

## 2004 Summary of Non-Fatal Hang Gliding Accidents

By Joe Gregor and Brian Vant-Hull

For the past year or so this column has been devoted to reporting on the investigations of the unusually large number of fatal accidents that occurred during 2004. This was not meant to diminish the importance of the non-fatal accidents reported by the membership, but rather to give due regard to the serious consequences that may result when things go wrong in the field of aviation. The year 2005 has been much kinder to us, and for the first time since I've taken over this column, there are no new fatalities on which to report. Accordingly, this column will be devoted to a summary of the 42 non-fatal accidents reported to the USHGA in 2004.

Note that this is a summary article, not a statistical analysis. The reports received by USHGA represent an incomplete and self-selected subset of the non-fatal accidents and incidents that occurred in 2004. I know of several local "events" that went unreported to the USHGA. A similar situation no doubt prevails in every region; the USHGA's accident reporting program is, after all, a voluntary system. So, we really have no idea how many hang gliding accidents actually occurred in 2004. Similarly, the USHGA has no quantitative information about the number of flights or flight hours logged by hang glider pilots in 2004, since there is no program in place for reporting or collecting this information. Given that we have no handle on either the numerator or the denominator, any calculation of probabilities and statistics concerning accident rates is clearly impossible. The data simply don't exist to support such an effort.

In place of potentially misleading chart, graphs, and numbers, we present in the following paragraphs a short summary of each *{reported}* non-fatal accident for 2004. These summaries are based solely on self-initiated reports received from pilots involved in or familiar with the incident. No independent investigation was initiated for any these accidents. That is not to say that these accidents are considered trivial in nature. Indeed, mere chance and luck separate many of these cases from other, fatal accidents. Future columns, time permitting, will include discussions based on these incidents, with an eye toward gleaning some important lessons learned before a full investigation is called for.

**A self-taught pilot with 28 mountain flights launched at a 300-foot coastal site with winds of 15-20 mph.** Many hang gliders were flying at the time. An observer launched first, and on noting conditions shouted down not to fly. It is unclear if the accident pilot heard this, but he launched and was turned into the ridge. Injuries to the pilot included minor soreness. Damage to the glider was extreme. The observer pointedly noted that this type of incident involving self-taught pilots has happened before in this area.

**An experienced aerotow pilot experienced a bad landing after a premature release under light wind conditions.** During launch the pilot judged that the glider had achieved sufficient airspeed, yet did not lift off the dolly. The pilot pushed out, popped up, and at 20-25' suddenly released from tow. A bad landing resulted. Injuries included a dislocated shoulder. At the time of the report the weak link was not inspected, and the cause of the premature release was not determined. Witnesses suggested that the glider keel angle was improperly set while the on the dolly.

**A novice pilot with five hours of airtime flying a mellow double-surface glider flared late and experienced a bad landing.** Injuries included a fractured elbow.

The reporter noted that the accident pilot had probably not maintained sufficient currency for this glider, given his level of experience.

**An experienced intermediate pilot blew his launch at a cliff site.** Winds were 10-12 mph with a high gust factor, and the accident pilot was the last person to launch. He recruited hikers for launch assist and "after checking to make sure they had cleared the wires" commenced to launch. The nose and one wing lifted, resulting in a crash. Injuries included a fractured leg and lacerations to the face. The accident pilot claimed to have been distracted, but also said that while the non-pilot wire crew was a risk factor, he did not consider it a contributing factor.

**An intermediate pilot crashed while attempted to land a mid/high performance glider in a restricted LZ.** The accident pilot (who was most recently current on paragliders) was hit by a thermal on approach, and attempted to fly over a fence near the end of the landing field. Pilot and/or glider became caught on the fence, thus terminating the landing sequence. Injuries included a slight concussion, split lip, and a broken rib.

**A student pilot impacted the ground after prematurely releasing from a winch tow.** The student's flight experience included 100 winch-tow flights and at least enough fixed-wing time to obtain a general aviation license. This was his second flight after adjusting his hang point to reduce a perceived nose-up tendency experienced during a previous aborted launch. A few seconds into the final tow the line was released at about 30-40 feet AGL, but the glider remained at the towing attitude until the glider pitched over slightly and pancaked into the ground with the accident pilot's arms outstretched. Injuries included violations to the face and amnesia. Glider damage included a wrecked control frame. The instructor speculated that flying several different gliders, each with different trim adjustments, may have confused the student, resulting in his maintaining an inappropriate bar position during the accident flight. The pilot does not remember why he released, and observers on the ground noted that everything looked normal prior to release.

**An experienced pilot on a rigid wing blew a ramp launch performed under somewhat cross conditions.** The pilot began his launch run after the wind cycled in straight and he felt (and was told by wire crew) that both wings were level and balanced. Partway through the launch run one wing dipped, coupled into an eventual 90-degree yaw, and when the pilot tried to correct the result was a stall and crash. Injuries included a fractured toe and pelvis, and a cut above one eye. The pilot believed that projecting rocks on the side of the dipped wing resulted in an uneven airflow, and reported that other pilots had cited similar experiences.

**An experienced intermediate pilot blew a launch while taking off into a light cycle on a day that had been switchy and cross.** A weak launch run coupled with a high nose angle left the glider vulnerable to conditions, and the pilot was turned and crashed. Injuries included a bruised thumb. Glider damage included a broken down tube and leading edge. The accident pilot admits to a history of weak launches.

**A pilot impacted a sand dune while flying in strong conditions.** The accident pilot had waited until winds became smooth and decreased to a comfortable range for paragliding (the witnesses were paragliders pilots). The accident pilot was about 100 feet above the dunes when the glider was observed to perform several rapid and steep turns in both directions before impacting the dune. The accident pilot has not filed a report, since

he is unable to remember the either the flight or the accident. Injuries include a broken wrist, arm, pain in the legs and back, and an abridged memory.

**A highly experienced pilot making his third flight on a topless glider under very thermally conditions crashed upon landing.** While in the turn onto final approach, the inside wing stalled at about 40 feet AGL, resulting in the crash. Injuries included a sore shoulder. Glider damage included a broken leading edge and downtube. The accident pilot stated that poor decision-making in setting up a low approach, coupled with lack of sleep, were contributing factors.

**An intermediate pilot flying a high-performance intermediate glider blew a launch under benign conditions.** The pilot reported injuries including chest pain and bruises. Glider damage included a broken keel, downtube, leading edge, and bent sprogs. It was noted that in the judgment of one reporter, the accident pilot (who had eight years of experience) had "upgraded inappropriately."

**A pilot in a hurry described experiencing multiple mishaps:** glider not tied down properly and fell during transport; pilot launched in a hurry and mashed the glider; camelback was not inspected and leaked; pod zipper was caught in frayed jeans and prevented pilot from unzipping for landing. No injury or glider damage, but much introspection followed.

**A pilot scraped up his glider while self-launching at a cliff site.** First the wing lifted while he was standing on launch and dragged him towards one side; he was rescued by a spectator. By this time the wind had died down and the pilot attempted to resume launch position, whereupon a second gust caused a repeat of the incident. The results this time included abrasions to the glider's leading edge. At this point two pilots arrived and came to the aid of the incident pilot, who finally performed a successful launch. Upon introspection, the accident pilot noted that the pressure to fly – in order to justify taking the day off from work – can cause an otherwise meticulous and safety-conscious pilot to cut corners and discount risk factors.

**A novice pilot flying a low-performance glider sank out while fiddling with his harness and was forced to make a tree landing.** No report of injury or glider damage. The reporter did note that this was the second time this sort of thing had happened at this unregulated site.

**A pilot with limited cliff launch experience who had recently moved up to a high-performance glider attempted a cliff launch under conditions that exhibited varying amounts of crossing wind.** He was having problems balancing the glider, was told several times by his wire crew that his angle of attack (AOA) was too high, and once that he was too far back. Each time he would pick up the wing, he was told he had the wrong launch configuration, struggle to balance the glider, then set back down. Finally he picked up and, with the AOA still set too high, cleared his wire crew. One wing lifted and the glider dived into the trees directly below launch. Injuries were limited to bruises. Final damage to the recovered glider was extensive. The accident pilot admitted afterwards that he did not understand the difference between the mechanics of a cliff and a slope launch, and that he had raised the nose until the forward pull from the ramp diminished to a comfortable level. Though feeling uncomfortable, he was lulled into a sense of security by his observing the clean launches made by several preceding pilots.

**A pilot approaching his novice signoff crashed while attempting to land.** The accident pilot had been winch towing in increasingly turbulent conditions while trying to

correct a landing problem (dropping a wing). A thermal had reportedly popped off while the accident pilot was coming in to land, and the pilot believes he added to the effect by letting the bar out too far during round-out. This combination of factors resulted in a wing being lifted, and the glider spun into the ground. Injuries included a slightly bruised rib (perhaps cushioned by a chest-mounted parachute). Glider damage included a broken leading edge, keel, control frame, and a torn sail. The pilot conjectures that flying in stronger winds than he was familiar with contributed to his misjudging the glider's airspeed. After the accident the instructor noted that he would have stopped the student from flying in the building conditions, had he been aware that the student was still towing.

**A small pilot who is typically very conservative about picking launch cycles was blown off the launch area into the setup area.** While sitting on launch during gusty conditions waiting for a smooth cycle, other pilots in line to launch began to harass her about being a launch potato. All, however, reportedly declined the accident pilot's offer to stand down and let them go first. After some additional harassment, the accident pilot picked a cycle and cleared her nose crew. A gust came through, lifted one wing and blew the glider back on top of other gliders. Injuries included a bruised thigh. Damage to the accident pilot's glider was extensive, and a keel was broken on another glider. The reporter noted that, while the accident pilot would likely not have picked this cycle without the encouragement of her friends, still, she could have corrected the lifted wing had she reacted more aggressively. The accident pilot acquiesced to this assessment.

**A low-airtime novice pilot blew a slot launch under reasonable-seeming conditions.** Upon picking up the glider to begin the launch sequence, the accident pilot did not initially notice an apparent lack of lift, even though there was plenty of air in the slot. The pilot ended up basically running all the way down the hill and into the trees. No injury. No damage. Pilots familiar with similar phenomena at this particular site have theorized under certain unspecified conditions a crosswind causes rotor from trees bordering the slot to dump air on top of a launching glider, weighting it down and preventing flight even if all of the streamers in the slot look good.

**An advanced pilot flying an older glider not flown for two years crashed while attempting to land in a tight field on a strong day.** The pilot was S-turning on the approach when one wing hit a tree about 25 feet above the ground and spun the glider to the ground. Injuries included bruises and a strained shoulder. Glider damage included a broken leading edge and downtubes. Injuries and damage were likely mitigated by the soft and swampy terrain into which the pilot impacted. The accident pilot admits that, given the conditions and field, there was no good reason to use S-turns on approach.

**A low-airtime advanced pilot ridge soaring on a single-surface glider made a poor choice of landing field after the lift disappeared.** The pilot headed first toward the primary LZ, then reassessed his glide path and considered changing targets to the bailout paraglider LZ. The pilot then hit lift and recommenced flight to the primary LZ. A further bout of sink eliminated both LZs as an option, and the pilot finally attempted a landing upslope in a bushy clearing. The pilot impacted both bush and slope, but claimed that someone with better landing skills might have pulled it off. Injuries included a dislocated shoulder and a torn rotator cuff. The glider reportedly made it unscathed. *{{I long ago concluded it better to sacrifice a downtube or two in favor of my rotator cuffs, which are not nearly as easily repaired. – JG}}*

**An experienced pilot flying a rented intermediate glider went XC at a site of limited familiarity and crashed upon landing in a tight field during midday conditions.** The accident pilot was familiar with this LZ from ground inspection, but had never landed there before. Pilot or glider was caught by a post at the end of the field while attempting a conservatively low approach. Injuries included a broken forearm and black eye. Glider damage included a bent control frame. The accident pilot believes that his full-face helmet, glasses, gloves, and chest-mounted parachute may have prevented further serious injury.

**A student pilot on a training hill started screaming during his launch run due to a suddenly dislocated shoulder.** This shoulder had been dislocated a couple of times several years in the past.

**A master-rated pilot who had flown twice in the last six months attempted to land in a field with tall grass and mistimed the flare.** Injuries included a broken leg. A recent change of prescription glasses may have been a contributing factor.

**An experienced pilot crashed while attempting a slope launch.** The accident pilot was observed to have a high nose angle and launched with wings not level. The result was a lifted tip followed by a spin-in during the launch run. Injuries included a concussion, and the accident pilot was medevaced for treatment. The accident pilot was not a USHGA member and the sole report on this incident is from a pilot who only saw the second half of the accident from a distance.

**An experienced advanced pilot chose to launch at a site where the grass in the LZ was known to be high, after hearing reports that it actually was “not so bad.”** Turned out it was. The accident pilot ended up landing in a thermal-induced tailwind, flared weakly, and could not outrun the glider (perhaps due to the tall grass). Injuries included a broken arm.

**A student approaching his novice signoff was in the first day of scooter towing lessons when he experienced a release failure.** Lessons had continued even as the wind strengthened. On the final tow the pilot was unable to release and ended up heading 90 degrees to the intended flight path while dragging the towrope, which eventually caught on something and initiated a nose-over. Injuries included a broken wrist. Glider damage included a broken downtube. The instructor believes there were signs that the lessons for this pilot should have been halted as the winds strengthened, and that the student was not thoroughly briefed on the release system and alternate procedures in case of a release failure.

**A pilot launched with a mis-rigged harness system.** Upon preflight inspection of his harness, the pilot decided some lines needed to be undone from the carabiner in order to untangle them. After reinstallation a hang check was performed, and no problems were noted by either the pilot or his wire crew. Immediately after launch the pilot noted that his body angle and position were entirely wrong. After landing it was discovered that one of the lines had not been positioned properly through the carabiner.

**A highly experienced pilot who had been accused of performing lazy launches with his advanced glider was determined to keep the nose down during this launch.** The pilot's next recollection is of waking up in a hospital with injuries to face and arm. The pilot's full-face helmet may have mitigated some of the damage.

**A student with multiple scooter-tow lessons was returning after a four- to six-week hiatus.** Upon release at about 75-100 feet AGL he did a 90-degree left turn toward

some obstacles, followed by another left turn, and yet another despite receiving contrary instructions via radio. The student mushed the glider all the way to the ground, resulting in injuries to the head, neck and chest. The instructor believes that when the student towed up higher than expected, he locked onto a flight plan that would return to the starting point.

**An advanced pilot aborted flight to the primary LZ when he noticed power lines in the way.** An attempted landing in a short field forced the pilot to flare early and high, resulting in a nose tuck. Injuries to the head and arm were sustained.

**A soaring pilot was flushed off the ridge and experienced sink all the way to the LZ.** With no time to unzip his harness, the pilot elected to perform a tailwind roll-in landing. Said landing proceeded without incident until the wheels suddenly caught and the glider whacked hard. Injuries included a dislocated shoulder.

**A highly experienced pilot was caught by a gust while landing.** A conjectured scenario is a tip stall into granite. Injuries included a fractured skull, damage to eye socket, and broken wrist. Head injuries were perhaps compounded by a half-shell helmet.

**A very low-airtime novice under radio supervision launched and began to ridge soar at mush speed.** Despite radio instructions, the pilot went through a stall break, and ended up flying straight towards and flaring into the ridge. Observers hypothesized that the pilot did not recognize stall signals and was attempting to go to the basetube too soon after launch. The turn followed by stall took place immediately after the pilot transitioned to the basetube.

**A highly experienced pilot flying in gusty wind conditions was hit by a gust that produced an uncommanded turn soon after launch.** The glider did not respond to reverse input. The pilot was unhurt, but the glider was totaled. The pilot hypothesizes that he was flying too slow.

**A pilot flying XC sank out and was hit by a strong tailwind (possibly thermal induced) during final approach.** Injuries included a broken arm.

**During a tow competition the pilot's towrope got caught on his helmet, pulling the helmet over his eyes.** The glider was damaged, but the pilot escaped injury.

**A low-airtime novice, who had recently transitioned from a single-surface glider to a docile double-surface wing, attempted landing in small LZ and ran out of room.** The glider suffered unspecified damage. The pilot chastised himself for not having practiced setting up for small field landings in a larger field first.

**A pilot flying in an old harness was climbing high over a ridge on a strong-wind day when his parachute popped out.** He landed near the top of the ridge and was dragged backwards about 75 feet through rocks and bushes. Injuries included broken lumbar (vertebrae) and bruised internal organs; the glider's downtubes and keel were broken and the noseplate was torn off. The pilot did not have a hook knife.

**A pilot performing his first solo foot-launch high flight misjudged airspeed flying downwind with a moderate tailwind, stalled the glider and spiraled in.** Unspecified injuries did not require a stay in hospital.

**A pilot on a single-surface glider launched into winds of 10-15 mph with a forecast for diminishing velocity.** Instead, the winds ramped up and the pilot was blown backwards to land in trees on the ridge. Injuries included a crushed vertebra and a broken foot sustained during a fall while attempting to climb down unaided. The pilot did not use a radio to call for help until after the fall.

**A group of pilots were running a winch-tow operation when the wind switched, but they decided to continue to fly with a crosswind rather than reposition the winch.** Lack of communication between the winch operator and a pilot may have led to a too-slow tow – the glider barely got airborne, then stalled and spun around a wing tip. Injuries included a broken arm. Lack of wheels may have contributed to the accident because there was no option except to flare.

**A highly experienced pilot launched from a high-altitude site, attempted to thermal immediately off launch and impacted the terrain.** The pilot suffered extensive injuries throughout the body accompanied by amnesia. Several possible contributing factors were mentioned, such as mindset and emotional state right before launching. Perhaps the most important factor was the pilot's tendency during the last few years to thermal very close to terrain, primarily at lowland sites where less clearance is needed than at high-altitude sites.

Again, the above are just brief summaries of those non-fatal accidents {*reported to USHGA*} during 2004. If from reading the above you were led to contemplate just one of your own questionable habits or practices, then the reports have served their purpose. Please continue to submit reports of any accidents that you experience or witness. More information leads to greater understanding. Accident reports may be filed online at <http://www.ushga.org/emailacc.asp>. Forms for mailing in a report are available from observers and instructors, or may be downloaded for printing here: <http://www.ushga.org/forms.asp>.