



National Transportation Safety Board Aviation Accident Final Report

Location:	Meadview, AZ	Accident Number:	LAX07LA281
Date & Time:	09/27/2007, 1440 MST	Registration:	N808MH
Aircraft:	Eurocopter France EC 130 B4	Aircraft Damage:	Substantial
Defining Event:		Injuries:	3 Minor, 5 None
Flight Conducted Under:	Part 135: Air Taxi & Commuter - Non-scheduled - Sightseeing		

Analysis

The pilot observed one large bird ahead to the left and below the helicopter while cruising between 100 and 120 knots, and 500 feet above terrain. Another large bird, tentatively believed to be a Golden eagle with an 8-foot wingspan, suddenly appeared directly ahead of the helicopter. Although the lower elevation bird passed left of the helicopter, the second bird impacted the helicopter in the area of the front windscreen (bubble). The center front and left windscreens shattered, and debris impacted and injured the pilot and two passengers. The pilot immediately commenced a shallow bank turn toward a nearby airport while descending for landing. The air tour sightseeing flight helicopter was equipped with a video camera, which captured images of the approaching birds.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: Collision with a bird during cruise flight.

Findings

Occurrence #1: IN FLIGHT COLLISION WITH OBJECT
Phase of Operation: CRUISE - NORMAL

Findings

1. (C) OBJECT - BIRD(S)
2. WINDOW,CANOPY - PENETRATED

Factual Information

On September 27, 2007, about 1440 mountain standard time, a Eurocopter EC 130 B4, N808MH, collided with an eagle while cruising about 5 miles north of Meadview, Arizona. The pilot's intended destination for the air tour sightseeing flight was a helispot near the Quartermaster Bluff, Grand Canyon, Arizona. Immediately following the impact, the pilot made a precautionary landing at the nearest facility, the uncontrolled Pearce Ferry Airport, located about 2 miles north-northeast of his location. Visual meteorological conditions prevailed at the time. The pilot and two passengers sustained minor injuries, and five passengers were not injured. The helicopter was owned and operated by Maverick Helicopters, Inc., Las Vegas, Nevada, and it was substantially damaged. The flight was performed under the provisions of 14 Code of Federal Regulations Part 135, and a company flight plan had been filed. The flight originated from Las Vegas about 30 minutes before the accident.

According to Maverick's Director of Operations (DO), during the impact sequence the left front windshield (bubble) was punctured and shattered, the vertically oriented column separating the left and center windshields was cracked, and the center windshield was cracked. Also, supporting fuselage frame structure around the windshield sections was deformed.

The DO reported that, at the time of the accident, the helicopter was traversing a bluff area between the Colorado River and the airport. The helicopter was cruising between 100 and 120 knots, and it was approximately 3,500 feet mean sea level. The airport's elevation is 2,941 feet msl.

The pilot provided the following account of the accident:

Approaching the western edge of Grapevine Mesa in level cruise flight, I noticed a large bird about to pass within 50 yards slightly below and to the left side of the helicopter. Suddenly, another bird appeared almost directly ahead. This second bird struck the windscreen section ahead of my seat position, shattering most of the left transparency, and a portion of the center transparency. At the moment of impact I was struck in the face, neck, and arm by debris and/or parts of the bird. I immediately began a descending, decelerating, left-hand turn toward the runway. During the approach I was able to make radio contact with other pilots in my flight to advise them of my situation and intentions. I terminated the approach about midfield, brought the helicopter to a hover, and landed. I advised the passengers that upon shutdown and stopping of the rotor blades, we would evacuate the helicopter. I performed a normal shutdown procedure, stopped the rotor blades, and attempted to open my door. Finding it jammed shut, I instructed the passengers on the right side of the cabin to open the right door. The three front passengers and I exited the helicopter through the right side.

The impacted bird was reported as likely being a golden eagle. It had an estimated 8-foot-long wingspan. The bird was not recovered from the accident helicopter's landing site.

The helicopter was equipped with a video camera that was operating at the time of impact. The DO provided the National Transportation Safety Board investigator with a copy of the video recording, in DVD format. The camera's forward facing lens photographed landscape ahead of the helicopter, and the helicopter-to-bird closure sequence, but not the collision.

The video shows two birds flying ahead of the helicopter a few seconds prior to the collision. The lower elevation bird appears to pass below and to the left of the helicopter. The second bird, which appears larger, rapidly "grows" in size until only one wing is apparent as it

disappears above the field of view. Less than 1 second later the sound of an impact is apparent, which is immediately followed by wind noise and voices in the cabin.

The video also shows that the helicopter is in near level flight during the few seconds immediately prior to the collision. Thereafter, the video shows the helicopter commence a shallow bank left turn while descending toward the airport.

Still pictures from the DVD showing the approaching birds are included in the Safety Board's public docket for this accident.

Pilot Information

Certificate:	Flight Instructor; Commercial	Age:	41, Male
Airplane Rating(s):	Single-engine Land	Seat Occupied:	Left
Other Aircraft Rating(s):	Helicopter	Restraint Used:	Seatbelt, Shoulder harness
Instrument Rating(s):	None	Second Pilot Present:	No
Instructor Rating(s):	Helicopter	Toxicology Performed:	No
Medical Certification:	Class 2 With Waivers/Limitations	Last FAA Medical Exam:	01/01/2007
Occupational Pilot:		Last Flight Review or Equivalent:	06/01/2007
Flight Time:	8465 hours (Total, all aircraft), 2185 hours (Total, this make and model), 8360 hours (Pilot In Command, all aircraft), 225 hours (Last 90 days, all aircraft), 70 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Manufacturer:	Eurocopter France	Registration:	N808MH
Model/Series:	EC 130 B4	Aircraft Category:	Helicopter
Year of Manufacture:		Amateur Built:	No
Airworthiness Certificate:	Normal	Serial Number:	3914
Landing Gear Type:	Skid	Seats:	8
Date/Type of Last Inspection:	09/01/2007, 100 Hour	Certified Max Gross Wt.:	5350 lbs
Time Since Last Inspection:		Engines:	1 Turbo Shaft
Airframe Total Time:	2893 Hours at time of accident	Engine Manufacturer:	Turbomeca
ELT:	Installed, not activated	Engine Model/Series:	Arriel 2B1
Registered Owner:	MAVERICK HELICOPTER INC	Rated Power:	849 hp
Operator:	MAVERICK HELICOPTER INC	Operating Certificate(s) Held:	On-demand Air Taxi (135)
Operator Does Business As:		Operator Designator Code:	M7KA

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual Conditions	Condition of Light:	Day
Observation Facility, Elevation:		Observation Time:	
Distance from Accident Site:		Direction from Accident Site:	
Lowest Cloud Condition:	Clear	Temperature/Dew Point:	31 °C / -2 °C
Lowest Ceiling:	Broken / 25000 ft agl	Visibility	100 Miles
Wind Speed/Gusts, Direction:	6 knots, 100°	Visibility (RVR):	
Altimeter Setting:	29.86 inches Hg	Visibility (RVV):	
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	Las Vegas, NV (LAS)	Type of Flight Plan Filed:	Company VFR
Destination:	Grand Canyon, AZ (NONE)	Type of Clearance:	None
Departure Time:	1400 PDT	Type of Airspace:	

Airport Information

Airport:	Pearce Ferry (L25)	Runway Surface Type:	Dirt
Airport Elevation:	2941 ft	Runway Surface Condition:	Dry
Runway Used:	01	IFR Approach:	None
Runway Length/Width:	2900 ft / 50 ft	VFR Approach/Landing:	Precautionary Landing

Wreckage and Impact Information

Crew Injuries:	1 Minor	Aircraft Damage:	Substantial
Passenger Injuries:	2 Minor, 5 None	Aircraft Fire:	None
Ground Injuries:	N/A	Aircraft Explosion:	None
Total Injuries:	3 Minor, 5 None	Latitude, Longitude:	36.087500, -114.080556

Administrative Information

Investigator In Charge (IIC):	Wayne Pollack	Adopted Date:	07/30/2008
Additional Participating Persons:	Terry L Jones; Federal Aviation Administration; Las Vegas, NV		
Publish Date:			
Investigation Docket:	NTSB accident and incident dockets serve as permanent archival information for the NTSB's investigations. Dockets released prior to June 1, 2009 are publicly available from the NTSB's Record Management Division at pubinq@ntsb.gov , or at 800-877-6799. Dockets released after this date are available at http://dms.nts.gov/pubdms/ .		

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