

On being Blown back, and flying as a small pilot

For a long time, I have been wanting to write about small pilots and the challenges we face over the average pilot. Most people including instructors don't really understand the challenges we face, how glider sizes affect us, nor the difficulties with flying the XS wings. After a decade of flying at Pine Mt in central Oregon, never getting blown back, it finally happened to me. I feel the motivation to know share my experience and my knowledge of being a very small pilot.

How could I get blown back, I know I am small and light, I know how to pick my days or wings. I just wrote an article about blow back, I warn every student and visitor about the potential of getting blown back at this Mt. I lecture other locals on not warning people about it. Yet it finally happened to me.

So, I will start with my story, and end with what a decade of flying as a tiny pilot has taught me.

I am 5'2, about 115 pounds, Average all up in flight weight is 72kg. I fly quite a few different wings depending on what kind of flying I am doing and the conditions.

- 1) C- 23m- Top of 83kg- my xc wing, permanent 8#'s of weight added to my pod, and 2 water ballasts to adjust weight for days conditions. The bigger glider allows me to fly faster.
- 2) C- 21m- Top of 75kg- my all-around wing, hike and fly wing, if I can have only 1 wing with me, my ridge or glassoff wing. I am weighted on it, can carry it up MT's, best penetration without ballast, but It is slower due its size, I often get passed by average flyers.
(this is the wing I got blown back on)
- 3) C- 18m- Mini/Mt Wing with speed bar. For stronger conditions along ridges, or when there are strong winds aloft and I do not want to sky out. I am nicely weighted on it, and it flies extremely fast, almost speed wing speeds near the ground.

We had gone up to the upper launch of the glass-off hill at Pine Mt. I had a tandem pilot and passenger, and a dear friend visiting for his first time. We arrived about 6pm, there were strong desert breaths coming in that were lasting a good 5-15min. I had brought both my 21m Artik and my 18m Apus with me. We deemed it was fine for the tandem using the smaller tandem wing. The visiting pilot was flying an 18m Air-G Acro wing, he also felt the conditions were fine. I assisted the tandem in launching, and watched my friend launch. I was not feeling it for myself even with the 18 at that time.

I sat back and decided I would just take pictures, hoping to see a good Acro show. By now there was 5 or 6 other pilots in the air. For a good 30min people were popcorn not big ups but up and then back down milking the terrain to stay aloft. The tandem was maintaining not really going high but maintaining nicely. The Air G was struggling to get up, barely gaining enough height to give us a show. A few people had found a pocket and were getting high. Eventually the strong breaths backed off for a good 15min, the Air-G had to top land the lower launch. Another 10min later a descent breath came in and the Air-G relaunched, it was a short-lived breath and he worked the ridge but ended up in the LZ. Others were starting to come down as well.

So, this lull had now lasted 20+min the sun was getting lower, I assumed well that is it for the night. So, I grabbed the 21, it had been super light for over 20min now so I felt I could launch go for a bit of a sledder and land with my friend. My gear was disconnected so it took me another 10 min to get set up. Just as I was hooked in with a nice wall up, a strong breath came back in. It was short lived about 2-3min long. I waited another semi strong one came in again short lived. Then back to nothing, so I launched.

Boom my typical for this site, launch and straight up, ah this normal, GPS showing 5mph forward, yup this is normal for me too. So, I pointed straight out, as my intention was to just go for a quick ride down to the LZ. Well it must have turned on as I just kept going up reaching a max altitude of 2500m or 8200ft. My Gps was going from 0 to 2.5mph. Honestly this was pretty normal for me at Pine, up n low forward penetration. I was on full bar, still climbing, but tonight was different. I would make some forward penetration often getting close to the Rock L, or

Freedom LZ's, then while still on full bar noticing I was now nowhere close to the LZ's. This game went on for a good 30min.

After a few of these back and forths, I realized shit I am in trouble up here. I got on the radio, and told the pilots all now coming in to land, that I was in trouble up here, and please stay with me. Considering I had quite a bit of altitude I felt semi safe and was not looking to turn and go downwind yet. Staring at the sun it would not be long before it dropped behind the wall of smoke in the west. I knew I had the altitude as I was still climbing, I could stay on bar and aloft while she set. My hope was that it would follow the typical pattern here and when the sun disappeared the winds and lift would subside and I could land. It would not be my first-time landing in the dark on a glass off so that was not an issue for me.

Instead it kept picking up. I contemplated descent technics, but a few things were a big factor. One, I felt safer being between the hill and the LZ at the high altitude, if I did have to turn and go downwind the altitude would be in my favor. Second my lack of forward penetration and obvious drifts backwards meant any descent technic would also drift me back putting me into the terrain and potentially on top or behind the ridge in the rotor zone. The B-line stall kept coming to my head, but I was still concerned about my drift back if I did so. So, I kept crabbing *around looking for the path of least resistance. 0-5mph, 0-5, 0,0,0,0 to 3, beep beep beep of the vario. The sun was now behind the smoke it was getting worse not better.*

My acro buddy got on the radio, and suggested the B-line, also noting that it would have less drift than anything else. This confirmed my own thoughts so Ok, deep breath here I go. B-line, yup going down, but going backwards to. Watching altitude and drift I held it till I was just in front of the ridge yet still high enough to stay above the rotor if this new altitude was still just as strong. Released, and yes, my fear was right I was now at 0 forward and seemingly going back. Another pilot got on the radio and said we all were getting sink to the right of the thermal tree. Yea ok I will try it; the ridge gets lower that direction anyway so the rotor will be less over there. So, I cruised towards the right now semi behind the ridge top, but lucky I still had altitude to stay out of the rotor. I was still going back up but, although now soft beeps filled my ears.

The difficult part of making that choice was now I was heading back into what could be a venturi area, yes, the ridge lowered over here but there was high terrain on the other side of the road. I found no real sink to the right of the tree, but I was seeming staying clear of any rotor still. I made to the end of the ridge, where I feared I would hit the venturi area but all of sudden I was going 5-7mph forward, it was looking like I could make the Y for landing. The air was pretty turbulent at this point but I was going forward again. I was just starting to relax, no longer going up, not sinking much but not going up anymore. Then boom strong flow again, I was now going a good 5-10mph backwards. Shit! There is another a hill now behind me, a ranch and lots of fences before it. Fuck this I am about to enter a rotor zone, and I am drifting to fast backwards, I no longer have the option to turn and go downwind. So, I pulled a deep spiral dive, aware of the turbulence I was entering, all my focus on getting down as quick as possible and my wing pressurized and good G-Force going to defeat the turbulence. Say what you want about that choice, but I knew full well what I was in for and this was what I was going to do. I spiraled down to about 100' off the deck and pointed back into the wind.

It had worked I was still going backwards but I would land in this desert clearing before the ranch. I am now in the gully, and behind the ridge of the main wind direction. Game on, a good 20+ tugs at my wing, I managed them never allowing one to be more than a 15% tip collapse. Using weight shift to control my direction as I came in backwards to avoid the Trees behind me, hands busy keeping the canopy open. Finally, I was on the ground on my feet. Wing laid over a tall sage brush wind howling. Disconnecting immediately unsure if the spiky brush could hold the wing from the wind. Thanking my lucky stars, shaking like a leaf.

When you are being blown back:

- 1) Get high, altitude is your friend here, the more altitude you have the more chance of avoiding rotor you will have
- 2) Crab around, perhaps you are in a venturi area, perhaps off to the side you can find forward movement

- 3) Be prepared to turn and go downwind. Get the altitude you can first, then be prepared as you have a good chance of entering into rotor zone. Scout a good landing option and make the run for it.
- 4) Next time watch your crab angle and try to avoid the situation in the first place
- 5) Doing descent techniques does not really help, again altitude is your friend, perhaps the lower level air is less strong, but be 100% sure of this before trying to get lower using descent techniques. Most descent techniques will also have a backwards drift so be sure to add that into the "what is safe and best".

Notes on other pilots: a huge thank you to everyone who stayed on the radio with me. Harrison for telling me to look at the beautiful sun setting into the smoke, just as my legs were trembling from being on bar so long now at 8000ft and freezing cold. Heather for continuing to talk to me, processing and offering suggestions, that was my favorite part, it was like she was in my head talking out choices with me. Mike for letting me know he could hear me but not talk to me on his radio and that he was watching me. Nova for confirming the B-line as the best descent technic. Matt for responding to my first calls, is anybody on the fucking radio, "yea Kim we are here".

However, as I was backing down into a danger zone I did not see trucks moving towards me. Fearing the others, I have seen in this situation taking big whacks just off the deck and breaking their backs, I was hoping someone was coming and would be right there if it happened to me. Knowing when I pulled the spiral dive that I would drop behind the ridge and have no radio communication with any one. My truck started to come right as I pulled the dive, but he turned to go the other way, obviously they thought I was ok and he was going to drop my friend back at his rig on the main Hwy. Thinking fuck no, this is the scariest place please come my way. About 15min after landing I heard a truck coming, oh thank god, I hope he can see me. It was Mike. He was so happy I was ok. It was noted that many were congregated back at the Y, when he got there he heard I was ok and landed. But having seen more than one of these he asked the proper question, "Did you actually see her land, have you actually talked to her" the answer was no, and he raced out to find me.

I realize in talking with others, that there was concern and people talking about where I was. But I would like to note a few things. Pilots are strong minded alpha types. I have seen many people impact in, and jump on the radio saying they are ok. Yet they have actually broken their backs or hips or something. Not only are we of a tough breed, we also are rushing with a powerful drug, adrenalin, which often can hide the truth of injuries. So, I was really sad to not see someone already on me as I was descending down into a bad area. I am sure I looked like everything was ok and when I pulled the spiral everyone thought nice she found a landing zone. I was actually in extremely turbulent air, choosing to spiral through rotor instead of ending up in house or fence or hillside, working super hard to keep the canopy open. It's also good to note most of the time it's just off the ground that you cannot recover if you get a big collapse, I was out of view by the time I was close to the terrain. Although I managed to land safe, all I wanted was for someone to be there, and bring me a beer. So, food for thought. Adrenaline is powerful, you can't always trust a "I am ok", it could just mean I am not dead. If you're out there and you see this happen to someone jump in your rig and get as close as you can to them. They may only need a beer like me, but having someone there incase its worse is just an awesome thing to do... I will also note if someone was broken having more than one person to help hike them out could be needed. At Pine in particular but also many other locations, when pilots are on the ground behind the Mt, or Ridge even powerful radios will not connect to you on the front side of the hill. Do not trust hearsay or assumptions. Until someone is with the pilot we cannot know the reality of the situation.

Another big observation was the boefeng radio. I have spoken out about them many times. They do not work well. I had borrowed one for my friend as being an acro pilot he does not normally carry one. He was able to hear me asking for his help, but I could only hear fuzz when he spoke back. This is the umpteenth million time, I have experienced this with the Boefeng. Our radio's are one of the few but very important safety gear we can carry with us. It's worth investing in a good one, and a good antenna. You never know when you will make a mistake like I did, and need it for survival.

Now on to being small.

When Mike arrived at me, he asked "Wow you were really on full bar that whole time?". Yes, I was except when I had to let off to deal with turbulence. I then explained on average nights out here on my 21m, top of 75, I sit at 72, I average 2-6mph forward penetration. Everybody comes up behind me, says hello and flies off. I have to work to get out in front, and use my bar almost every night. Why? It's a tiny glider, it's not a speed wing, it flies rather slow. I also even though weighted am still a light load altogether. Both of these are a huge factor in my forward penetration. Therefore, I have to be careful of wind speeds, and I always fly with my groundspeed and glide ratio on my screen, yes even ridge soaring and on glassoffs.

So, what does this mean. It means small pilots are at a disadvantage of course. So then what size wing is best? What size wing should I sell my small students? Well that depends on what type of pilot they are, what is there flying style, and where do they fly. It always means they are going to go up easy, and fly slow.

For XC flying I want a bigger, faster wing. So, I fly on 23m gliders with tops of 80 to 85kg. This gives me better speed, ability to handle stronger winds, and make longer glides. However, because of my body weight I still want to be at the top of this wing. So, I fly a heavy pod harness that I put 8 pounds of ankle weights (soft sand ones) under my seat board. I then carry two large water bladders. One in my flight deck, and one under my seat. Depending on the conditions I can always release some of that weight, although I rarely need to. You do not want to be sending new P2's out on this size of canopy. It requires a lot of awareness on weighting that they do not have. Nor do you want to have to carry ballast all the time as they would need it on ridges especially. While the wing flies faster being light on it I have noticed worse penetration and inability to fly in semi strong winds without my ballast.

So, for a first wing, or you don't really go on big XC's often, or you can only afford one wing. Trust me here it's not about weight ranges of the canopy it's about the size of it. You want the smaller 21m canopy. I have tried 23m claiming top of 75 and it behaves like my 23m XC top of 85. It's really about canopy size folks. So, for one wing, or new pilots with all up-weight ranges of 65-75 you want a 21m canopy. Yes, you will still have to watch the wind speeds and understand you won't have forward penetration when others do, but this will give you the broadest ability to fly in most places and situations. They will have more fun on it, and feel in control of the glider. I see way too many small pilots getting sold the 23 or top of 80. When I meet them, I let them fly my wing or an old 21m low B I keep around. They have all always reported back feeling better on this size and feeling more in control.

I also now have a great 18m Mountain Wing. Its weight range is vast as its used by all sizes for different purposes. At my weight, it is a C glider, lighter a B, heavier can be up to a D. It's an active little thing, with some behaviors of a speedwing, but flies/boats at my weight as a regular paraglider. I really love the RS technology in it, as being small and spicy I can trust in the RS's ability to recover from collapses with ease. This is not for the newbies, nor a good all around. On lighter nights, I can't get up on it, but can still soar against the terrain. It thermals nicely and has good speed but it's not a true XC wing, as on glide I sink fast. It also has incredible speed near the ground. The speed is great as it is always present and I am sure had I picked that one I would not have been blown back. However, you must be ready for that speed when soaring close to the terrain or coming in for a landing. It takes active piloting.

After 10 years of flying as a small, light, pilot, this is what I have discovered. While we may have some disadvantages, there is lots to love. I can launch and just go up, in lighter conditions I don't have work as hard to get up or stay up. The negatives and positives are well balanced. It's only a problem when you don't know which wing and size to fly, and or get sold something that is not right for our tiny size. Please instructors hear my words, if the manufacture you sell does not have a 21m, please contact the importer of a brand that does, and sell you student something they can enjoy and be safe on. In fact, I am the Swing Paragliding Importer, and my general I can have only 1 wing is a Niviuk. Swing does not make a 21, so I had no choice. I do get to fly their 23 for xc, and the new Apus 16 (18m), but if I can have only one or I have a student my size I go for the brands that make the 21.

Thanks for taking the time to read about my experience and my thoughts on small pilots. I hope in sharing this with everyone I can help enlighten others in my weight range, and give everyone else an idea of what small pilots go

through to enjoy this sport. I am open to feedback on my perspectives, however I am pretty firm at this point in my flying career on what works for my size. I love that more manufactures are coming up with things for people in my weight group. I do realize we may have some great advancements coming soon, that will help resolve some of my issues. For now I will just stick with my fleet and knowledge, but not always trust 30min of a lull as it backing off for the night.