

A popular misconception: *I hit sinking air!*

SOME TIME AGO WE WROTE THAT VERY RARELY DOES ANYONE INVENT A NEW ACCIDENT; NEARLY ALWAYS WE SEE A REPEAT OF A WELL RECOGNISED OCCURRENCE WHICH SHOULD HAVE BEEN AVOIDED.

Over the years we have received many incident reports sent in by pilots who have misjudged a top landing approach or a 360 after a period of time spent ridge soaring. Some of these have resulted in severe injuries, some minor, but all of them could have been avoided. These reports very often include the words, 'Suddenly I unexpectedly hit sinking air.'

Imagine you are ridge soaring in the traditional manner, beating along in the lift band and turning outwards from the ridge at each end. You are able to stay up because the air is rising. The stronger the wind, the slower will be your progress along the ridge, because you will be facing more into wind to maintain your track and not drift backwards. In this situation, apart from traffic, your brain is concentrating primarily on ground speed and direction. Taking this situation further, any increase in wind strength will lead to progress becoming non-existent. You will become stationary with no increase or decrease in height; what we know as 'gale hanging'.

Now consider a further slight increase in wind strength. You are now being blown slowly backwards, still facing directly into wind. You will start to lose height as you leave the lift band and you will be flying in air which is laminar with the flat top of the ridge (you wouldn't fly over a spine back ridge would you!). This set of circumstances is quite predictable and should present few problems to a well-trained pilot. Note: No sign of 'unexpected sinking air'.

Now let us look at what will happen if we turn downwind to set up a landing approach or do a 360. Let's assume we are flying in a 15 mph wind on a glider that is flying at 18 mph. We will have little problem ridge soaring in these conditions, turning into wind at the end of each beat and

crabbing backwards a little to regain the ridge. While soaring we remain facing out from the ridge. But if we turn downwind, either to set up a landing approach or do a 360, the scenario will change dramatically.

Instead of a ground speed of 3 mph, it will now be 33 mph, around 50 feet per second. So instead of the nice calm situation of gentle ridge soaring, with very low ground speeds and little or no descent rate, we are now faced with a very different situation. The glider is now flying in air which is no longer rising, but it is not 'sinking air'!

This is where the problems really start. We now have very little time in which to assess our ground speed and sink rate in order to set up a good landing approach. Remember, we may have been soaring for many minutes - or even hours - without experiencing even still-air flight speed or gliding descent. We now have downwind groundspeed and normal gliding descent rate to deal with, close to the ground. This can easily take you by surprise, leading you into thinking you have encountered sinking air.

The solution?

- Always use a crabbing approach whilst setting up for a top landing when the wind is anything above light.
- Never turn downwind directly towards the ridge unless the wind speed is light.

Fairford mid-air initiative

The USAF's 422nd Air Base Group, covering all military operations at RAF Fairford in Gloucestershire, has released a pamphlet aimed at ensuring a safe flying environment for military and civilian pilots in the surrounding area. The document points out that 80% of reported Air Force near misses occur with general aviation aircraft. It details the local air traffic zones and departure routes used by Fairford aircraft, and identifies the numerous military types operating out of the giant base. These include B-1, B-2 and B-52 bombers and C-17 heavy transports. Although emphasising that the primary mechanism for avoiding conflict is the strict observation of controlled airspace and active use of see-and-avoid, the document opens a useful channel of communication between the GA community and the operators of some pretty hefty military traffic. The pamphlet can be downloaded at www.501csw.usafe.af.mil/shared/media/document/AFD-150220-002.pdf. Any queries or suggestions can be directed to Fairford's Flight Safety Manager John Edmonds on 01280 708572.

- If you really want to do 360s above the ridge, allow yourself double the height you think is the safe minimum. This way you should make it round OK, but just see how much more height you lose than you expected. And learn by it!

BGA and BMAA input, among others, concludes that the project should go forward to develop a specification for an EC device for industry developers to work on. It is thought likely that the platform would use ADS-B (broadcast GPS position) technology. The report, Electronic Conspicuity in Class G Airspace, can be accessed at www.bhpa.co.uk/documents/safety.

Electronic conspicuity

In response to a recent AAIB report, the joint CAA/NATS/AOA/GA/MoD Airspace and Safety Initiative programme established an Electronic Conspicuity Working Group to consider how systems like FLARM, Mode-S transponders, ADS-B and TCAS can be used to alert recreational and other aircraft to each others' presence to improve safety. The Working Group's initial report, which takes account of BHPA,

BHPA Club Coach courses

Note the dates below for the Autumn 2015 and Spring 2016 series of BHPA Club Coach courses. Clubs wishing to host a course should contact Stef Blankley (0116 289 4316/e-mail stephanie-blankley@bhpa.co.uk) and book an available date from the list. Individual pilots who want to attend a course should contact the hosting club; these will be listed below as clubs take up the courses. The BHPA Club Coach course is the only post-CP coaching available that isn't specifically aimed at SIV or XC flying (although it touches on both). It's very good value at £30 for a weekend. A guide for clubs considering hosting a course is at www.bhpa.co.uk/members/clubs/clubs.php.

BHPA Coach and Instructor courses

Apr 21 - 23	BHPA Instructor	Lilleshall	stephanie-blankley@bhpa.co.uk	0116 289 4316
Oct 17 - 18	BHPA Club Coach	TBA	stephanie-blankley@bhpa.co.uk	0116 289 4316
Nov 7 - 8	BHPA Club Coach	TBA	stephanie-blankley@bhpa.co.uk	0116 289 4316
Dec 5 - 6	BHPA Club Coach	TBA	stephanie-blankley@bhpa.co.uk	0116 289 4316
Jan 16 - 17 2016	BHPA Club Coach	TBA	stephanie-blankley@bhpa.co.uk	0116 289 4316
Feb 13 - 14 2016	BHPA Club Coach	TBA	stephanie-blankley@bhpa.co.uk	0116 289 4316
Mar 5 - 6 2016	BHPA Club Coach	TBA	stephanie-blankley@bhpa.co.uk	0116 289 4316