



Nuff Sed!

Illustrations by *Ted Wilbur*

Fatal Line-up

An HH-1N "Huey" was conducting routine search and rescue (SAR) training and area familiarization in mountainous terrain under daytime visual flight rules conditions. The helicopter aircraft commander (HAC) was familiar with the area and had been assigned to the squadron for more than a year. The copilot had recently joined the unit and this was his first flight along the route. After an hour airborne conducting high-altitude SAR training, the HH-1N proceeded west and descended to intercept a river and fly south toward a lake for the area familiarization portion of the flight.

As it was flying over a winding section of the river, at about 200 feet above ground level, the aircraft struck a span of power lines. The power lines passed above the helo's upper wire cutter and below the main rotor blade. They struck the lower portion of the rotating control tubes, just above the scissors and sleeve assembly. Both tubes failed, severing all cyclic and collective connection to the main rotor blades. Without pitch, roll, climb or descent control, the helo went out of control and crashed 1,200 feet down river from the point of initial contact. All four crew members and the sole passenger perished on impact.



Grampaw Pettibone says:

Gol dang it! What a horrible loss! A seemingly tame situation turned to disaster in a second's time.

The span of power lines was not charted on any available publications; however, the HAC was known to have some knowledge of them. Apparently, the aircrew relied strictly on the "see and avoid" method to remain clear of obstacles along the route. This was tough to do under the circumstances, because the backdrop for the crew's view approaching the wires was a high mountain face ahead and the river curving 80 degrees to the right. The terrain completely camouflaged or masked the power lines and the weathered brown wooden poles which supported them.

Three years earlier a civilian heli-

copter struck the same power lines from the same direction, killing the two occupants. Despite this mishap, the power company elected not to install visual augmentation devices when the lines were re-strung. The follow-up investigation of the civilian accident by higher authority failed to identify the height and near invisibility of these power lines as a cause of the mishap and, as a result, made no recommendations to mark or re-route the power lines.

The Navy crew erred in relying solely on the "see and avoid" theory to navigate this one-mile portion of the river, but higher authority should have taken more effective action after the civilian mishap. This lack of action contributed to the Navy accident.

All Gramps can say is to become as familiar as you can with the terrain you're going to fly down low **BEFORE YOU LAUNCH**, and assume that obstacles may be in your path.

Low Light . . . High Impact

An AH-1W *Sea Cobra* gunship with its two-pilot crew was wingman in a two-plane, night close air support flight from a ship. The mission was to be conducted using night vision goggles (NVGs) under low light level conditions. The aircraft departed the ship and proceeded directly to an air station to begin the mission. The flight was early and held at the beach line for an hour before being summoned inland by a forward air controller to support the assault exercise.

The AH-1Ws flew an uneventful but fatiguing mission, then headed seaward to return to the ship. The *Sea Cobra* leader checked in with the tower and was advised the ship had to

maneuver for winds. He was assigned holding in a starboard delta pattern. The leader then requested and was granted approval to hold in an overhead delta at 500 feet for better visual reference, since the visibility was minimal due to haze and there was no discernible horizon.

The section proceeded up the starboard side of the ship at 500 feet and 80 knots with the wingman in a cruise position at the leader's five o'clock, three to five rotors out. The leader turned left across the bow in a 15 to 20 degree angle of bank in the holding pattern. A moment later the wingman was observed to impact the water at a relative bearing of 310 degrees from the ship. The *Sea Cobra* struck the sea in a high-G, nonsurvivable attitude. The AH-1W hit skids first, then rolled 170 degrees with the cabin contacting the water almost completely inverted and nose down. The pilots were killed, the aircraft lost.



Grampaw Pettibone says:

Great horned toads! Another case of lost situational awareness and flyin' a workin' machine into the water.

The crew had flown a tiring mission under tough visibility conditions and had probably lost a measure of alertness at a critical point in the holding turn. Investigators learned that the intercockpit communications system (ICS) had been lost. They also wondered why the pilots didn't respond to the radar altimeter warning.

Because of the low-light conditions, haze and lack of horizon, hindsight tells me it mighta been better to shed the NVGs and fly on instruments. Loss of the ICS at an untimely moment made matters worse.

No matter what the distractions, when the weather is workin' against you, work against the weather by believin' things can/will go wrong. And above all else, fly the aircraft. When it comes to that key triumvirate—aviate, navigate, communicate—aviate is your first priority.

