

Airport Wildlife Mitigation - 'Birdstrike news you can use'

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Ryanair 737 heavily damaged at Ciampino after birdstrike on approach, see page two

Report from Sanford

The annual joint meeting of BSCUSA/Canada took place in Sanford, Florida in August. Despite a tropical storm the meeting was attended by about 400 people. Unfortunately neither papers nor presentations have yet been posted on the BSCUSA website, but papers submitted for publication may be available from an academic journal in 2009. In the meantime the following captures some of the high points of the presentations:

NASA concerns with Shuttle launch bird strikes

Steve Payne, Shuttle Test Director, discussed NASA's concerns with shuttle launches and bird strikes with buzzards. In an attempt to decrease the local buzzard population NASA instigated the cleanup of the road kill along the 12 mile parkway leading to the Shuttle site. After continuous cleaning of the parkway the local buzzard population dropped by 2/3rds. Interestingly, Payne said NASA does not try to eliminate risk, but rather mitigate it. They now deploy a small bird radar which observes the location of buzzards during the launch. Like bad weather NASA simply waits for the birds to clear, then launches through the clear zone.

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Accident Report

FATAL

September, 2008

Caledon, South Africa

An Airtractor aerial applicator struck birds while engaged in crop dusting. The aircraft crashed, killing the pilot.



Air carrier dual ingestions

October, 2008

Ciampino, Italy

During a morning approach to Rome's second largest airport, the Ryanair B-737 struck large flocks of birds and suffered a power loss on both engines. Press reports indicated starlings. On landing the left main landing gear collapsed. Photos indicate numerous bird impact points on the aircraft's nose, leading edge slats, wings and engine cowlings. The Italian ANSV reported that there was substantial damage to the left landing gear, the left wing and the fuselage.



October, 2008

London Heathrow Airport

During a morning approach to London's largest airport the Cyprus Airlines A-330 ingested birds into both engines. Although the airline reported both engines damaged the UK AAIB took no note of the incident and has not issued a bulletin although the incident would appear reportable under AAIB rules.



October, 2008

Tallinn, Estonia

During descent at 3,000 feet the Estonia air B737 struck a large flock of birds. Press reports noted damage to its nose, landing gear, stabilizers, fuselage and both engines.



Incidents

September, 2008

Barcelona, Spain—Click Airways A320 safely returned for landing after ingesting a bird in one engine on takeoff.

Zaragoza, Spain - Air Europa B737 suffered bird strike damage on landing

October, 2008

Beijing, China - El Al B767 safely returned for landing after ingesting a bird during takeoff.

Sao Paulo, Brazil - Korean Air B777 safely returned for landing after ingesting a bird during takeoff.

Coolangatta, Australia - Virgin Blue B737 suffered a hydraulic failure after striking a bird on its nose landing gear during approach.

Chicago O'Hare - Sprit Airlines A319 suffered an engine ingestion on departure, returned safely for landing.

Omsk, Russia - KD Avia B737 was damaged on departure due to a collisions with birds.

Madrid, Spain - Air France A320 returned for a safe landing after a bird ingestion on takeoff.

Orlando, Florida - Delta Airlines B767 suffered damage to an engine and windshield after colliding with birds on takeoff.

Moscow, Russia - Delta Airlines B767 suffered engine damage after a bird ingestion during takeoff.

Omsk, Russia - S7 Airlines A319 returned safely for landing after ingesting a bird during take-off.

Salt Lake City, Utah - Delta Airlines MD90 returned safely for landing after ingesting a bird during takeoff.

Ambon, Indonesia - Sriwijana Air B737 returned safely for landing after ingesting a bird during takeoff.

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Airfield Cleanup reduces strikes

Marty Daniel of the USDA reported on efforts at several military airfields in Florida. Habitat modification such as removing standing water, spraying grasshoppers, installing anti-perching devices, eliminating bird houses on the airfield, improved fencing and exclusion netting over detention ponds resulted in a marked reduction in bird strikes at those airfields. Tyndall Air Force Base achieved a 50% reduction in bird strikes on the air field due to habitat modification.

Vulture mitigation successful

Jon Gilbert of Flyaway Farms reported a 95% success rate at moving troublesome vulture roosts at McDill Airbase. A fulltime harassment program of pyrotechnics, dead vulture effigies and shooting resulted in a dramatic increase in operational flying time availability. The use of 'bird watch condition' moderate or severe dropped significantly. Gilbert stressed that the harassment of the vultures had to be continuous to convince vultures to move.

United Kingdom efforts

Andy Baxter of the UK's Central Science Laboratory reported on a variety of strategies implemented at UK airports. Once a determination of unacceptable risk is made, based upon the mass of birds present, exclusion efforts are made. It was found that wire grids of .7 meters spacing were successful in excluding many birds, such as mallards, from wetlands areas. Bird balls were found to be completely effective in some wetland areas but were not practical for large areas.

Birdstrike database and mandatory reporting

Sandy Wright of the USDA reported that birdstrikes in the US continue to increase due to bird population increases, bird adaptation to urban living, quieter aircraft engines and other causes. There is currently no FAA metric for ascertaining if risk is being mitigated. It was felt that mandatory reporting of strikes would increase the usefulness of the database. During discussion Mont Smith of the Air Transport Association (ATA) stated that the ATA would no longer oppose mandatory reporting of birdstrikes. Later, in a separate conversation, Smith said (cont'd on Page 5)

BSC Canada call for papers

The next joint meeting of BSCUSA/Canada will be held in Victoria, B.C. on September 14-17, 2009.

BSC Canada has issued a call for papers for this meeting. Abstracts of papers and posters must be submitted by March 16, 2009. Submission details are available on the BSC Canada website at www.birdstrikecanada.com.

(report from Sanford, cont'd from page 4)

that, regarding the implementation of mandatory reporting of birdstrikes, the ATA would be "...taking it to Washington and getting the job done".

Small bird radar advances

T. Adam Kelly of Detect spoke on the success of the 50+ small bird radar units currently deployed across the world. Users are pleased with the results and seeing a solid return on their investment (ROI). As a result users are demanding more sophisticated units with higher performance, more capacities and features. Kelly detailed the "next generation" of birdstrike avoidance radars and new features such as a 3D scan.

USAF small bird radar summary

Gene Lebeouf of the USAF BASH reported on the USAF experience with bird avoidance radar units. Currently USAF seeks quicker transfer of information from the radar to decision making personnel and needs better definitions for Bird Watch Conditions (BWC). Further USAF would like automatic transfer of data to the ATC tower for warnings to be issued to flight crews. Lebeouf stated that the small radars were expensive but had no data on what the USAF's return on investment (ROI) was for the units it has purchased. There is currently no USAF training program for the use of these radars but one is under development, however it's deliver date is unknown.

US Navy bird radar and near-miss information

Matt Klope of the Navy presented a video of bird near misses at NAS Whidbey Island. The Navy feels there is a definite correlation between near miss events and the risk of birds strikes at an airport. The small radar units clearly show both aircraft tracks and conflicting bird patterns.

Ongoing FAA research on small radars

Ed Herricks of the FAA's CEAT reported on the FAA funded study of small bird radars and their use in mitigating wildlife hazards. The goal of this study is to analyze avian radars and develop an FAA Advisory Circular (AC) for the use of these radars. No delivery date for this product has been proposed.

Fatal Biz Jet crash investigation explained

Dr. Carla Dove of the Smithsonian Institute explained the Smithsonian's involvement in the investigation of the Citation business jet crash near Oklahoma City. Dove noted that the accident happened four miles from the airport in midafternoon during VMC conditions. Impact and post crash fire were severe. The number of human dead, five, and the fire made identification of bird remains difficult. However, her office achieved a 100% match with the white pelican. Bird hits were literally all over the airplane.

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(Report from Sanford, cont'd from page 5)

UK CAA Perspective

Nick Yearwood of the UK's CAA presented the UK's view on birdstrikes. Since the advent of mandatory birdstrike reporting in the UK in 2004 the number of reported birdstrikes has risen by 60%. However, he noted that the serious strike rate is not up despite an increase in air traffic. The CAA views birdstrike mitigation as a part of each airport's SMS program. There are barriers to effective integration of birdstrike mitigation programs, among them being poor communication/coordination; poor competence/performance by airport staff; lack of control and a weak SMS program. The CAA doesn't understand the culture of secrecy in the US airport community as the UK has had SMS with its open reporting and feedback loop for over 10 years. In the UK the CAA is not seeking a numeric metric to judge birdstrike programs but rather is looking for constant improvement year to year.

BSCUSA changes

There were a number of changes among the Birdstrike USA steering committee members, with the addition of a number of new faces. Also, a new strategic plan has been proposed to guide BSCUSA. Details are available on the BSCUSA website.

US Navy report on T-45 Goshawk crashes

The *Navy Times* has reported that the T-45 Goshawk trainer has had a good safety record over the last several years.

However, during a 9 month period from September, 2007 until May, 2008, five aircraft were lost to crashes, a disturbing spike in the accident rate. Of the five crashes, two were tied to bird strikes. According to *Navy Times*: "In each case, the pilots ejected and were not seriously injured, but the \$21 million planes, which joined the fleet starting in 1991, were destroyed. Based on accident investigations, no one was officially faulted in at least three of those crashes. One was caused by an engine malfunction, and two others crashed after striking birds that were then sucked into the engines."



One incident occurred during day landing pattern work at NAS Kingsville, Texas. The engine ingested a bird and failed, both pilots ejecting successfully. Another incident occurred during night landing pattern work at NAS Meridian, Miss. The engine ingested a bird and failed at very low altitude, causing a sudden and immediate ejection by the crew.

The single engine T-45 is a variant of the British Hawk, which has its own history with birdstrikes. YouTube featured a much viewed video of this model Canadian trainer ingesting a bird in the landing pattern and the subsequent engine failure and ejections.

Qualified Airport Biologist Listing

Based on industry and airport community request, Embry Riddle Aeronautical University began vetting resumes of biologists who seek to work on airports. Under FAA Advisory Circular 150/5200-36 only biologists who qualify may conduct wildlife assessments on airports. As both airports and biologists have said they were having difficulty determining qualification, ERAU has set up a panel of experts who review biologists qualifications. If the applicant appears to satisfy the criteria in the Advisory Circular, the applicant's name is posted on the ERAU website.

A list of qualified biologists and applications for listing can be found on the web at:
http://wildlife.pr.erau.edu/workshop/qualified_biologists.html.



NEXT WILDLIFE HAZARD TRAINING SESSION

Embry-Riddle will be scheduling its next training session on airport wildlife hazards in the spring of 2009.

This seminar is currently the only public training acceptable to the FAA Administrator to fulfill the FAA's training requirements of Advisory Circular 150/5200-36.

The seminar is three days in length. The first two days consist of classroom sessions led by four of the nation's top wildlife management experts. These sessions allow for plenty of interaction with the instructors, opportunities for questions and networking with fellow participants. Day three features a field trip to the host airport, during which hands-on wildlife mitigation exercises will be performed and mitigation techniques discussed.

Participants who successfully complete the seminar will receive a certificate of completion and continuing education units (CEU) from Embry-Riddle Aeronautical University.

You may register online at Embry-Riddle's website <http://www.erau.edu/ec/soctapd/wildlife-dfw.html> or call 866-574-9125 for more information.

Editorial

The most recent joint meeting of BSCUSA/Canada was completed in August in Florida, despite a good blow and torrential rain by a tropical storm. Was the meeting a success?

Depends on your metric, your definition of success. If judged alone by the number of attendees, about 400, then the meeting was on curve with other recent meetings.

If judged by new policies, procedures or information introduced, then, no, not a success. There were a number of good, sound scientific papers informing us of what we already knew: if airports use the procedures detailed in Transport Canada and FAA manuals then airports can control bird populations around their airports. Those new areas which were discussed, such as SMS, were labored and amateurish. Any closed culture which hopes to grow must bring in new blood, new ideas. The most interesting presentation was by NASA, which carefully detailed their flight plan: they identified a hazard, came up with a plan, implemented the plan and flew. Not rocket science but an excellent case study for BSCUSA. What we are engaged in is serious business, attested by reading page one, two or three of this newsletter, but not rocket science.

Our choice is clear: we can continue with more of the same, 35,000 birdstrikes a year. Or we can change to become more effective and impact the hazard, rather than the other way around.

Paul Eschenfelder, Editor
eschenfp@erau.edu



Cloud of starlings swarms across the runway at a major European international airport
