

## Pilot Profile: David Barish, the Probable Inventor of the Paraglider

By Steve Roti

SR: As far as I know, nobody else was launching off hills with parachute-like aircraft in the 1960's. What made you decide to build and fly the Sail Wing?

DB: The slope soaring Sail Wing was an outgrowth of the Sail Wing used for skydiving, which existed much earlier than the slope soaring version. NASA was looking for alternate means for recovery of their capsules and it became obvious that something with higher performance than the skydiving version was needed, so we developed a higher aspect ratio version and took it to Hunter Mountain in New York in September 1965. The aspect ratio went up from 3 for the skydiving version to 5 for the slope soaring version. There were other people involved in the development, including Dan Poynter and my son Craig. Slope soaring was a way of testing out the higher aspect ratio version of the Sail Wing.



SR: What was your educational background that led you to develop the Sail Wing?

DB: I earned masters and professional degrees in Aeronautical Engineering from Cal Tech, graduating in 1950. I spent nine years in the Air Force as a pilot, including my time at Cal Tech. After the Air Force the first parachute I worked on was the vortex ring parachute from 1954 to 1957. In 1964 I really got going on the gliding parachute as a result of work I was doing under contract for the Army.

SR: Is there anyone in particular who inspired you to pursue this form of aviation?

DB: My own interest led me into the gliding parachute area. Of course, Lindberg inspired my whole generation.

SR: Were you aware of Francis Rogallo and the work he was doing?

DB: Yes I was, and after we got into the NASA work with the higher performance version we did a lot of our wind tunnel testing at Langley where Rogallo was working. Our work started out quite differently because Rogallo was interested in using metallic structures and all of my work was without rigid structures. While we were testing at Langley one day I looked over my shoulder and saw Rogallo looking at the models we had hanging in the wind tunnel and taking notes. Of course he followed quite a different path.

SR: Dan Poynter's book "Hang Gliding: The Basic Handbook of Skysurfing" published in 1973 uses the term "paragliding" to refer to your activities with the Sail Wing. Do you know when and where did the term "paragliding" originate?

DB: Not really, at the time we called it slope soaring. Someone else originated the term "paragliding" but I'm not sure who it was, it might have been Dan.

*Interviewer's note: A phone call to Dan Poynter verified his use of the term "paragliding" in the 1973 book, but he wasn't sure where the term originated. Dan also mentioned that 1973 was right about the time when the sport of hang gliding standardized on using aviation terminology rather than sailing terminology. Paul Klemond informed me that NASA used the term "paraglider" in the early 1960's to describe developments such as the Rogallo wing and the Parasev (Paraglider Research Vehicle). So in summary, it appears NASA originated the term "paraglider" in the early*

*1960's, David Barish invented the practice of foot launching gliding parachutes in the mid-1960's, and the term "paragliding" was first used to describe foot launching of gliding parachutes in the early 1970's.*

SR: Did anyone else fly the slope soaring Sail Wing?

DB: Yes other people flew it including Dan and my sons, around 1966 or 1967. My son Craig was in his teens and he loved it.

SR: You mentioned flying at Hunter Mountain in New York State. Where else did you fly?

DB: I've always been a skiing enthusiast myself, so I got the idea of taking advantage of the ski lifts. I was sponsored by Ski magazine to travel around the country looking for the best ski areas for slope soaring. The best one I found in the east was the Stowe ski area. Unfortunately the trails at Stowe were fairly narrow and I wasn't very skilled at staying over the trails and away from the trees, but I only had a couple of tree landings. I was discouraged at the other eastern ski areas because I thought there were too many trees. I went out west, but the weather wasn't cooperative at the times I could get out to the slopes. The other thing about the 1965-1966 time period is that I wasn't aware of the advantage one could get out of thermalling, so I was always doing my flying under calm conditions and not getting any thermal lift. It was a few years later before it became obvious that I could use the thermals.

SR: What kind of response did you get from people who saw you out slope soaring back in the 1960's?

DB: Well, there weren't many people around, the slopes were mostly deserted at the times we picked to do the flying.

SR: What were your thoughts on the safety of what you were doing back then?

DB: We were young and foolish. But in all fairness I've never been injured on a paraglider nor while skydiving.

SR: Is there any particularly memorable experience that stands out in your mind from your early slope soaring flights with the Sail Wing?

DB: Well I've always tried to be pretty careful, and in those days we were using the slopes as a way of checking out the effects of changes in the rigging and the aspect ratio and the cloth we were using. Our flights were really engineering flights, we weren't trying for spectacular flights.

SR: Did you have a vision for the future of recreational slope soaring back when you were experimenting with the Sail Wing?

DB: Probably because of my ignorance of the effects of thermals I didn't really think about the amount of flying you could do, but that was largely due to ignorance on my part.

SR: Modern paragliders have advanced quite a bit in the last 20 years. Do you think we've reached the performance limits of paraglider wings, or are there still advancements ahead for the sport?

DB: There are still advancements being made and they will continue to be made. I've continued working to explore the extremes of designs to see where we could expand the envelope. I fly a paraglider that is probably somewhat higher performance than most. I currently have a glider with a flat aspect ratio of 8. I think there's still plenty of room for improvement in materials and aerodynamic shape.

SR: Where do you fly your paraglider?

DB: These are still engineering flights and I have a training hill that's adequate for that kind of testing.

SR: One instructor I know describes paraglider pilots as people who feel they are birds trapped in human bodies. Does that description apply to you?

DB: I don't know if it applies to me, but I can certainly believe that it applies to a lot of other people. One is reminded of the old saw: There are bold pilots and there are old pilots, but there are very few old, bold pilots.

*Interviewer's Note: For more information about David Barish, read the article by Xavier Murillo that is reprinted on the Fly Above All Web site at <http://www.flyaboveall.com/articles/davidbarish.htm>*