

Shenandoah Valley Soaring

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Diamond Distance in Thermals – A 500 Kilometer Flight

By Jim Garrison

Club Notes

Recently named custodians for our fleet are:

Chic Randow for the Pawnee,

Randy Branch for the 2-33 (please note the nice, clear windows in the back seat, which are Randy's handiwork; new interior to follow),

Dave Miller for the Lark.



John Critz is among our new members. Apologies from the editor for not including him in last month's listing.



Last month's picnic social was a huge success, thanks to the abundance of food and the entertainment by the **Lonesome Thermal Boys**, a group that includes **Bud Branch, Walter Grooms** and **Dave Miller**. Much thanks to **Mike Moses** and **Eva Tashjian-Brown** for orchestrating the whole affair.



(Editor's note: Following is Jim Garrison's account of his Diamond Distance flight up and down the Shenandoah Valley July 14, 2001. Following this article is his first-person description of his very first cross-country flight in July 1987, written 14 years earlier. The two pieces are a study in the maturation of a cross-country glider pilot from silver to diamonds.)

Realizing that I had to fly much faster than I had on any of my previous badge attempts, my first attempt at the Diamond Distance flight was declared over a course which planned to use the Massanutten Ridge on a day with good NW winds to provide 100 miles of ridge running to increase the average speed.

The idea was to begin at Eagle's Nest Airport in Waynesboro, fly up the Shenandoah Valley to the Massanutten Ski area, run the ridge at high speed to Strasburg and back, climb off the ridge and finish the flight in thermals.

Funny how things work out. Eventually, this same course was used for the flight that was successful, but it was done entirely in thermals.

In retrospect, my first 500 km flight actually went pretty well. On a windy day in the fall, I did reach the ridge, and had a spectacular flight at 100 knots for 100 miles up and down the ridge before it all fell apart. At the south end of the ridge, I could not find a thermal to climb off the ridge. After about 30-50 minutes sawing back and forth, I eventually went for a cloud in the Valley south of Harrisonburg, found little lift and landed out at Shenandoah Valley Airport in a 20 knot cross wind. So began the quest for Diamond Distance.

In between there have been interesting ridge, wave and thermal flights on a number of different Diamond attempts. I have tried many courses from two or three different airports without success. Actually, I am glad I did not reach 500 km on that first try because every subsequent flight taught me a number of things. I would not have missed a single one of them.

However, the basic problem with this flight is illustrated by simple mathematics-- to fly 310 miles at a 60 mph takes over 5 hours; at 50 mph it takes over 6 hours and at 40 mph it takes nearly 8 hours.

In each of my earlier diamond attempts, one of two problems kept me from the goal. Either I flew too slowly and ran out of day, or I got low at some point in the flight, spent too much time getting back on course and then ran out of day. So, if I could not make the distance by flying at a 60 mph average speed, I needed a long day with good, consistent lift over a wide area.

The weather this summer has been unusual in that the jet stream has dipped south a couple of times and allowed cold fronts to reach into North Carolina. On Thursday July 12, it happened again and the leading edge of a very large dome of cold Canadian air passed over Virginia. The high was centered in the northern Midwest and slid in beside a nearly stationary low near upstate New York. The whole system provided a northwest flow of cold air over Pennsylvania and Virginia for 5 days. RAOB plots around the region, the ETA 40 model and other indicators suggested Thursday, July 12 thru the weekend of 14 and 15 might offer excellent soaring.

The only problem was a low that developed on the weakening front in North

Carolina. This low produced high clouds around Charlottesville for most of Thursday, but promised to move away on Friday. Chic Randow kindly agreed to tow on Friday the 13th and Randy Branch was happy to spend the day helping, so off we went early Friday morning. On the way to Eagle's Nest, the day looked like it would develop well, but in the end, the southern part of the course toward Glasgow stayed cloudy. While the lift looked terrific to the north, the leg to Glasgow would probably have been struggle. In the end, Randy and I put Alpha Echo back in the trailer and flew the Lark together for a while (it was Friday the 13th after all).

For once, Saturday actually looked better. The low in North Carolina was predicted to move SE and out to sea and the cold air was still coming in from the NW. The 24-hour loop from the ETA 40 model predicted that the thermal index would actually improve during the day on Saturday. Finally, a really good day and—it was on the weekend.

Another set of calls to Randy and Chic and we were ready for Saturday morning. As Randy I and started down the West side of the Blue Ridge on I-64 a little after 9 AM, small Cu's were forming on the ridges over the Allegheny Mountains and the sky looked clear and blue in all other quadrants. Randy and I arrived at Eagles Nest and assembled Alpha Echo,

Bev Orndorff arrived just a bit later and kindly agreed to be the Official Observer. After all the usual preparations, the Cu's arrived from the West. Oddly, there were few clouds over the Blue Ridge, but the center of the Valley looked good, so we were off at 10:45 AM.

A short tow to Fishersville where I released and notched the barograph. The intended course was to Strasburg, at the north end of the Massanutten Ridge (about 70 miles), then to Glasgow (about 110 miles), then to Thornton Gap near Luray (about 95 miles) and back to Eagles Nest (about 53 miles). Even though the wind on the ground was weak, I was still hoping that a NW flow might offer some ridge flying. All looked good to the north so off I went. The first thermal provided 4 kts to about 5000 MSL—a really good omen since it was still before 11 AM.

Even better, the next thermal provided 6 kts to about 5500, but I kept my cruising speed between 60-70 kts, as it was still early in the day. For the next 30 minutes or so, I worked north under clouds in the Valley while slowly edging closer to the Blue Ridge, which was starting to produce really good-looking clouds.

A good climb near the Merck plant south of Elkton and I headed west over the Valley toward the south end of the Massanutten Ridge. None of the clouds were strong, but I eased along at about 4500 MSL and soon found a 6 kt climb to 5500 MSL just south of the ski area. I turned to fly along the ridge and cruised north climbing easily above 5000 MSL a couple of times. As I neared New Market I spoke with Dave Brunner who was flying 081 near Strasburg. I was still hoping that the ridge might be working—I really wanted to dive onto the ridge and increase my average speed for the leg.

Dave thought the ridge might be working and promised a report in a few minutes. A few minutes later, I was up near Short Mountain and Dave said he thought he was in ridge lift. Good enough—I left 4500 MSL by increasing speed to 90-95 kts. All seemed well as I ran off the north end of Short Mountain headed for the lower, northern end of the ridge. The Massanutten produces powerful thermals around this gap and as the altimeter eased below 3500 MSL, I bumped into one

of those wonderful, strong ridge thermals that pegged the vario at over 10 kts. Wheee—the first good thermal of the day and I could not resist climbing.

During the climb, I talked to Dave Brunner again and he was less sure about the ridge lift and going to thermal mode. No matter, with strong thermals popping off the ridge, I held speed and flew on to Strasburg at 5000 MSL. Somewhere north of the fire tower, I crossed paths with Dave who was working a thermal a bit west of the ridgeline. By 12:30 PM I was taking my first turn point photos at the Southern Railroad Bridge over the north fork of the Shenandoah river.

Three photos (good thing – I was a bit rusty and the first two were not in the observation zone) and I am back over the ridge climbing in a strong thermal to 6500 MSL, the highest point of the flight so far. The first 70 miles are done at an average speed of 41 mph and better yet, the sky is looking very good to the south. I radio Dave, putting a "virtual" claim on the Boomerang Trophy (ahead of the expected fiberglass cloud from New Castle) and head south at 80 kts.

The lift is improving on the Blue Ridge and I fly back across the valley to the Blue Ridge itself somewhere around Luray. Flying down the Blue Ridge is spectacular, but uneventful. I try to keep the speed up to 80 kts and climb a couple of times to about 6500 MSL. As expected, the lift is strong at Elkton and soon the next big issue is getting across the "gap" near Waynesboro. The Blue Ridge gets low where I-64 crosses and then jumps about 10 miles to the West at Wintergreen. For some reason, it can be soft in this area and I take care not to get much below 5000 MSL.

It is about 2 PM as I arrive back in the Waynesboro area. I talk with a couple of SVS gliders and tell them all is well for now. Crossing the "gap" goes fine, 140 miles are covered and before long I am climbing in strong lift over the rock faces just east of Stuarts Draft. The lift is always good here and I reach 7000 MSL for the first time in the flight. I run down past Buena Vista toward Glasgow with long 15-minute glides and quick 6-8 kt climbs to 7000 MSL. Between 2 and 3 PM, the sky is still looking very good, pilots all over the area are excitedly telling each other about their exploits (always with a chirping vario in the background) and all seems very well with the world. A great day to be in the air.

I pass Buena Vista and catch a good thermal before going into Glasgow for the second turn 45 miles south of Waynesboro. Glasgow is one of my favorite turn points. The James River cuts through a large gap in the mountains here and the Shenandoah Valley narrows to provide a spectacular setting. To the south, the Peaks of Otter dominate the skyline, to the east you can see Lynchburg and to top it all off, two roads, Va. 130 and US 501 define the observation zone for the turn, making the photo pretty easy to shoot.

Oblivious to the scenery, I am staring at the ground, anxious to get the photo and head north. A touch of un-coordinated flight to get the wing in the correct attitude and I shoot three photos. I pick a cloud in the Valley to get back above 6000 MSL and soon I am on my way to Thornton Gap. It is 3 PM, 181 miles flown and I have averaged about 44 mph for the second leg. Better yet, the sky looks good to the north. I keep the speed to about 80 kts between thermals and rarely fall below 5000MSL.

In a little over 40 minutes I am back near Waynesboro. Just east of Stuarts Draft, I hit a 10 kt thermal that takes me to 8000 MSL. It is about 3:45 PM, I have been flying

5 hours and I am a bit tired. However, the strong thermal lifts my spirits right along with Alpha Echo. This is really fun!! I talk to Bruce Burkholder who is having a great time with the Lark over Wintergreen; we end up telling everyone on the East coast what a nice day it is.

Reality again—even though I have been in the air for roughly 5 hours, I still have 100 miles to go!! Fortunately, the Blue Ridge looks really strong and I head across the Waynesboro "gap" with no difficulty. Soon I am running under big fat clouds with strong thermals of 6-8 kts. I keep the speed at 80-85 kts, but the lift is good enough that I can stay between 5000-7000 MSL past Elkton and nearly to Luray. I talk on the radio with Juliet Kilo (out of New Castle) for the second time that day and he confirms that they have decided to head for Front Royal and are going for the Boomerang trophy. Juliet Kilo and another New Castle ship report being in the Shenandoah Valley and moving well. So much for my virtual claim on the trophy.

The Thornton Gap intersection is north of Luray and the strong lift ends well before the turn point where US 211 crosses Skyline Drive. It is nearly 5 PM, and I do not want to scratch here for long. I try a couple of clouds without gaining much altitude and keep heading for the turn point with the altimeter easing below 5000 MSL. All badge flights require a bit of drama but this one has been remarkably free of any troubles. So, assuming that it will all turn out OK, I stop looking for lift and push in to take the pictures.

All the while I am looking for a nearby cloud for a climb right after the photos and I am not really happy -- for the first time all day, I do not see a great cloud back along the course line. Nonetheless, I turn my concentration to shooting three good photos and quickly head south. I have logged about 273 miles and it is 5 PM. The average speed from Glasgow to Thornton Gap is 46 mph—overall, life is very good.

As I leave Thornton Gap, the altimeter slides under 5000 MSL for the first time in 3 hours and I slow to 50-55 kts to conserve a bit of altitude. A pond in the valley glows in the afternoon sun and shows a nice NW wind at the foot of the mountains. Maybe the Blue Ridge will provide a bit of ridge lift! Off to my left the Park Service lodge and cabins at Skyland hang out on the sharp cliff formed by the West face of the Blue Ridge—really spectacular and pretty, except that with my wings level my left wing is pointing right at them. I move toward the mountain in an attempt to use any ridge lift that might be there and tiptoe along at about 4300 MSL for a few minutes to the next cloud. Soon I am climbing at 4 kts to about 7000 MSL and the drama is over. About 5 minutes later, I hit another nice thermal and push on toward Elkton. A little north of Elkton, I can see the usual thermal from the rock faces southeast of town is working well and I increase speed to over 80 kts to reach it.

A quick climb to 7000 MSL about 25 miles from home and I am well above final glide. Ed Kilbourne's "One More Climb" begins playing in my mind, but I do not really need to climb again. I hesitate to talk about it out loud, but the flight is in the bag. I increase speed again and head for a cloud about 17 miles from home. The lift is 6-8 kts and I cannot resist spending a couple of minutes for a last climb to about 6500 MSL.

Now I am confident and I radio Randy and Bev that I will be home soon and run for the airport. I slowly increase speed

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to about 120 kts and soon cross the 24 end of the Eagles Nest runway at about 2500 AGL. All around me the clouds still look great and there is a small temptation to sample one or two. However, better sense prevails and I plan a pattern for 06 on the grass and touch down at about 6:05 PM. I can see Gordon Aylor off to the side of the runway taking pictures.

I roll to a stop about 300 feet from where I took off 7 hrs and 20 minutes ago and Randy meets me with the golf cart. Final distance, 327 miles with a 50 mph average for the 53-mile last leg. Surprisingly, I can get out of the plane and can even walk the wing back to the trailer.

We take closing pictures, Bev opens the barograph – the trace is good and it is all over. We turn off the barograph and carefully put it in the back seat of the car. By about 7:15 PM the plane is apart and in the trailer and Randy and I head for Charlottesville.