2004 and 2005 Incident Analysis Report

The sunny times of 2003 were over all too quickly and the norm was restored for 2004 and 2005. The overall number of reports was down from 173 in 2003 to 125 and 113 for '04 and '05 respectively – a direct reflection (I think) on the weather. On a positive note the percentage of injuries is down from 71% in 2003 to 66% in both 2004 and 2005.

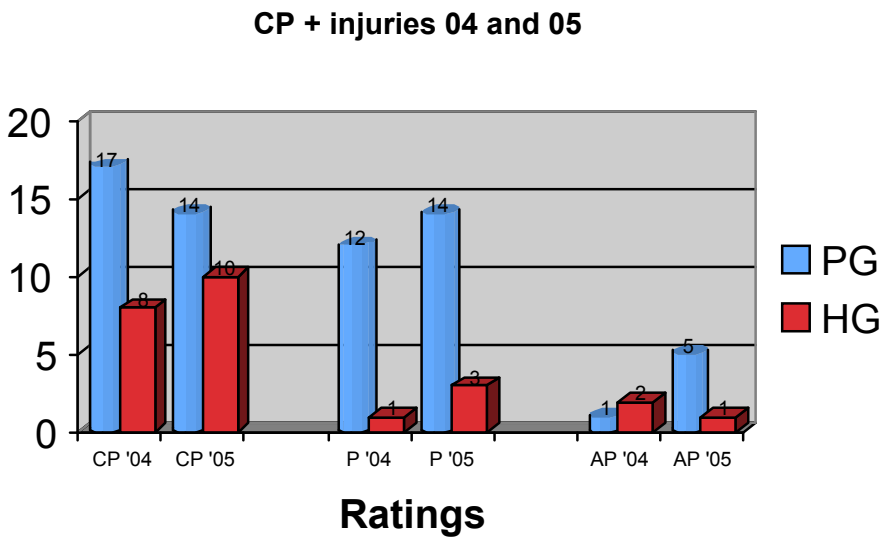
For those of you who have not seen the 2003 report, a few things to bear in mind whilst reading this one: As mentioned above, not all reports relate to injuries. Of the 35% or so that do not involve injury, a proportion will be lucky escapes, equipment issues, damage to 3rd party property and things of that nature. Many of the percentage figures will NOT add up to 100% as, for example, in one incident a person may have more than one injury etc.

As mentioned in the 2003 report, the database can now cater for Parascending and Power PG and HG (or Self Propelled Hang Gliders [SPHG] PG/HG as they are now known). This means the data can be presented in this report. Unfortunately (but fortunately for those pilots) there have been too few incidents to warrant formulating tables and so that data will be shown as figures instead.
The report has been split into CP+ and Training incidents as in previous years.

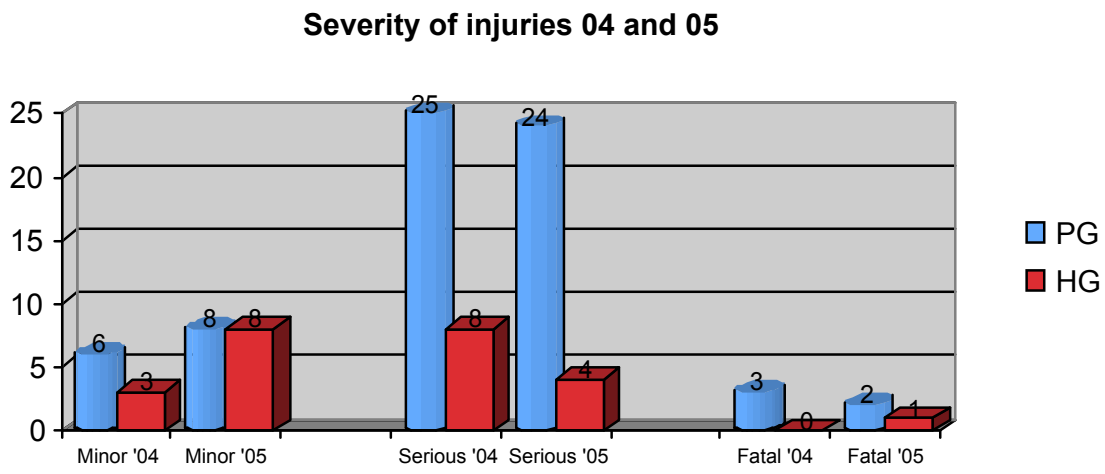
Total reported incidents (inc. training);	2004 = 125	2005 = 113
Involving injury (inc. training);	2004 = 83	2005 = 75

2004 and 2005 Statistics CP+

CP+ injuries; 2004 = 47 (57%), 2005 = 51 (68%)



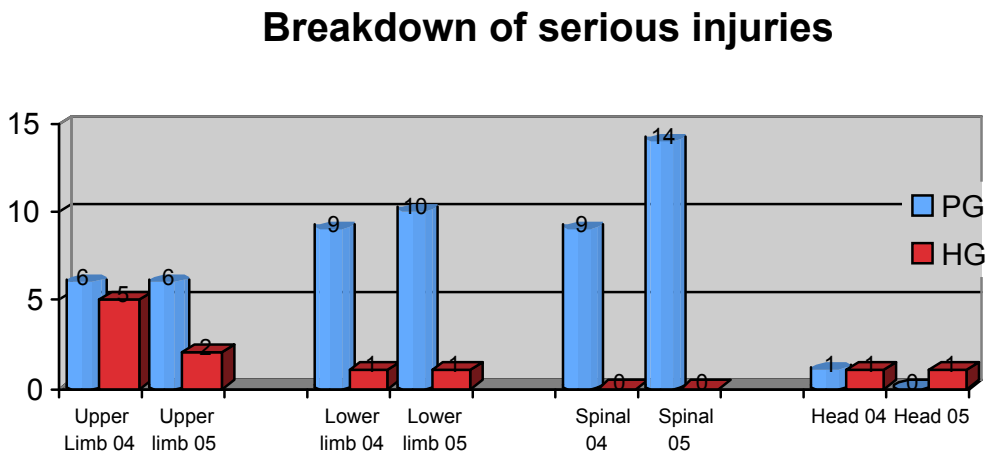
There were 2 reported SPHG PG injuries for 2004 and 2 for 2005. There was 1 reported SPHG HG injury for 2004 and none for 2005. All of the reported injuries for SPHG fell into the 'Serious' category.
There were no CP+ parascending injuries for 2004 or 2005 (unless you know otherwise!).



It is important to note that the descriptions 'Minor, Serious and Fatal' are recognised EU terms for the purpose of accident investigation. Not all 'Serious' incidents are actually that serious e.g. a broken limb (inc. wrists and ankles but not fingers or toes) is classed as serious. Clearly there is quite a range within the term when comparing a fractured wrist to a badly crushed vertebra.

Of the serious PG incidents upper limb injuries accounted for 24% in 2004 and 25% in 2005; lower limb 36% in 2004 and 42% in 2005; and spinal 36% in 2004 and 58% in 2005.

Of the serious HG incidents head injuries accounted for 13% in 2004 and 25% in 2005; lower limb 13% in 2004 and 25% in 2005; and upper limb 63% in 2004 and 50% in 2005.



Due to the nature of the craft, paragliders' have a tendency towards spinal injury and hang gliders head and upper limb injury. Looking at the causal factors in the following table these incidents, as in previous years, are almost all as a result of poor glider control having first decided to fly in unsuitable weather and/or in an unsuitable environment. It is worrying that this well documented trend continues and while an honest mistake is forgivable, taking obvious risks in our sport can only lead to pain and suffering – and not only for the pilot concerned.

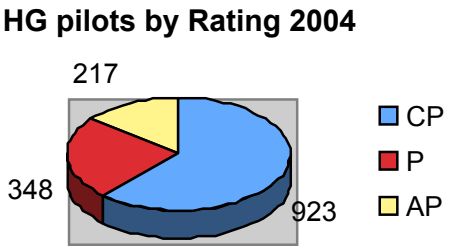
Causal Factors

The transfer of data between European nations is now gathering momentum. The BHPA database also holds data from the Italians and Swiss (and will eventually for the Germans and French [don't ask!]) for the last 3 years, which goes to produce a European report on an annual basis. The table below uses the fields that have been developed for the European data to describe (as best it can) the causal factors behind the UK incidents reported in the last 2 years.

Human Factors	CP 04	CP 05	P 04	P 05	AP 04	AP 05
Pre-flight Check (omission)	6	0	0	2	0	3
Controlling Glider (error)	14	15	14	13	4	6
Judgement Position (error)	16	9	8	3	3	1
Awareness (lack of situational awareness)	10	11	4	6	3	2
Environmental Factors	**CP 04**	**CP 05**	**P 04**	**P 05**	**AP 04**	**AP 05**
Unsuitable Site	1	1	0	0	0	0
Judgement Weather (error)	7	9	6	7	2	2
Judgement Orography (misjudging airflow around terrain)	9	4	2	5	3	0
Judgment Wind Gradient (error)	1	1	0	0	0	0

Ratings

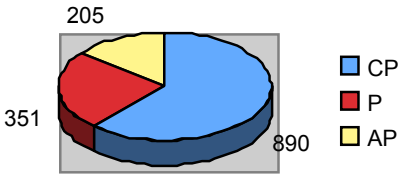
I've included some simple charts and tables to enable a quick visualisation of membership breakdown per rating. The greatest proportion of accidents occurring in both disciplines is to CP rated pilots, which is to be expected, as they constitute the largest portion of the membership. However, the division of incidents does not exactly mirror the division of member's ratings. In paragliding the portion of accidents occurring to 'Club Pilot' rated pilots is lower than the proportion of the membership with that rating. In hang gliding the opposite is the case with a higher proportion of CP rated pilots having accidents. In paragliding the proportion of accidents to 'Pilot' rated pilots has increased dramatically when compared to 2003 (27% membership – 15% accidents).



1,488 total ratings
1,449 pilots

HG 04	% membership	% accidents
CP	62%	73%
P	23%	9%
AP	15%	18%

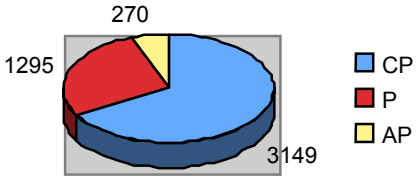
HG pilots by Rating 2005



1,446 total ratings
1,396 pilots

HG 05	% membership	% accidents
CP	62%	71%
P	24%	21%
AP	14%	7%

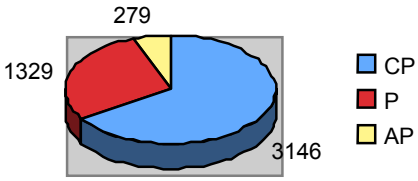
PG pilots by Rating 2004



4,714 total ratings
4,472 pilots

PG 04	% membership	% accidents
CP	67%	57%
P	27%	40%
AP	6%	3%

PG pilots by Rating 2005



4,754 total ratings
4,510 pilots

PG 05	% membership	% accidents
CP	66%	42%
P	28%	42%
AP	6%	15%

Fatalities
In 2003 there were 5 fatal accidents. In 2004 there were 3 and in 2005 there were also 3. The breakdown of 2004 and 2005 is as follows:

2004: Total of 3, all paraglider pilots. 2 CP rated and 1 P rated. One of the incidents occurred in the UK, one in France and one in Spain.
2005: Total of 3, 2 paraglider pilots and 1 hang glider pilot. There were 2 CP rated pilots, 1 P rated. All 3 occurred in the UK.

As with 2003 there are no marked trends in the fatalities.

Mid Air Collisions
Mid air collisions has stabilised at totally unacceptable level of 5 per year (reported).
In 2004 there were 5 paraglider to paraglider mid airs. In 2005 there were 4 PG/PG and 1 PG/HG. As with 2003, there were no reported collisions with model aircraft.
It is essential that you are realistic about avoiding collisions. They are often fatal and are always avoidable. The best pilots fly in such a way that they rarely (if ever) have to resort to collision avoidance manoeuvres. Once you get that far (even if you avoid the collision) you have screwed up and next time may not be so lucky.

Emergency Parachute Deployments
There were 3 intentional deployments in 2004 and 2 unintentional. Luckily none of these deployments resulted in injury to the pilot. Of the 3 intentional deployments, 2 occurred in the UK and 1 in France.

There were 6 deployments in 2005, none of which were accidental (good news). Unfortunately 3 of these resulted in injury to the pilot ranging in severity from line burns to a fractured spine (to be expected with an 8m/s descent rate!). Of the 6 deployments 3 occurred in the UK, 2 in Spain and 1 in Italy.
There is limited information on the emergency chutes used due to the information being missing from the report form. Please don't leave fields on the form blank if you can possibly help it.

Tandem Incidents
There were 3 reported tandem incidents in 2004 and none in 2005

Incidents/accidents occurring in schools

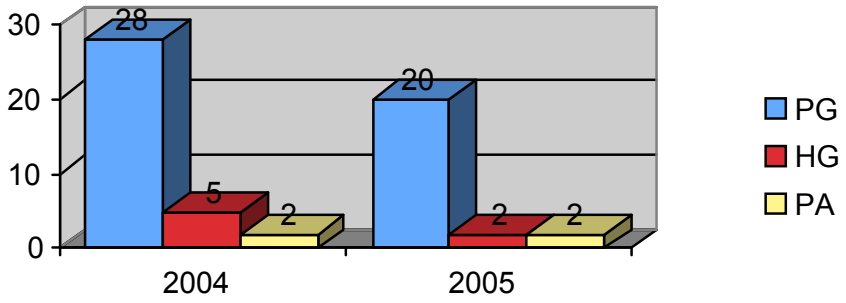
There were 36 incidents reported in schools in 2004 and 24 in 2005. This is down significantly on the 54 reported in 2003. Much as I would like to believe this was down to good practice and professional improvement (I do believe it is a factor), I think this is another indicator that the schools saw fewer students overall. This is supported by the membership figures:

In 2004, 2378 intro memberships were sold; 332 training memberships; 900 full; and 65 concessionary.
In 2005, 2291 intro memberships were sold; 251 training memberships; 850 full; and 113 concessionary.

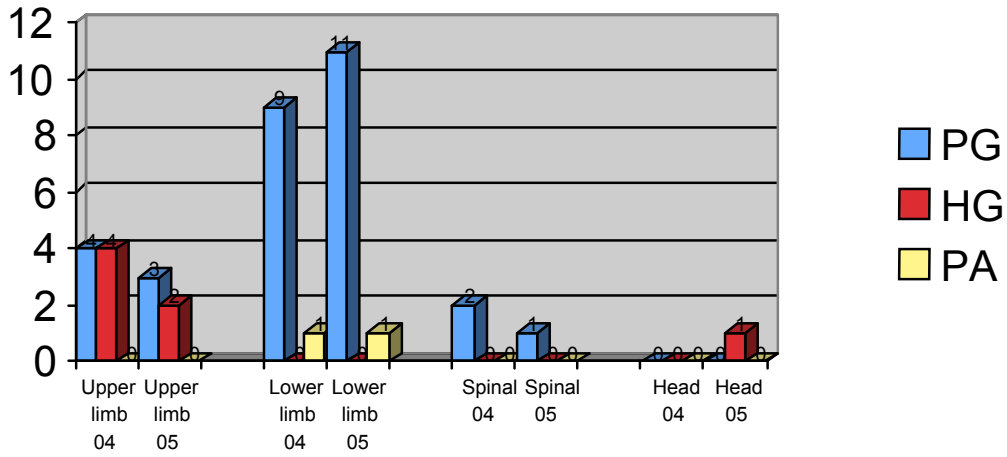
Totalling 3675 for 2004; and 3505 for 2005. This compares with a total of 6000 in the same period in 2003.

The graphs that follow give the breakdown of the injuries and type of injuries that occurred in schools in 2004 and 2005.

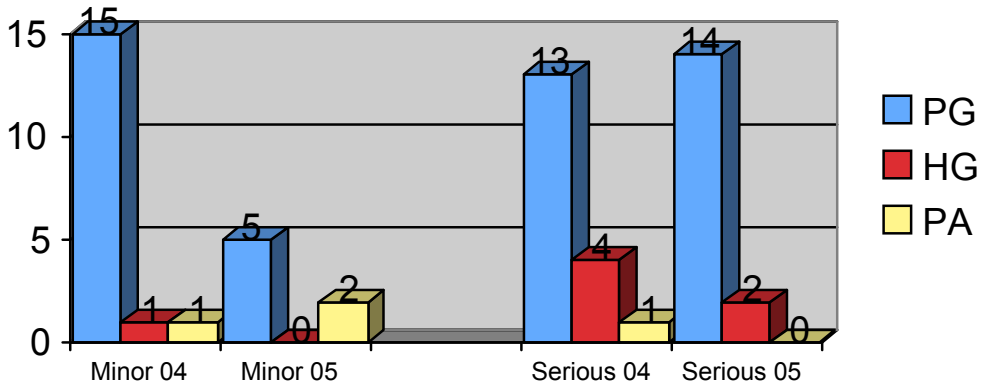
Total incidents in schools



Breakdown of Serious injuries



Severity of injuries 2004 and 2005



Under training (PG) upper limb account for 14% in 2004 and 15% in 2005; lower limb 32% in 04 and 55% in 05; spinal 7% in 04 and 5% in 05; and no head injuries.

For HG training, upper limb injuries accounted for almost all injuries.

As in previous years the majority of the incidents stem from the student failing to properly control the glider and/or tripping and falling whilst ground handling or landing. There were no instances where the students were flying in unsuitable conditions which is as it should be given the student is under the control of an instructor.

It is very difficult to make meaningful comparisons between the rate of hang gliding, paragliding and parascending accident rates. This is due to the vast difference in the amount of people who come through the various arms of the sport.

During 2004 606 new CPs were processed; 82% of these were PG, 12% HG and 6% PA.
During 2005 664 new CPs were processed; 83% of these were PG, 14% HG and 3% PA.

When attempting to compare the accident rates of the PG schools and HG schools there are some important factors that need to be considered.

1. There are 40 active paragliding schools and 10 hang gliding – approx 4 to 1.
2. There are approx 130 PG instructors and approx 25 HG – approx 5 to 1.
3. There were 496 (04) 550 (05) new PG CPs awarded and 73 (04) and 93 (05) HG CPs - approx 7 to 1 (04) and 6 to 1 (05).

To finish

Finally I'd like to thank all pilots who submitted Incident Report forms. These forms are our only means of identifying incident trends, and so enabling us to keep the membership informed when hazardous equipment or procedures come to light. With this in mind I'd like to stress the importance of completing the form as fully as possible. It may appear that many of the fields on the form are insignificant or irrelevant, they do all however make a difference when compiling the data.

Here's to a great 2006. Happy flying and please don't become one of my statistics!