

TOWLINE

December 2009 & January 2010



Pix by H. Gehlhaar

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Chairman

Stephen Northcraft 425-235-0231

Vice-Chairman

Jim Simmons 425-472-4722

Secretary

Mike Newgard 425-313-9754

Treasurer

Chris Gunther 425-788-4001

Directors

Nelson Funston 206-232-9416

Chris Gunther 425-788-4001

Heinz Gehlhaar 206-932-5428

Bruce Bulloch 206-935-5927

SGC/Ephrata Homepage

www.seattleglidercouncil.org

Webmaster: Jim McNeil

SGC Clubhouse

Ephrata Municipal Airport

30 Airport St NE,

Building 625

Ephrata WA 98823

509-754-3852

Soaring Society of America

P.O. Box E

Hobbs, New Mexico 88241

505-392-1177

www.ssa.org

SSA Region 8 Director

Steve Northcraft 425-235-0231

Idaho SSA Governor

Tom Dixon 208-376-6718

Montana SSA Governor

Steve Ard 406-388-6887

Oregon SSA Governor

Stew Tittle 503-746-7032

Washington SSA Governor

Bruce Bulloch 206-935-5927

State Record Keeper

Bruce Bulloch 206-935-5927

Region 8 Clubs & Associations

Cascade Soaring

Wenatchee, WA

Arnie Clarke 509-884-2494

www.nwinternet.com/~blanikam/css

Columbia Basin Soaring Assoc.

Tri-Cities WA

Tom Seim 509-627-5532

www.tcfm.org/cbsa

Evergreen Soaring

Arlington, WA

#165 6947 Coal Creek Pkwy Newcastle, WA

Hotline 425-238-6617

Fred Hermanspann 206-288-3951

www.evergreensoaring.com

High Desert Soaring

Bend, OR

John Bentley 541-330-3905

Puget Sound Soaring Assoc.

Enumclaw, WA

Operations 206-660-0019

Stefan Perrin 253-927-9183

www.pugetsoundsoaring.org

Silverstar Soaring Association

Kelowna, BC

Hans Kruiswyk 250-763-1788

www.members.home.net/soar

Spokane Soaring Society

Spokane, WA

Dale Walker 509-466-0206

www.spokanesoaring.org

Vancouver Soaring Association

Vancouver, BC

James Swank 604-590-6954

Clubhouse Voicemail: 604-869-7211

www.vsa.ca

Willamette Valley Soaring Club

Portland, OR

Information 503-647-0913

www.wvsc.org

Commercial Operations

Blanik America, Inc.

Wenatchee, WA

Vitek Siroky 509-884-8305

Cascade Soaring McMinnville, OR

Joe Deem 503-472-8805

Towplane Lewiston, ID

Dave Dorion 509-243-9919

SGC one-year membership renewal (January-December) US \$35.
(SGC Membership is required for all tows behind an SGC towplane.)
SGC Family Membership (for 14 and older) US\$10 each.
Tows (at Ephrata): \$23 for first 1500' (minimum fee) + \$1 per 100' above 1500'
Tows (airport other than EPH): \$25 for first 1500' (Min Fee) + \$1.10 per 100' above 1500'
Aero Retrieve or Glider Ferry: \$100 / tach hour
Ephrata Pilot Use Fee: \$66 for the season or \$11 per week (7 days)
(Note: maximum limit if pilot fee paid by the week is \$66)
Trailer Parking: \$175 per season, or \$27 per week (7 days)
RV Parking: \$350 per season (incl. tax), or \$60/ week (incl. tax) (7 days)

Weather Information:

NWS Spokane 509-353-2367

NWS Seattle 206-526-6087

FAA Weather 800-992-7433

Highway Report 206-368-4499

The SGC elects a new board for 2010

The annual election of the Chairman and Director Positions were held in November and December. The call for nomination of candidates produced a strong field of 12 candidates and the note that Steve Northcraft, for work-related reasons, would not be able to run for the Chairman position.

It says something about the high quality of our slate of candidates that this year's election was such a tight race. The race was so close that the Nyberg/Bulloch/Gehlhaar Election committee had to count the ballot-responses several times (of course, that may also have had something to do with the fact that the ballots were counted at Cupcake Royale and we were in no hurry to leave; See Pix).

As you may remember from your SGC ballot, our 2010 candidates were: Bruce Bulloch. Kevin Finke. Heinz Gehlhaar, John Gilbert, Chris Gunther, Fred Hermanspann, Tom Kreyche, Jim McNeil, Mike Newgard, Jim Simmons, Noel Wade, and Bob Wallach.



Our new board of directors for 2010 are: Mike Newgard, Chairman, Jim Simmons, Director, Fred Hermanspann, Director, Chris Gunther, Director, Heinz Gehlhaar, Director, Bruce Bulloch, Director.

All of us at the Seattle Glider Council want to thank outgoing Chairman Steve Northcraft , and Director Nelson Funston, for their long and diligent service to the club.

Leadership in the SGC has much more on its plate than just keeping the showers caulked at Ephrata. It seems our sport is constantly facing challenges to its continued existence and these people, the board members as well as the candidates, are the ones who volunteer countless hours of their time to make sure the rest of us can enjoy ourselves in the sky. They all deserve a vote of thanks.

It has been particularly gratifying to see a new generation of leaders emerge in the form of Kevin Finke and Noel Wade. Both of them have already made their mark on the northwest soaring community. We hope that other pilots will follow their example in bringing new ideas and fresh passion into the leadership of our sport.

Armchair Soaring

or Enjoying the OLC Show

by Fred Hermanspann

While most local sailplanes have been tucked away for the winter and most local XC pilots are counting the days to the beginning of the 2010 soaring season, another fascinating story about modern XC soaring is unfolding in the Southern hemisphere. Thanks to the almost universal acceptance of the OLC one can follow XC soaring around the world on a daily basis and the current developments in the far South make for interesting reading. The 2009 OLC year ended on Oct. 12 and thus Oct. 13 was the nominal beginning of the 2010

OLC year. While serious XC soaring in the Northern hemisphere has pretty much stopped for this year, the Southern hemisphere season is just getting into full swing.

For some years now dedicated XC pilots (with the necessary discretionary income) from Europe have travelled to some choice locations in the South to enjoy a second annual soaring season. They used to join the local pilots in Australia and New Zealand, but for the last decade Southern Africa (mostly Namibia and the Kalahari desert) and South America

(mostly Argentina close to the Andes) have become the preferred destinations for long distance XC soaring enthusiasts. Namibia, South Africa and Australia seem to present the best conditions for thermal XC flying in the world, while New Zealand and Argentina offer the most impressive but also most demanding wave flying. In 1963 Al Parker accomplished the first ever 1000 km soaring flight and sometime later the FAI defined the 1000 km diploma. This 1000 km diploma has become a “must” for serious XC pilots of repute and it is an interesting exercise to look at who has reached this status mark and where.

So, using the 1000 km (1k) flights as an indicator of outstanding conditions (in addition to outstanding piloting skills), how has the Southern season shaped up so far? Aussie David Jensen did not wait too long and put in the first 1k flight on Oct. 18, flying from Darling Downs. This was an unusually early achievement and the next 1k flights came only about 4 weeks later – Nov. 14 in New Zealand, Nov. 16 in Namibia, and Nov. 21 in Argentina. Namibia, the former Southwest Africa, deserves some special mention. The fantastic thermal conditions in the Kalahari were discovered only some 20 years ago in Bitterwasser, a farm with a dry lake as a runway. Bitterwasser developed quickly as a soaring center for the Southern summer and is highly popular with European, particularly German, soaring pilots but has now competition from some other neighboring fields. This year the XC soaring activity in Namibia heated up quickly. On Nov. 20 there were 10 1k flights, on Nov. 30 there were 18, and on Dec. 30 the total was 30! By Dec. 15 there were 137 1K flights (almost half of them from Bitterwasser) and the longest flights went to over 1400 km – an amazing activity in such a short time.

Meanwhile, one continent away, a small group of wave specialists under the lead of the undisputed wavemaster Klaus Ohlmann started to do battle with the awesome Andes waves and were coming up with some awesome flights. There have been already several 2k flights with Klaus Ohlmann achieving 2831 km on Nov. 30, the second longest soaring flight ever! Under the right conditions wave flying will produce the greatest distances for Out and Return or yo-yo flights – flying from sunrise to sunset and never having to stop to gain altitude and

being able to sustain this high speed and high altitude flying for over 15 hours. This is only for a few exceptional pilots but it is fascinating to observe.

Flying triangles is more difficult for wave flying as it inevitably involves some upwind and downwind flying. This requires finding other lift sources besides the primary wave and there are only few areas where one can connect with other suitable wave systems (although Jim Payne is looking at this scenario with the Owens Valley wave). Several years ago Terry deLore and Steve Fossett managed to combine wave and thermal flying for a 1500 km FAI triangle flight, a feat that so far has not been achieved in pure thermal flying.

Another interesting development is the soaring activity in Chile, on the upwind side of the Andes (based on the prevailing westerly winds) A place named Munivitacura in the foothills of the Andes has become a very active XC soaring base and in early December the first two 1k flights were posted from here. Looking at the flight traces it is pretty clear that these flights were based on ridge flying, still a viable method for long distance flying.

Australia and New Zealand have seen so far only a few 1k flights as registered in the OLC but apparently not everybody there has yet subscribed to the OLC.

Based on the results so far, Klaus Ohlmann is leading the field for the OLC Classic (based on 6 best flights) and also for the OLC Speed category while Alexander Mueller is in the lead for the OLC FAI Triangle category. And both seem to be unbeatable. So, as odd as it may sound, the 2010 OLC champions appear to have been determined already by Dec.15 of 2009! This must be somewhat frustrating for “Northern “ pilots who are still several months away from the beginning of their XC season. Maybe the OLC champions should be determined separately for the Northern and Southern hemispheres...

So are we going to see 1000 km flights in the Northwest? And how long has it been since Paul Bikle flew almost 900 km from Idaho way into the far North with a low performance Prue Standard? Maybe this is a challenge for our better pilots with their hot ships to set some new standards. The 18m Nationals earlier this year showed what kind of XC

speeds these modern sailplanes can achieve in the Columbia basin. If one could maintain such high

speeds over longer time (like 70 mph over 9 hours) such flights may become reality.

2010 National Event/Contest Dates

Date(s)	Event	Location
1/28/2010 - 1/30/2010	SSA Convention	Little Rock, AR
2/20/2010	2010 Soaring Safety Seminar	Lakeland, FL
3/7/2010 - 3/13/2010	Seniors Championship	Clermont, FL
3/30/2010 - 4/3/2010	Minden Wave Camp	Minden NV
4/19/2010 - 4/24/2010	Region 5 North	Perry, SC
5/10/2010 - 5/15/2010	Region 9 South	Tucson, AZ
5/16/2010 - 5/22/2010	Region 2 - Mifflin County Airport	Reedsville, PA 17084
5/24/2010 - 5/29/2010	Region 10 North	Cherry Valley, AR
5/29/2010 - 5/31/2010	3rd Annual Memorial Day Weekend Contest	Hampshire, IL
6/7/2010 - 6/12/2010	Region V South	Cordele, GA
6/15/2010 - 6/24/2010	18-Meter Nationals	Waynesville, OH
6/15/2010 - 6/24/2010	Sports Class Nationals	Parowan, UT
6/29/2010 - 7/8/2010	Open/Standard Class Nationals	Hobbs, NM
7/5/2010	Truckee Airport Gliding Air Races	Truckee, CA
7/19/2010 - 7/24/2010	Region 9 North	Logan, Utah
7/19/2010 - 7/23/2010	WSPA Annual Women's Soaring Seminar	Reno, NV
8/3/2010 - 8/12/2010	15 Meter Nationals	Uvalde, TX
9/5/2010	Truckee Airport Gliding Air Races	Truckee, CA

Women Soaring Pilots Association (WSPA)

The purpose of the Women Soaring Pilots Association (WSPA) is to promote all aspects of soaring for women glider pilots. The WSPA was founded in 1986 in Tucson, AZ. Current membership exceeds 200 pilots including international pilots. The highlight of each year is the Annual Women's Soaring Seminar where members from all over the country meet to encourage and support each other and to soar.

Here is a report of last year's first international seminar hosted by the Slovenian Women Pilots Association at the Alpine Flying Centre in Lesce, Slovenia.

The 2009 WSPA Women Soaring Seminar

By Lucy Anne McKosky



Photo by Mary Rust

36 of the 48 seminar participants

Imagine soaring high over mountain ridges, a hawk wheeling on your wingtip, the Alps silhouetted in the distance. Imagine an emerald lake, with a fairytale castle perched high above and a mystical tower on a tiny island. Imagine evenings under a cheery tent, an ample buffet spread with delicious local dishes, wine and good spirits in abundance. Imagine warm and welcoming soaring sisters, going out of their way to make sure we have everything to make our stay complete. Imagine all this – and you'll have some idea of the magical experience that was our first international seminar hosted by the Slovenian Women Pilots Association at the Alpine Flying Centre in Lesce, Slovenia.

After two years of intense preparations, everything came together beautifully. Irena Gornik, Nataša Marzidovšek, and Dani Volčanšek Černe headed the organizing team, assisted by Jasna

Jerman, Boža Martinčič, Marjeta Rigač, Vesna Stergar, and other members of the Slovenian Women Pilots Association, as well as many volunteers from the Aeroclub ALC Lesce.

By Friday evening, July 17, more than forty WSPA members had gathered, with several more to arrive in the following days. Twenty made the trip from the U.S. Saturday morning dawned rainy and overcast. After a briefing on airspace regulations and local flying procedures, the weather had not improved, - but not to worry! A bus arrived and whisked us off to the mammoth Postojna Cave, one of the natural wonders of Slovenia. We returned in the evening for dinner at the airfield and high hopes for the next day.

Sunday morning, we were greeted by blue skies and the kind of white, puffy clouds soaring pilots love to see. After an interesting lecture on Slovenian

aviation pioneers by Dr. Branko Brodnik, Chief Medical Officer of the Slovenian Air Authority, we eagerly swarmed onto the field to begin our flying adventures. Dani and Irena performed scheduling wonders, providing opportunities for everyone who wanted to fly. In the evening, we shared stories of awesome flights over dinner under the tent.

Monday morning we met Andrej Kolar, the developer of the *SeeYou* flight analysis software, who discussed his experiences developing and using the software. Later, several participants had the opportunity to fly with him, as he is an instructor at the club. After an afternoon of flying, we traveled to the nearby town of Radovljica for a banquet at Gostilna Lectar, an inn with its own living history museum – a gingerbread bakery. Each participant received a personalized gingerbread heart to commemorate the event. As usual, a number of awards were presented at the banquet. The Geusen family swept the field, with Anna Laura (age 18) receiving the Lindbergh Award for best cross-country flight and Nora (age 14) winning the limerick contest.

To make the evening even more festive, the organizers had gathered a host of prizes, from gift bags of lotions to plane tickets, and many participants went home winners.

Tuesday and Wednesday followed similar patterns. On Tuesday, we visited a plant that produces composite parts for sailplanes and ultralight aircraft and a shop that repairs and rebuilds sailplanes. Margherita Acquaderni stopped by on her way to the Women's World Championships in Hungary, and Gill van den Broek spent two days with us, regaling us with tales of women soaring pioneers and past women's contests.

Five days flew by, and the seminar was over too soon. We parted company with cameras full of pictures, heads full of memories, and hearts full of gratitude for the hospitality of our Slovenian hosts. Our farewell wish to our European sisters – "See you in Reno!" became a prayer that the bonds we have forged will remain strong and that we will continue to share soaring adventures as women of the sky.

Following the seminar a sizeable group of Slovenian, American and German pilots went to the Wasserkuppe to experience the thrill of the pioneer glider pilots.

German soaring was born at the Wasserkuppe, the highest point in the Rhoen region of north central Germany. Here aviation pioneers launched their gliders from the mountaintop and discovered that they could use rising air currents to climb higher into the sky. Now, it is the home of the Sailplane and Modellflug Museum and the Oldtimer Segelflugclub, as well as a modern glider operation.

Readers of *Hangar Soaring* may remember the account of the Geusen family's adventures with bungee launches of primary gliders at the Wasserkuppe, which appeared a couple of years ago.

Sylvia Geusen offered to set up a similar trip for seminar participants, and several WSPA's leaped at the opportunity. Sylvia arranged with the Oldtimer Segelflug Club to do bungee launches with their "Schulgleiter" primary trainer on the Friday and Saturday following the seminar.

The day after the seminar, a caravan of Slovenians and Americans left Lesce and made its way north to the Wasserkuppe. We arrived late in the evening to a warm welcome by members of the Oldtimer Segelflug Club and settled into our bunks in the youth hostel. We awoke Friday morning to wind and rain - poor weather for bungee launches, but fine for our visit to the Alexander Schleicher factory. Here we learned about all phases of high-tech sailplane construction and saw the intimate details of some of our favorite sailplanes, like the ASK-21 and the ASW-27.

The weather did not improve in the afternoon, so after a delicious lunch with fixings provided by Sylvia, we visited the Sailplane Museum. Their excellent collection of gliders and models shows the entire history of European soaring, from replicas of Otto Lilienthal's hang gliders to the development of modern composite sailplanes, including many early models never seen in the U.S. When the rain stopped, we explored the mountain paths, and in the evening, we feasted on an outdoor barbecue at the youth hostel.

Saturday morning was still very windy, so we waited anxiously as our host, Wiel Zillen, repeatedly checked the weather briefings to see if conditions would permit any flights. By afternoon, he judged the situation safe enough to pull out the glider, so it was loaded onto its trailer, hitched to the tractor, and pulled to the hillside launch area. The bungee cords

were laid out, and Wiel instructed the “rubber dogs” on the proper launch procedure. The club instructor took his seat as the first pilot, and we took our positions and ran with the ropes, following Wiel’s commands. When the people on the tail cord let go, the glider lifted off, flew for about fifteen seconds, and settled back down in the grass. The flight was successful, but the instructor felt that the wind conditions (about 20 kt!) were too severe for novice pilots, so we loaded the glider back on its trailer, coiled up the bungee cords, and hauled everything back to the hangar. At least we had witnessed a primary glider bungee launch.

Seminar participants who made the trip to the Wasserkuppe included the Geusen family (Sylvia, Heribert, Anna Laura, Holger, and Nora), Neita and Mark Montague, Kathy and George Taylor, Dani Cerne, Irena Gornik, Ana Klanšek, Margaret Roy, Lucy Anne McKosky, Sharon Smith, and Monique Weil. In addition, WSPA member Petra Boon and her husband came from Holland to join us, and two

families from the Geusens’ club in Germany, took part, along with several members of the club from ALC Lesce.

Frauke and Wolf Elber came part of Saturday and spent their time in the museum together with Peter Selinger and his wife Fritzi as museum’s guides.

We learned that the *Oldtimer Segelflugclub* schedules two weeks of bungee launches each summer, which are open to any interested pilots. If you would like to try bungee launches, you can find next year’s dates on their website, www.osc-wasserkuppe.de, listed on the calendar as “Schulgleiterfliegen 2010”.

The 2009 winning limerick by Nora Geusen

A young girl in a Blanik
Made the towpilot get in panic
Loops and rolls
She performed while in tow
Hopefully a future expert in aerobatic

The 2010 WSPA Women Soaring Seminar

by Neita Montague, President, Women Soaring Pilots Association

2010 will find Air Sailing, Reno, Nevada, again hosting the Women Soaring Seminar July 17-23.

The first Women Soaring Seminar was held in Tehachapi in 1979. In 1983 the seminar was a Women's Wave Camp at Ephrata, WA.

In 1985 a group of women sat in a trailer at Air Sailing and pulled together an organization to support and mentor women and to continue these special seminars. Men are welcome to join as members and we usually have 8 to 10 attend each year. Join the WSPA on www.womensoaring.org to get the most updated information and our "Hangar Soaring" newsletter starting in January.

The seminar officially begins on the 19th, but events are planned the two days before to help you acclimatize to our high desert soaring. We suggest

you plan on arriving on Friday the 16th so you won't miss anything.

The seminar ends on Friday the 23rd with a celebration and an awards banquet, but we encourage you to fly the next two days for your best Badge or Record flights. Members of Air Sailing are available to help you with advice and recorders.

Membership in the WSPA is required for the seminar and you can either pay extra for the registration as a non-member or you can sign up now and receive our "Hangar Soaring" which will give you the most up-to-date details. Proceeds of the seminar support our scholarships and our organization.

For further information contact neitalibelle@aol.com

SGC Awards Banquet

by Heinz. Gehlhaar

What can I say about the Annual Awards Dinner? Well I guess, the same as always, it was absolutely outstanding. There was a nice crowd, the food was great, with Salmon and other entrées, and there was an open bar for those who wanted it. It started off with the social hour with everyone mixing and visiting friends we sometimes don't see very often. And the facility was is equally excellent with the occasional yacht cruising by the big picture windows. A great time was had by all.

The Annual Dinner gives the Seattle Glider Council the opportunity to reward our members for exemplary performance or service. This year's awardees were:

- The Arnold J. Carson Memorial Award for the longest flight in the Columbia Basin went to Len Edvinson, for 615.97 km done from Ephrata on 6/20/09.
- The *Columbia Basin Soaring Association Award* for the second longest flight in the Columbia Basin was earned by Helmut Gebenus for 613.67 km also on 6/20/09 from Ephrata.
- The *Joe Robertson Memorial Altitude Award* was earned by Eric Greenwell for achieving 5404 m or 17,730 feet of altitude on 4/5/2009.
- The *Cloyd Artmann Award for Pioneering or Exceptional Effort* went to Keith Purves for his Out & Return flight of 562.19 km on 5/9/09 from Ephrata to the Blue Mountains.
- The *Tow Pilot of the Year Award* was earned by Bill Birney for doing 129 tows.
- The *Unsung Hero Award* was presented to Roy Clark for making us many scrumptious dinners at the Ephrata clubhouse to benefit the SGCSF.
- The *SGC Safety Award* was presented to Neal Karman for silently working Soaring/Airport issues for the Soaring Community and for the use of his fine meeting facilities.
- The *SGC Honor Award* was Presented to Ron Bellamy for being our Safety advisor and for CD for several contest at EPH.
- The *Roger Frank Memorial 300K Speed Trophy* was a awarded to Stuart Larimore for his McKay flight on 8/2/2009 at 75.75MPH.
- The *Student Achievement Award* was earned by Hans Sendelbach.
- The *Knight of the Open Field Award* given in recognition of a pilot's first off-field landing was shared by Noel Wade & Hans Sendelbach.
- The *Clodbuster Award*, given in recognition of an outlanding on a local flight (pilot really intended to return to point of origin) was earned by Noel Wade.
- Certificates of Appreciation for service to the Organization were given to
 - Chris Gunther, for his work as SGC Treasurer.
 - Rita Edris, for her work as SGCSF Treasurer.
 - Mark Nyberg, for his effort to put on the X/C Seminars.
 - Heinz Gehlhaar, for organizing Soaring Expo & being the DG-1000 Mgr.
 - Bruce Bulloch, for the foresight in designing, selling, and then running the Ephrata *Dust-Up* Contest.
 - Steve Northcraft, for running the 18 Meter Nationals.
 - Jan Funston, for crafting Dinners at various SGC functions.
 - Becky Newgard, for crafting Dinners at various SGC functions.
 - Marlyn Householder, for crafting Dinners at various SGC functions.
 - Judy Woodmansee, for crafting Dinners at various SGC functions.
- *Cross Cascades Flight Certificate*: This year there were 4 Cascade crossings who earned Certificates:
 - Ron Clark, for his flight from AWO to Tonasket
 - Fred Hermanspann & Wilfred Feifel, for their flight from AWO to EPH and then a day later, their return flight EPH to AWO.
 - Dan Housler, for his flight from AWO to EPH.
- A *Special Notice Certificate* was awarded to
 - Len Edvinson, for having made 7 Cross-country flights, each over 500 km.
 - Rita Edris, for having made 15 Cross-country flights, each over 300 km.

• **SCG Awards Banquet**



Safety Ideas

by Heinz Gehlhaar

I am always looking for items relating to soaring safety. If you have any inputs please send them!

Here is something I found from Gliding and Motorgliding International at www.glidingmagazine.com/

Aerotow 'Upset-Accidents.

From Chris Rollings, Former Chief Instructor, Booker Gliding Club, UK

Recent discussions concerning the fatal aerotowing accident at the US Air Force Academy last year, made me think that it was worth-while giving wider publicity to the information which I provided to the investigators of that accident, regarding the experiments we conducted some years back into the nature of these accidents.

Whilst I was Chief Instructor at Booker Gliding Club, we conducted two series of tests on the phenomenon variously referred to as "Kiting", "Winch Launching behind the Tow-Plane" and "Sling-Shot Accident", one in 1978 and one in 1982; my memory of them is quite vivid. Airplanes used were a Beagle Terrier (a side by side, two place, high wing, tail-dragger), fitted with an Ottfur Glider hook for towing (very similar to the Tost hook, dissimilar to the Schweitzer hook) with a 160 hp Lycoming engine for the first series of tests, and for the second series a PA18-180 with a Schweitzer hook. Gliders used were a Schleicher Ka 8b and ASK 13. Tow rope initially used was a heavy (4000 lb) rope with a thinner rope weak link at the glider end (nominally 900 lb, but a well worn specimen could break at as little as 200–300 lbs—laboratory tests, not opinion), the second series of test used the same heavy duty rope with "Mity" links at each end, 1100 lbs at the Tow-Plane end and 900 lbs at the Glider end—these links use metal shear pins, one under load and a second unloaded, which takes over if the first one fails. This eliminates failure due to fatigue and means that the links always fail at close to their nominal load even after some time in service—again laboratory tested, not just subjective opinion. Rope length was around 180 feet in all cases.

I was the Glider Pilot on all the tests, Tow-Plane Pilot was Verdun Luck (then my deputy Chief Instructor) for the first series of tests and Brian

Spreckley (then Manager of Booker GC) for the second. The object of the tests was to try to reproduce the "Kiting" under controlled circumstances, with a view to developing a Tow-Plane release mechanism that would automatically release the glider if it got dangerously high above the Tow-Plane. All tests were conducted at about 4000 feet agl.

First test:

Terrier Tow-Plane and ASK 13 on nose-hook.

At about 4000 feet I took the glider progressively higher above the tow-plane, eventually reached about 100 feet above tow-plane (i.e. rope angle more than 45 degrees above horizontal). At about this point, the tow pilot, who had been using progressively more back stick, ran out of back stick and the Tow-Plane began to pitch nose down but not excessively violently. I released at that point. It took a very positive control input on my part to achieve the displacement, we both felt it was something unlikely to occur accidentally, even with an inexperienced glider pilot, and there was plenty of time for either party to release if it did occur.

Second test:

Terrier Tow-Plane and ASK 13 on C of G hook.

I pitched the glider about 25–30 degrees nose up—the weak link broke immediately! Tow pilot reported a sharp jerk, but no significant change to flight path.

Third test:

Terrier Tow-Plane, K 8b on C of G hook.

I pitched the glider about 25 degrees nose up. The glider continued to pitch up fairly rapidly (as at the start of a winch launch) and substantial forward movement of the stick only slightly slowed the rate of pitch. The glider achieved about 45 degrees nose up, speed increased rapidly from 55 knots to about 75 knots and the glider was pulled back towards level flight (again as at the top of a winch launch). I released at that point. The entire sequence of events

occupied a VERY short period of time (subsequently measured as 2 - 3 seconds). The Tow Pilot reported a marked deceleration and start of pitching down which he attempted to contain by moving the stick back, this was followed immediately by a very rapid pitch down accompanied by significant negative "G". The tow-plane finished up about 70 degrees nose down and took about 400 feet to recover to level flight. We both found the experience alarming, even undertaken deliberately at 4000 feet. Our conclusion was that the combination of the initial pitch down and the upward deflection of the elevator caused the horizontal stabilizer/elevator combination to stall and the abrupt removal of the down-force it provided caused the subsequent very rapid pitch-down and negative "G".

Our first conclusion was that, in the event of this sequence occurring accidentally as a result of an inadvertent pitch up by the glider pilot, there was effectively no chance that either the glider pilot or tow-pilot would recognise the problem and pull the release in the available time.

Attempts to produce a tow-plane hook that would release automatically were unsuccessful for reasons that became apparent later.

These tests were repeated a few years later with a PA18-180 as the tow-plane, Brian Spreckley flying it. The third test described above was repeated and photographed from a chase plane using a 35 mm motor drive camera on automatic (this took a frame every half second—video camcorders of small size were not readily available then). The photo sequence started with the glider in a slightly low normal tow position and starting to pitch up, the second frame has the glider about 30 degrees nose up and about 20 feet higher than previously in the third frame it is about 45 degrees nose up and has gained another 30 feet or so, the tow-plane is already starting to pitch down, in the fourth frame the glider is about 100 feet higher than its original position and the climb is starting to shallow, the tow-plane is about 50 degrees nose down, the final frame shows the tow-plane about 70 degrees nose down and the glider almost back in level flight, almost directly above it (that was about the point that I pulled the release).

Sufficiently alarmed by events, Brian Spreckley had been trying to pull the release in the tow-plane earlier and found that it would not

operate until my releasing at the glider end removed the tension from the rope. Subsequent tests on the ground showed that the Schweizer hook fitted to the tow-plane, whilst perfectly satisfactory under normal loads, was jammed solid by the frictional loads when subject to a pull of around 700 lbs with a slight upwards component—not something that a normal pre-flight check would reveal.

We solved that problem on our tow-planes by replacing the bolt that the hook latches onto with a small roller bearing. So far as I know, no one has tested the Schweizer hook as fitted to a glider, but I would not be surprised if it exhibited the same characteristics at high loads.

The photo sequence also showed that at no time was the glider at an angle greater than 30 degrees above the tow-plane's centre-line. However, of course once the glider has pitched up, considerable extra lift is generated by the wings and that extra lift provides extra load on the rope. With a large, heavy glider it is easy to exceed weak link breaking strains and with a lightweight machine the tension can easily rise to 700 lbs or so. With that much load on the rope, quite a small upward angle provides enough of a vertical component to produce the results described.

That of course is the reason that attempts to produce a hook that released if an certain angle was exceeded were unsuccessful. The quite small angle needed to trigger the "Kiting" when the glider is pitched significantly nose-up is not much greater than the amount of out of position commonly experienced in turbulent conditions. We did build an experimental hook and tried it, but, set to an angle that prevented "Kiting" it occasionally dumped an innocent glider in turbulence, and set to an angle that prevented that, it didn't prevent the "Kiting". What was needed was a hook that responded to the vertical component of the load, not the angle at which it was applied, and that problem we decided was beyond us (at least in a form robust and foolproof enough to be attached to the rear end of a tow-plane).

Our conclusions for preventing "Kiting" were:

Don't aerotow gliders, especially lightweight, low wing-loading gliders on C or G hooks intended for winch launching (I think the JAR 22 requirement for nose hooks to be fitted to new

gliders for aerotowing was at least in part a result of these tests). I didn't do any experiments with the 2-33 along those lines, so I'm not sure how to categorise its hook position nor could I predict how "well?" it would "Kite". If you feel tempted to experiment, bear in mind that you are effectively going to wind up doing a winch launch at way above the maximum winch launch speed, and most of the 2-33's around are very old and tired.

Don't use short ropes. The speed at which things happen varies directly with the length of the rope.

Don't let inexperienced pilots fly at anywhere near aft C of G.

Don't let inexperienced pilots fly solo in turbulent conditions.

Ephrata News

2010 Calendar



Happy New Year!

Think Sunshine and bubbly thermals. Ephrata will open on the Weekend of April 3rd/4th

Look at <http://www.seattleglidercouncil.org/> for an up-to-date schedule, and click on **2010 Calendar**. Also, if you have an update to the Calendar, or if you have some neat pictures, please send that to our webmaster Jim McNeil at jwm033@netscape.net.

SGC Schedule

●-January 4, 7:00PM, SGC General Membership Meeting - Museum of Flight

●-February 1, 7:00PM, SGC General Membership Meeting - Museum of Flight

●-February 13/14, Instructor Re-Validation Clinic, location TBD, contact Mark Nyberg, mcnyberg@tsi-net.com



●-March 1, 7:00PM, SGC General Membership Meeting - Museum of Flight

●-March 20/21, Soaring Expo, Museum of Flight

●-April 3/4, Start of Soaring Season at Ephrata

●-April 5, 7:00PM, SGC General Membership Meeting - Museum of Flight

●-May 3, 7:00PM, SGC General Membership Meeting - Museum of Flight

●-May 13-25 Aerobatic Box Open at EPH for Aerobatic Training Camp.

●-May 29-31 (tentative), Dust-Up (2) Soaring Contest at Ephrata

●-June 12 -20 Aerobatic Box Open at EPH for Aerobatic Training Camp.

●-June 27 - July 3 (tentative), Region 8 Soaring Contest at Ephrata

The new fuel tank at EPH will be owned and operated by the Port.

Have Merry Christmas
and a Happy New Year.

Heinz

Classifieds

GROB 109 Motorglider for Rent

Available for rent \$65 per hour, dry.

Instructors available.

Contact Chris Klix,
Pacific AeroSport LLC,
360-474-9394
Arlington WA.

See www.pacificaerosport.com for additional information and requirements.

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Fixed gear. Good condition.

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Gene Ogden
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nogo@comcast.net

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Dual NAV-COM's: KX155 & KX165

KT76 Transponder

PS Engineering Audio Panel

Artificial Horizon

Engine: Factory fresh overhaul,

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Propeller Reconditioned

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\$54,900 OBO

Contact Chris Klix,
Pacific AeroSport LLC,
360-474-9394
www.pacificaerosport.com

Wanted to Publish:

Wanted: great stories or cheap drivel to fill this newsletter. Call Heinz. (But don't call him nasty names.)

Standard Cirrus Co-Ownership

Co-ownership available in PY. Std. Cirrus, Standard class ship with water capabilities, cockpit for tall or large person up to 242 lbs.,

~35:1 glide ratio, gel in good shape, Volkslogger/GlideNavII glide computer, Schumann/Cambridge varios, more. Contact John Gilbert (soaring@blarg.net, 206-283-4638) for details.

Wanted to buy:

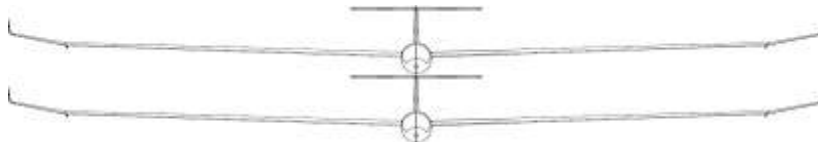
Full cover for my Grob 102 Astir CS.

Please call or email Steve Volk

Spokane WA
509-448-8263
psvolk@comcast.net

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Perfume



I want my Husband to pay more attention to me.
Do you have any perfume the smell like a glider?