Aviation Investigation Final Report

Location:	JOHNSON CITY, New York	**Accident Number:**	BFO93LA095
Date & Time:	May 21, 1993, 16:37 Local	**Registration:**	N17870
Aircraft:	SCHWEIZER SGS-233A	**Aircraft Damage:**	Substantial
Defining Event:		**Injuries:**	2 Minor
Flight Conducted Under:	Part 91: General aviation - Personal		

Analysis

THE 2 PLACE GLIDER WAS TOWED ON A FLIGHT FROM ENDICOTT TO BINGHAMTON, NY. A PRIVATE PILOT WAS FLYING THE GLIDER AND AN INSTRUCTOR WAS ALONG AS AN INTENDED PASSENGER ON THIS FLIGHT. AS THE AIRCRAFT APPROACHED THE DESTINATION, THE GLIDER WAS RELEASED FROM BEING TOWED AND WAS MANEUVERED TO LAND ON RUNWAY 34. THE APPROACH TO RUNWAY 34 WAS OVER RISING TERRAIN WITH A CLIFF SHORT OF THE THRESHOLD. ON FINAL APPROACH, THE GLIDER ENCOUNTERED AN EXCESSIVE SINK RATE. SEEING THAT THE GLIDER WOULD NOT REACH THE RUNWAY, THE INSTRUCTOR OPTED TO TAKE CONTROL. HE TURNED THE GLIDER TO AVOID RISING TERRAIN AND OBSTRUCTIONS, AND TRIED TO LAND IN A SUITABLE AREA. HOWEVER, BEFORE ROLLING OUT OF THE TURN, A WINGTIP CONTACTED TERRAIN AND THE GLIDER CRASH LANDED. DURING A POST-ACCIDENT EXAMINATION, THE SPOILERS WERE FOUND IN THE 'UP' POSITION, BUT THE INVESIGATION DID NOT VERIFY WHETHER THE SPOILERS WERE EXTENDED BEFORE OR AFTER IMPACT. THE INSTRUCTOR HAD ABOUT 247 HOURS OF FLIGHT TIME (IN GLIDERS) AND THE OTHER PILOT HAD ABOUT 35 HOURS FLIGHT TIME.

Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: IMPROPER PLANNING/DECISION BY THE FLIGHT CREW. FACTORS RELATED TO THE ACCIDENT WERE: THE DOWNDRAFT ON FINAL APPROACH, THE TERRAIN CONDITIONS (CLIFF & OBSTRUCTIONS) NEAR THE APPROACH END OF THE RUNWAY, AND THE LACK OF RELATIVE EXPERIENCE FOR EACH OF THE PILOTS.

Findings

Occurrence #1: UNDERSHOOT
Phase of Operation: APPROACH - VFR PATTERN - FINAL APPROACH

Findings
1. (F) WEATHER CONDITION - DOWNDRAFT
2. (C) PLANNING/DECISION - IMPROPER - PILOT IN COMMAND
3. (F) LACK OF TOTAL EXPERIENCE IN TYPE OPERATION - PILOT IN COMMAND
4. (F) LACK OF TOTAL EXPERIENCE - OTHER CREWMEMBER

Occurrence #2: IN FLIGHT COLLISION WITH TERRAIN/WATER
Phase of Operation: MANEUVERING - TURN TO LANDING AREA (EMERGENCY)

Findings
5. (F) TERRAIN CONDITION - MOUNTAINOUS/HILLY
6. (F) TERRAIN CONDITION - HIGH OBSTRUCTION(S)

Factual Information

On May 21, 1993, at 1637 eastern daylight time, a Schweizer SGS 233A glider, N17870, registered to the Triple Cities Soaring Society, was substantially damaged during landing at Binghamton Regional Airport, Johnson City, New York. The pilot and passenger received minor injuries. Visual meteorological conditions prevailed and a flight plan was not filed. The personal flight departed from Endicott, New York, and was conducted under 14 CFR 91.

According to FAA inspector Anthony James, the glider was cleared to land on runway 34 by Binghamton Tower. About one half mile from the runway, the glider was observed to bank to the right and pitch down. It impacted a sloped bank of rocks near the threshold of runway 34 and then slid into a tree. Inspector James examined the wreckage, confirmed control cable continuity, and reported that the "spoilers were up." He also stated that no mechanical malfunctions were reported by the pilot.

According to the certified flight instructor (CFI), the private pilot seated in the rear seat was at the controls of the glider up until the last ten seconds of flight. The flight departed with a towplane takeoff from an airstrip located 11 miles from the Binghamton Regional Airport. The glider was towed up to 3000 feet above mean sea level. The CFI stated that he delayed the order to release from the towplane so that ". . . the angles looked good for a very conservative approach . . . " He stated that the glider was ". . . less than the runway's length out from the runway . . . " at the time of release.

The CFI stated that during the initial portion of the straight in approach to runway 34, the glider encountered a "fairly severe sink" and the private pilot corrected "appropriately". It still appeared to the CFI that the glider would be able to "land beyond the numbers". The glider then encountered "very severe sinking air". After observing rapidly rising terrain and powerlines near the threshold of the runway, the CFI took control of the glider and turned toward a small scrub covered field because " . . . that seemed to be our only option." The right wing impacted the ground, followed by the nose of the glider. No mechanical malfunctions were reported by either pilot.

Pilot Information

Certificate:	Commercial; Flight instructor	**Age:**	30,Male
Airplane Rating(s):	None	**Seat Occupied:**	Left
Other Aircraft Rating(s):	Glider	**Restraint Used:**	
Instrument Rating(s):	None	**Second Pilot Present:**	Yes
Instructor Rating(s):	Glider	**Toxicology Performed:**	No
Medical Certification:	None None	**Last FAA Medical Exam:**	
Occupational Pilot:	UNK	**Last Flight Review or Equivalent:**	
Flight Time:	247 hours (Total, all aircraft), 7 hours (Last 90 days, all aircraft), 7 hours (Last 30 days, all aircraft)		

Aircraft and Owner/Operator Information

Aircraft Make:	SCHWEIZER	**Registration:**	N17870
Model/Series:	SGS-233A SGS-233A	**Aircraft Category:**	Glider
Year of Manufacture:		**Amateur Built:**	
Airworthiness Certificate:	Normal	**Serial Number:**	240
Landing Gear Type:	Skid	**Seats:**	2
Date/Type of Last Inspection:	November 4, 1992 Annual	**Certified Max Gross Wt.:**	1040 lbs
Time Since Last Inspection:	21 Hrs	**Engines:**	0 Unknown
Airframe Total Time:	1300 Hrs	**Engine Manufacturer:**	
ELT:	Not installed	**Engine Model/Series:**	
Registered Owner:	TRIPLE CITIES SOARING SOCIETY	**Rated Power:**	
Operator:	TRIPLE CITIES SOARING SOCIETY	**Operating Certificate(s) Held:**	None
Operator Does Business As:		**Operator Designator Code:**	

Meteorological Information and Flight Plan

Conditions at Accident Site:	Visual (VMC)	**Condition of Light:**	Day
Observation Facility, Elevation:	BGM ,1637 ft msl	**Distance from Accident Site:**	1 Nautical Miles
Observation Time:	16:37 Local	**Direction from Accident Site:**	160°
Lowest Cloud Condition:	Scattered / 5000 ft AGL	**Visibility**	45 miles
Lowest Ceiling:	Broken / 9500 ft AGL	**Visibility (RVR):**	
Wind Speed/Gusts:	8 knots /	**Turbulence Type Forecast/Actual:**	/
Wind Direction:	360°	**Turbulence Severity Forecast/Actual:**	/
Altimeter Setting:	29 inches Hg	**Temperature/Dew Point:**	16°C / 3°C
Precipitation and Obscuration:	No Obscuration; No Precipitation		
Departure Point:	ENDICOTT , NY (N17)	**Type of Flight Plan Filed:**	None
Destination:	(BGM)	**Type of Clearance:**	None
Departure Time:	16:00 Local	**Type of Airspace:**	Class D;Class E

Airport Information

Airport:	BINGHAMTON REGIONAL BGM	**Runway Surface Type:**	Asphalt
Airport Elevation:	1637 ft msl	**Runway Surface Condition:**	Dry
Runway Used:	34	**IFR Approach:**	
Runway Length/Width:	7500 ft / 150 ft	**VFR Approach/Landing:**	Full stop;Straight-in

Wreckage and Impact Information

Crew Injuries:	2 Minor	**Aircraft Damage:**	Substantial
Passenger Injuries:		**Aircraft Fire:**	None
Ground Injuries:	N/A	**Aircraft Explosion:**	None
Total Injuries:	2 Minor	**Latitude, Longitude:**	42.110542,-75.960487(est)

Administrative Information

Investigator In Charge (IIC):	Guzzetti, Jeffrey
Additional Participating Persons:	ANTHONY JAMES; ROCHESTER , NY
Original Publish Date:	June 30, 1994
Last Revision Date:	
Investigation Class:	Class
Note:	
Investigation Docket:	https://data.ntsb.gov/Docket?ProjectID=8773