CLIPPER
Newsletter of the Pan Am Historical Foundation • Vol. 15, No. 1, February 2009

# Water ditchings: Scary, but survivable

Of course, the Airbus A320 did not crash into the Hudson River. It was ditched, making US Airways Flight 1594 the first ***jet*** airliner reported to do so. All 155 passengers and crew survived, after a flock of geese struck the A320's engines, shutting both down minutes after take-off from LaGuardia Airport.

The January 15 episode indeed is awe-inspiring, thanks to the flight and cabin crews who performed their jobs with calm courage and professional competence: Captain Chesley B. Sullenberger, co-pilot Jeff Skiles, flight attendants Sheila Dail, Donna Dent and Doreen Welsh. We salute them. All five are responsible for the remarkable rescue of all aboard without a single fatality.

### Pan Am knows a thing or two about ditching airliners

Pan Amers can speak from experience about emergencies that require touching down in seawater. And saving all aboard.

**The Honolulu Clipper**, on November 3, 1945 was en route to San Francisco from Pearl Harbor with 26 passengers aboard the B-314 flying boat. Five and a half hours into the flight the No.3 engine backfired, shooting flames. Captain S.E. "Robby" Robinson shut down and feathered the engine, then headed back to Hawaii. Then No.4 engine started acting up. Ninety minutes later, it, too, was shut down. But the Clipper, now on two remaining engines, seemed unlikely to make it all the way back.

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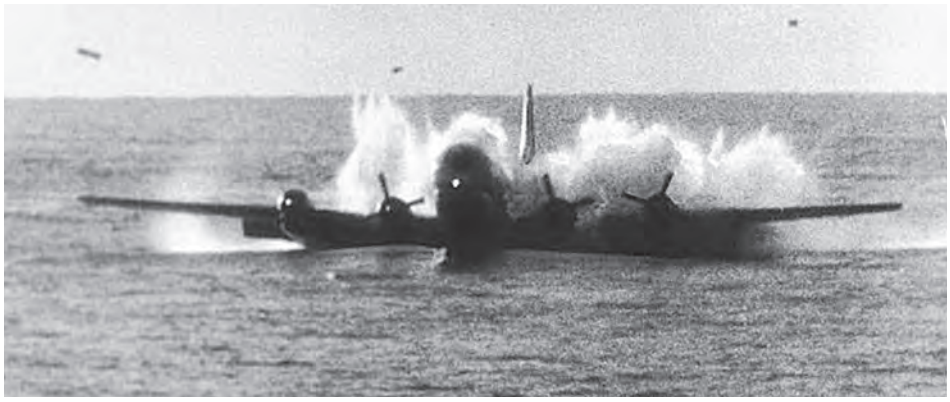

**Photos of Pan Am's Stratocruiser Flight 943 on its descent to a water ditching in the Pacific.** *—William Simpson/US Coast Guard photos*

# Water ditchings: Scary, but survivable

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By then it was 11PM and pitch black. The decision was made to land in the Pacific, 650 miles east of Oahu. Technically, because the B-314 is a flying boat, it landed in the ocean rather than being ditched — the term used when a landplane is intentionally set down in water. All aboard survived. The aircraft was not damaged.

**The Clipper Sovereign of the Skies,** on October 16, 1956, Flight 943, a Stratocruiser with 31 passengers aboard, suddenly swooped after a loud screeching noise. It was 3:20AM. If that didn't wake all those on board, Captain Richard Ogg's voice on the loudspeaker did. "Ladies and gentlemen, this is Captain Ogg. We have an emergency. Our No.1 engine is uncontrolled. A ditching at sea is likely. We have a Coast Guard cutter nearby that is able to render assistance. There is no cause for alarm."

Two stewardesses (as they were called then) and the purser explained what each passenger must do. As the cabin staff went about their emergency duties, the No.4 engine coughed and quit. The Stratocruiser, the most luxurious airliner of its day, was 1,000 miles out of San Francisco — too far ahead. Hawaii — too far behind.

### Captain and Commander in sync and at the ready

Captain Ogg, reluctant to ditch the plane in the dead of night, decided to exhaust the fuel and wait until daylight. Switching off the seat-belt sign, he told the passengers to relax: conditions were just fine for ditching in the Pacific. The cutter Pontchartrain's skipper, Commander William K. Earle was advised. The Clipper circled above at 2,000-feet until dawn.

The cutter had lain down a long strip of fire-fighting foam for the airliner to come down into the waves. Captain Ogg touched down gently, but the Stratocruiser bounced, whipping violently around when an engine tore loose. The airliner broke in half.

The passengers were guided onto life-rafts and put aboard the cutter. Eleven minutes later, the abandoned Stratocruiser sank. All aboard survived.

### A ditch in time saves lives

Historically, the survival rate of ditching incidents is surprisingly high. Much depends on several factors: the size of the plane, the condition of the water, the speed at impact, the height of the wings on the aircraft. The National Transportation Safety Board found that "of the 179 ditchings we reviewed, only 22, or 12%, resulted in fatalities. Although survival rates vary by time of year and water-body type, the overall general aviation ditching survival rate is 88%."

Yet, the NTSB added, "even that record is somewhat misleading; the potential ditching survival rate is actually a bit better." (The board's findings are based on records from 1985-1990 and 1994-1996.)

Pilot competence and experience should not be overlooked. U.S. airlines by law are required to provide training for water ditching; major foreign airlines serving the United States ordinarily also provide training programs matching the U.S. standards.

The degree of emphasis on water ditching, however, is difficult to ascertain, in part because of its rarity. On the other hand, it is common for cabin crews to demonstrate the application of life vests and the location of passenger seat cushions for use as flotation devices.

Here are a few examples of water ditchings which tend to confirm that crew training is invaluable and ditching is survivable:

• **2009:** The January 15th ditching in the Hudson River is the latest and ranks among the most successful rescues, with no fatalities. Survival rate: 100 percent.

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**The Boeing Stratocruiser was the most luxurious airliner of its day. Unfortunately, Clipper Sovereign of the Skies ended up in the ocean and sank eleven minutes after all passengers and crew were guided onto life rafts and put aboard a cutter.**

# Water ditchings: Crew training is invaluable

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• **2005:** Tuninter Flt. 1153, an ATR-72, ran out of fuel and ditched off the coast of Sicily. The aircraft broke into three pieces. Of the 39 aboard, 19 died and 20 survived, some seriously injured. Survival rate: 59 percent.

• **2002:** Garuda Indonesia Flt. 421 (B737) flew through heavy rain and hail when both engines flamed out and could not be restarted. The plane was ditched into a river on Java Island, where it came to rest in knee-deep water. Of the 60 aboard, a flight attendant was killed. Survival rate: 98 percent.

• **1996:** Ethiopian Flt. 961 (B767-200ER) ran out of fuel and was ditched in water 500 feet from land as the flight crew fought hijackers. The plane hit the water at high speed, dragging its left wing, rolling and breaking into three pieces. Of the 175 on board, 52 survived. Some were killed by the impact, others because they inflated their life vests in the cabin, trapping themselves. Survival rate: 26 percent

• **1970:** ALM Flt. 980 (DC9-33CF) ran out of fuel and ditched in deep water off Princess Juliana International Airport on San Maarten island after several attempts to land in low-visibility weather. Of the 63 aboard, 40 were rescued by U.S. military helicopters. Survival rate: 63 percent.

• **1963:** An Aeroflot Tupelov 124 ran out of fuel and ditched in the Neva River. The airliner remained afloat. A nearby tugboat towed it ashore after taking on all 52 passengers. Survival rate: 100 percent.

***— M.Y.***

## Birds vs Aircraft

Reported aircraft bird strikes numbered 7,439 in 2007, according to the latest government figures available. The hits resulted in 312 engine shutdowns, 1,442 aborted take-offs and 3,094 precautionary landings. Minor negative affects totaled 1,162. The FAA reported four times the number of bird strikes in 2007 than the 1,738 reported for 1990.

Other sources counted 109,151 bird strikes from January 1990 to December 2008, including 98,759 civil and 10,392 military aircraft. They involved 454 avian species.

Suggested possible causes of the strikes were quieter engines and greater numbers of large birds because of wildlife conservation efforts in North America.

**Pan Am's B-314 Honolulu Clipper only looks like its ditching into the Pacific. It's actually landing because, technically, that's what flying boats are supposed to do — even if they happen to be 650 miles away from a safe mooring and two engines have conked out.**