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Report from Kingston

The joint Birdstrike Committee USA/Canada was held in Kingston, Ontario in September. A variety of papers were presented. Some papers served as excellent case studies on how to implement wildlife mitigation/reduce bird strikes to aircraft. While some of the papers can be viewed at www.birdstrikecanada.com, that listing is incomplete. Reported below are summaries of some of the papers with the author's contact information attached.

Whiteman Air Base, Missouri

Todd Lewis, todd.lewis@whiteman.af.mil

Whiteman AFB was able to mitigate the air base's wildlife hazards by engaging in a comprehensive program: prairie chickens were relocated 150 miles away; deer on the airfield were eliminated by erecting an 8' fence; raptor numbers were reduced by 88% by applying zinc phosphate to rodents; dove over flights were reduced 95% by covering retention ponds and water pits with 'bird balls'.

Radar implemented at Dover AFB, Delaware

Karen Voltura, Karen@flyawaybash.com

Dover AFB has restricted its flight operations during a period from 30 minutes prior to sunrise/sunset to 90 minutes after sunrise/sunset due to bird over flights detected by radar. Over 35,000 snow geese are passing by or over the airfield at altitudes of 800' - 1,200', or at the base of the lowest cloud deck.

Successful bird mitigation at waste dump, failure at airport

Russ Defusco, birdmanruss@aol.com

A successful management plan was developed for a large dump immediately at the end of one of the runways at Louisville, Ky. The plan was based upon a full time program of control of birds at the dump site. The dump used radar to determine bird 'hot spots' and a full time staff to constantly harass the birds on site. Pyrotechnics, propane cannons and distress calls are principally used. It found that spikes worked to deter raptors from perching, but that mylar strips had little effect as a harassment tool. The result was a bird population at or below the background levels of bird activity.

On the other hand, the airport, SDF, sustained 14 strikes in a 2 night period during (cont'd P. 3)

Accident Report

Italian Air Force F-16 destroyed Nov. 2007

While attempting to land at Trapani-Bergli Air Base this F-16 ingested a bird. Due to its low altitude the pilot ejected and the aircraft crashed on the air base. This is the third AMI F-16 lost to a bird strike.



Navy T-45 destroyed October 2007

According to *Navy Times* a Navy single engine T-45 jet trainer crashed near Kingsville, Texas after colliding with a bird two miles from the air field. Both pilots ejected safely. This aircraft is a variation of the British Hawk trainer, the same model depicted in an internet video sequence of a Canadian Forces Hawk which ingests a bird and crashes in the landing pattern.



An-12 Freighter crashes, 7 killed July 2007

Flight Global reports that Russian officials blamed the crash of an An-12, similar to a Lockheed C-130, on bird ingestion and the loss of two engines on takeoff. The An12 departed Moscow's Domodedovo airport at night and in foggy conditions. Birds were reported on the airport and bird remains were found in the engines. Shortly after liftoff the #3 and #4 engines auto-feathered, the aircraft rolled into a right 100 degree bank and flew into the ground. This is the fourth AN-12 lost to birdstrikes.



Promises, Promises

When we began this newsletter one of our goals was to deliver to you, the reader, ‘news you can use’. Well, in this issue we believe we are doing that. The Kingston Birdstrike Committee Meeting was certainly full of case studies of success and failure in aviation wildlife control. Some studies simply emphasized that tried and true methods, i.e., pyrotechnics, work. Other studies identified true paradigm shifts, such as radar being required in the operation of the new La Mercy airport. Spirited debate actually broke out once or twice.

Regardless of the case, one need only to read the Accident Report on page two to clearly see that we are not winning the battle. Many more paradigm shifts and success stories will need be detailed before we can declare the aviation birdstrike fire “under control”.

Paul Eschenfelder, Editor
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Avion Corp.

Report from Kingston (cont’d fm page 1)

a migratory event. At first the dump was blamed for the strikes, but radar data proved the strikes were caused by a large migration passing over the airport in the evenings. Interestingly enough when it was proven to be a migratory event both the airport and its tenants lost interest in attempting to solve the problem. The dump operator questioned the commitment of the airport as the dump seemed to be receiving much more regulatory attention than the airport and the airport had no full time wildlife staff nor did it collect strike remains.

La Mercy seeks mitigation

Albert Froneman, albertf@ewt.org.za

The new La Mercy airport, proposed near Durban, South Africa, must mitigate the presence of 2-3 million barn swallows in a reed bed 2.6 km from the proposed runway. Radar studies, engaged by government, indicate that the risk can be mitigated by the use of radar. More on this subject in an accompanying editorial.

Navy Outlying Field mitigation

Christine Sousa, csousa@ene.com

The U.S. Navy has elected to construct an outlying training airport in rural North Carolina in an area of significant wintering snow goose and tundra swan populations. The Navy believes it can mitigate the threat of these large animals by managing the adjacent agriculture fields to make their crops unattractive to birds. It also intends to do most of its flight training at night when the birds are less active. Further, it intends to use a mobile radar unit to monitor bird activity and issue hazard advisories. The Navy has no policy on what its flight crews must do with such advisories. (cont’d on p. 4)

Report from Kingston (cont'd from page 3)

Smithsonian changes protocol for remains collection

Carla Dove, dovec@se.edu

In an effort to improve its ability to identify bird remains submitted by civil or military sources, the Smithsonian Feather Identification Lab has recommended a changed protocol for collecting bird remains. Samples should now be collected using alcohol wipes, alcohol spray bottles or Whatman FTA cards. Samples should be submitted as quickly as possible. Do not use water to collect blood/tissue samples.

British Airways View

Steve Hull, steve.hull@ba.com

This accident investigator spends only 5% of his time on birdstrikes, even though he is the airline's birdstrike expert. He expects that to change with increasing flying activity. In 1995 there were 12,343 airline aircraft in service; in the year 2015 there are estimated to be 23,100. Costs to carriers are quite high, i.e., one damaged fan blade costs \$18,000. Another UK carrier, Monarch Air, lists birdstrikes as #4 on its list of risks, but has no formal program to address the risk.

Southwest Airlines improves reporting

Stanley Clark; shredder110@hotmail.com

Southwest Airlines incorporated 'one stop shopping' for its crew members to report birdstrikes via the company web system. Since this change the number of birdstrikes reported by its crewmembers has essentially tripled.

(cont'd on page 5)

Birdstrike Conference Announced

BSCUSA is sponsoring the 2008 Bird Strike Conference to be held August 19-21 in Sanford, Florida.

The call for papers is posted at <http://www.birdstrike.org>. Abstracts must be submitted by April 30, 2008.

Registration and hotel booking forms will be available on the website at a later date.

Report from Kingston (cont'd from page 4)

Dead gull effigies have mix results

Tom Seamans; Thomas.w.seamans@aphis.usda.gov

The use of dead gull effigies on waste dumps and airports had mixed results. In desirable feeding areas gulls seemed to ignore the effigies, but in loafing areas gulls seemed to avoid the effigy areas. Gull effigies seemed most effective when used with a integrated bird control program. Effigies alone failed to keep gulls away from extensive areas.

An earlier paper has shown that a dead vulture effigy, hung by the feet and left to sway in the wind, was effective in vulture roost dispersal.

Lasers disperse gulls

Andy Baxter; a.baxter@csl.gov.uk

The use of laser beams, swept over a large pond area about 1 meter above the surface, effectively and completely dispersed large numbers of gulls on the pond. Scans every half hour inhibited their return during evening hours. However, during daylight hours the lasers had no effect upon the gulls. The color of the laser was not reported.

Raptor management by rodent management

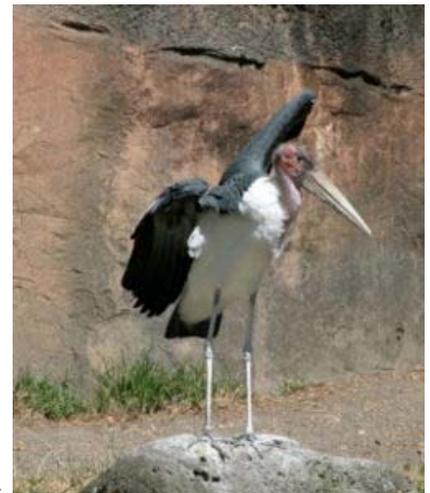
Todd Lewis

Raptor strikes had caused more than \$20 million in damage at Whiteman AFB. In an effort to control raptors the airfield sought to control their prey: rodents. A rodent control program using zinc-phosphide was begun over the entire airfield. Rodent populations across the airfield were reduced by 2-94%, which lead to a decrease in raptor populations by 80%.

Nairobi controls bird hazard by controlling prey

George Amutete; gamutete@yahoo.com

Nairobi, Kenya, had a problem with birds feeding on the airport, right up to the terminal ramp. Bird species varied but included the marabou stork, a 5' tall bird with a 10' wingspan. The airport began a sweeping and cleaning plan, removing the food source, moths/butterflies, from the ramp. After 6 days of cleaning the large birds had completely disappeared. The theory is that large birds require large amounts of food and must forage at the most efficient places. Without food they left the ramp area. An overall decrease in bird numbers was also noted. The greatest impediment to the mitigation effort was the lack of policies. Obtaining the cooperation of the stakeholders was difficult. Policies and MOUs with the key stakeholders are necessary to address the problem areas. During the negotiations to obtain stakeholder cooperation a stork struck an aircraft engine causing \$4.8 million in damage.



***Editorial*—Paradigm Shift**

The announcement that the South African government is proceeding with the new La Mercy Airport near Durban can be surprising only because of its terms and will probably go unnoticed in most airport communities. But it is ground breaking news. A paradigm shift.

The government has decided that the 2-3 million swallows off the end of the proposed runway can be mitigated and part of that mitigation process will be the mandatory use of radar. While other airports have had various models of radars installed, removed, tested, evaluated, discussed and cussed, this is the first airport which mandates the use of radar as part of its operational plan. On the far side of the world from the USA, airport wildlife radar has arrived.

It will be interesting to see what procedures are developed for the use of the radar, the communication links formed and the policy developed for the use of the data. The airport is to be completed in time for Durban to host the 2010 World Cup event.

Definitive earthworm

Having had repeated debate regarding earthworms and their mitigation, we asked Tom Seaman of USDA-WS for his thoughts—editor.

Earthworms, though generally considered beneficial, can become a hazard at airports. When found in large numbers on runways or taxiways after heavy rainfall earthworms attract birds, especially gulls, thereby increasing the risk of bird strikes to aircraft that are landing or taking off. A dramatic example of this occurred during a 35-minute period on 3 September 2004 at Calgary International Airport (YYC). A B737 of Westjet and an A319 of Air Canada aborted takeoffs after multiple strikes with gulls attracted to the runways to feed on earthworms. The B737 had strikes and damage to both engines and the A319 had damage (apparently uncontained failure) to one engine (see Air Safety Week, 27 Sep 2004, Vol. 18, No. 37).

There are no pesticides registered for earthworm control. There are chemicals that will kill earthworms, but it is illegal to use them for the purpose of controlling earthworms. Because of the cost to register a chemical, it is unlikely that any chemical will be registered to kill earthworms. Consequently, in cooperation with the FAA, research at a USDA/Wildlife Services/National Wildlife Research Center/Field Station in Sandusky, OH is underway to discover methods that prevent worms from reaching runways and taxiways.

Researchers in England, Oregon, and Washington found that incorporating abrasive material into soil reduced the number of worms coming to the surface. Also, by creating a more acidic soil, researchers have reduced the population of worms in treated areas. In lab trials, some naturally occurring compounds also have shown promise as repellants, but have yet to be completely evaluated. Most likely a repellant will be used along with a soil additive that creates a more acidic and perhaps abrasive soil in areas of concern at airports. This mix of techniques should reduce the number of worms that crawl onto runways and taxiways and therefore reduce the hazard posed by earthworms to aircraft. USDA plans to present results from this research at an upcoming Bird Strike meeting.

Flight crews have no knowledge of strike reporting

According to a recent study by Embry Riddle Aeronautical University professors, flight crews and mechanics have little or no knowledge of the need to report bird strikes nor how to do it. Reported in the November, 2007 issue of *International Journal of Aviation Training and Testing Research*, professors Metscher/Coyne/Reardon reported, in their paper entitled “*Analysis of the Barriers Found in Reporting Wildlife Strike Incidents to the FAA...Database*”, that 80% of the respondents had never heard of the FAA Wildlife Strike Database. Of the respondents who had been involved in a bird strike only 6% had reported the strike. A variety of reasons for not reporting were offered, including ‘too lazy’, ‘not a big deal’, ‘didn’t think to report it’.

While the sample size was small, less than 200, the survey was conducted at ERAU, a large aviation university and flight school where aviation principles are taught. This paper demonstrates, once again, the almost complete disconnect between operational aviation and the wildlife strike problem.



NEXT WILDLIFE HAZARD TRAINING SESSION

Embry-Riddle has scheduled its next Airport Wildlife Management seminar in Dallas-Ft. Worth on March 5-7, 2008.

This seminar is acceptable to the FAA Administrator to fulfill the FAA’s training requirements for airport personnel supervising wildlife control on airports, airport personnel’s annual training requirement and the training requirement for biologists who wish to conduct airport wildlife assessments or write airport mitigation plans.

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. Hotel reservations may be made at the Homewood Suites at Grapevine, 972-691-2427. An Embry Riddle University rate is available until February 4th.