h
- 10:1 glide at 80km/h
- 130km/h top speed

**Moyes Contour** competition harness, 1 season, \$800.

- light for a framed harness at about 10 pounds
- all pockets are internalized
- single main riser with single adjustable shoulder line
- slider to allow easy landings
- shoulder area well shaped and sealed for low drag and warmth

**Moyes Fast aluminum aerofoil speedbar** with fittings, \$250.

Various Moyes parts, inquire.

Brett Hazlett  
[suja@infinet.net](mailto:suja@infinet.net)  
(604) 980 0661

Check out the products section of the Moyes web page:

<http://www.moyes.com.au/>

**Glider for sale:** 134 UP Gemini. 50 hrs.

- Good for beginner to intermediate pilot.
- Hook in weight 95-165 lbs.
- Mylar leading edge and half batten at the tip.
- Purple, red and white.
- Easy to launch and land.
- Will allow advancement to cross country flying.
- Newer wires, ready to fly.
- \$600.00 including spare downtube.
- Recently inspected and test flown.
- Contact Karen Keller 403-293-4008  
[skyward@cadvision.com](mailto:skyward@cadvision.com)

---

## Vehicle Basic First Aid Kit

---

Price \$35.00.

BCHPA Fundraiser.

As the BCHPA exits from the BC Government Feeding Trough, other ways must be found to raise funds to support our programs like the Cloudstreet, Site Development...

This is an excellent WCB "Basic" First Aid Kit: covers cuts and scrapes right up to amputations... with a few extra's Thrown in!

### Contents:

Soft Pack Compartmentalized Carrying case  
Hand Cleaning Towlettes  
BZK Towlettes (for bacterial / wound cleaning)  
Band-aids  
Sterile Gauze  
Pressure Dressings (c/w crepe tails)  
20 cm X 25 cm Abdominal Pads: Used for fracture padding, abdominal wounds  
Tensor Bandage  
Triangulars: There are whole courses on how to use these – from supporting Broken Arms to using them to apply pressure on a badly bleeding wound.  
Q Tips  
Bandage Scissors  
Tweezer  
1" Adhesive Tape  
Latex Surgical Gloves  
Ice Pack  
Emergency Whistle (Courtesy Scott Plastics Victoria BC: Maker of Scotty Down Riggers!)

Butterfly Closures - used like bush sutures

TPR Charts: a Step by Step Checklist of a head to toe examination. - Fill this out and it helps the Paramedics determine if the patients condition is improving, stable or deteriorating.

\*Note: Many extra items can be ordered:

1. The Kit Does Not include a Pocket Mask as you MUST be trained in its use.
  2. Universal Scissors: cuts harnesses, straps, pennies: like it was butter (- also the greatest thing since sliced bread for cutting chicken!) I wish to thank and that it be noted that my employer has a long history helping sporting associations, and has sold these kits to the BCHPA at a tremendous price for our fundraiser, so that we, the BCHPA, can be competitive with your local Safety Supplier's National prices!
- There are thousands of additional First Aid and Safety Items which can be ordered from them.

Contact: Columbia Fire & Safety Ltd  
Email: [safety@columbia-safety.bc.ca](mailto:safety@columbia-safety.bc.ca)  
768 Spruce Ave. Victoria B.C. Canada V8T 5A5  
Ph: 1-250-386-6773 Fax: 1-250-386-3941 1-800-661-5090  
<http://www.columbia-safety.bc.ca/>

---

## ATLAS "FIT" Gloves:

---

Price: \$10.00 per pair.

BCHPA Fundraiser.

Sizes Small through XL

Note: Small is Very Small, XL is really XL.

ATLAS Gloves feature KEVLAR thread (used in the Meat Cutting Industry for Cut Protection.) In addition, the Palms, Fingers and finger tips are covered with a heavy coating of Blue Nitril – also extremely good cut protection. FYI Nitril also gives excellent Chemical Protection

These gloves were provided to the BCHPA, at cost, by Briteland Distributors in Vernon 1-800-663-5416 (for your Gardening and Pet Needs.)

Recommended for Hang Gliding.

Grips Down Tubes like they are glued on. Provides excellent cut, scrape, wind and cold protection. I've needed my Bar mitts only once: at 10,000' since I started flying with these.

*Not Recommended for Paragliding.* (Nitril coating makes it too difficult to release toggles.)

### *Either of these fundraising kits may be obtained from:*

Rick Hunt: BCHPA President.  
Peachland Cell: 250-470-8674  
Mark Dowsett: WCSC President  
N. Vancouver Cell: 604-618-4020  
Jim Reich: Fly BC Airsports  
Coquitlam Ph / Fax: 604-469-8429  
Randy Pankew, Mark Tulloch  
Aerial Adventures Hang Gliding Ltd  
Langley Ph / Fax (604) 888-1988  
Claude Fiset: Parawest Paragliding  
Whistler Cell: 604-938-3637  
Wayne Bertrand: Arial Sensations  
Kelowna Cell: 250-470-8359 Fax: 250-765-8200  
or Order from me direct: Accident Review & Safety Committee Chairman  
Fred T L Wilson  
Email: [fwilson@junction.net](mailto:fwilson@junction.net)  
7604 Kidston Rd. Vernon B.C. V1B 1S2  
Ph: 1-250-545-2004 Cell: 1-250-881-5551

# Muller Hang Gliding & Paragliding Ltd. Cochrane, AB

For all your Hang Gliding & Paragliding needs.



## The Allegra

*The Allegra has exceptional performance and exciting handling but retains its easy character with the forgiveness of a beginner glider on the ground and in the air.*

*Relax, enjoy the flight and listen to the music of the wind.*

Canadian Distributors for:

**Apco Paragliding Equipment  
Brauniger Instruments**

Dealers for:

**Wills Wing Hang Gliders  
Ball Graphic Comp**

**We have a large selection of New and Used Hang Gliding & Paragliding Equipment.**

**Send in your 1999 XC flights - check the listings on our home page**

## Apco Annual Sale

The Annual Apco Sale will start October 15, 1999.

There will be a 10% discount on all gliders ordered between October 15 and December 15 with \$1000.00 deposit. Delivery will be at the end of February, 2000.

10% discount will apply on all Apco products purchased before December 15, 1999.

Contact us or your local Apco Dealer for details.

### *New!*

Apco Airbag Harnesses

featuring:

*double airhole & 'forget-me-not leg/chest strap'*

"Security In Flight" SIV Video

USHGA 2000 Hang Gliding Calendar

Wills Wing Drogue Chutes

Charley Insider Helmets

Brauniger Paragliding Pockets -new 'pouch-type'

Brauniger Instrument Protective Covers

## Wills Wing Ultrasport



**Flying was never this easy!**

ph/fax (403) 932-6760

email: [fly@muller-hang-paragliding.com](mailto:fly@muller-hang-paragliding.com)

visit our website on the internet:

<http://www.muller-hang-paraglide.com>