Inaugural Issue!

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...and more!

BIRD STRIKE COMMITTEE: FULL-STEAM AHEAD!

Welcome to the inaugural issue of the Bird Strike Buzz, the newsletter of Bird Strike Committee (BSC USA). I would like to thank our newly formed Communications Committee for making it happen.

Our Steering Committee has undergone some significant changes since we met in Milwaukee last August. Three Steering Committee members, Elizabeth Louie (FAA), Lynn Deardorf (FAA) and Bob Dogan (DOD), stepped down. I know that I speak for all of us in saying that we will miss their professionalism and commitment. We wouldn’t be where we are today without their involvement. I have a feeling that we will continue to see contributions from Liz, Lynn and Bob for years to come.

But with a little rain comes a lot of sunshine. We’ve managed to fill almost all of the open Steering Committee positions. I would like to welcome the following individuals to the Steering Committee: Dave Paulsgrove (DOD), Mike Stephens (FAA), Steve Jangelis (Airlines), Tahereh Behbehani (Airlines), Carla Dove (General), and Gary Cooke (General).

Two open positions remain: one in the FAA membership class and another in the General membership class. If you are interested and meet the eligibility requirements, or know someone who might be interested, please contact Amy Johns, Chair of the Membership Committee.

I have had the privilege and honor to serve on the BSC USA Steering Committee for almost 14 years, serving as Chair for the last six years. I will be stepping down from my position as Chair during our annual meeting in Atlanta from August 11 to 14, 2014 (www.birdstrike.org). Mike Begier will be moving up from Chair-elect to take over the reins, with Sarah Brammell moving up from Vice Chair to Chair-elect. I have the utmost respect for both Mike and Sarah and know that these two, along with the rest of the Steering Committee members, will move BSC USA and its initiatives forward into the future. See you in Atlanta!

Respectfully,
John E. Ostrom
Chair, Bird Strike Committee USA

Join us in Atlanta for “Back to the Future”
August 11 to 14, 2014
View from the Top:
FAA, Safety, and Wildlife Hazard Management

The FAA’s mission is “to provide the safest, most efficient aerospace system in the world.” The FAA’s vision adds a little meat to those bones, saying “We strive to reach the next level of safety, efficiency, environmental responsibility and global leadership. We are accountable to the American public and our stakeholders.” And, if there were any remaining doubt as to FAA’s priorities, their values are categorized into five key words: Safety, Excellence, Integrity, People, and Innovation. Clearly – and understandably – safety is paramount.

Environmental hazards, such as wind shear, volcanic ash, and foreign object debris can be unpredictable, unavoidable, or unmanageable. Wildlife threats are no different. Nevertheless, we know that risks can be quantified and hazards can be mitigated. From the viewpoint of the diverse stakeholders within the aviation industry, solutions involve technological advancements, operational modifications, research on methodologies and wildlife characteristics, improved strike reporting including species identification, and habitat management based on sound ecological principles and good old-fashioned hard work. In pursuit of these goals, aviation professionals continually assess, plan, implement, and evaluate management strategies.

From the viewpoint of the FAA, reducing the risks associated with wildlife hazards requires five critical elements: regulatory oversight, data collection, research, partnerships, and outreach. Our regulatory and non-regulatory guidance materials are based on strike data and research (i.e., CFR 14 Part 139.337, Advisory Circulars, CertAlerts, and Manuals). Our partnerships with the Bird Strike Committee USA, United States Department of Agriculture (USDA), Smithsonian Institution, National Association of State Aviation Officials (NASAO), and other federal agencies help to provide for a unified and comprehensive strategy to reduce the safety threats posed by wildlife. Our outreach efforts remind the industry and public we’re doing well. But we can always do better.

Increased Efforts/Improved Results

During the past five years, the FAA’s efforts to assist airports with wildlife management have increased, and more airports are conducting Wildlife Hazard Assessments (WHAs) than ever before. We now forecast that, by the end of FY 2016, the percentage of certificated airports that have conducted WHAs will have risen from 52 percent to 100 percent. WHAs are important because they provide the technical foundation for developing and implementing Wildlife Hazard Management Plans (WHMPs) at airports.

Overall, strike reporting activity has also increased during the past five years. However, despite the higher number of reported strikes, the
number of damaging strikes documented within airport airspace has actually declined. This suggests that our outreach efforts are working and that wildlife hazard management programs are proving effective.

**Better Data for a Better Toolbox**

The diversity of wildlife and the hazards they pose to aviation requires a comprehensive strategy and a large toolbox. Strike records in the National Wildlife Strike Database indicate that a total of 482 bird species, 42 terrestrial mammal species, 15 bat species, and 11 reptile species have been involved with aircraft incidents. The number of strike records in the database currently exceeds 150,000, and we can use the data available in these strike reports to rank the hazards posed by these species and develop targeted management strategies.

Wildlife and aircraft will always coexist in a limited airspace. We know that 92 percent of all strikes occur at elevations at or below 3,500 feet above ground level. The data tells us where we can focus our efforts to mitigate hazards, allows us to quantify and evaluate the effectiveness of our efforts, and reminds us that room is always available for improvement. Everything we do, as a regulatory agency, a committee, and an industry, is focused on a single outcome – safety.

*Submitted by: John Weller, Federal Aviation Administration*

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**Advisory Circular Update**

Advisory Circular 150 / 5200-33B “Hazardous Wildlife Attractants On or Near Airports” will be updated in 2014.


**BSC is on the Move!**

In April, BSC USA participated in the Sun 'n Fun International Fly-In and Expo in Lakeland, Florida. Members and volunteers staffed BSC USA’s information booth, and several thousand visitors stopped by to learn more the challenges that wildlife poses to aviation. Later this summer, BSC USA will set up a booth at the Experimental Aircraft Association’s Airventure in Oshkosh, Wisconsin, from July 28 to August 3. We will also attend the National Business Aviation Association’s 2014 Convention and Exhibition in Orlando, Florida, from October 21 to 23.

But we cannot do this alone....

Much has been done nationally and globally to raise awareness of wildlife hazards and issues, but much more needs to be done. Visibility and participation in outreach events will help to spread the word. Expanding the ever-growing BSC community is a key element, and member participation is essential. We need your help!

Consider participating in an outreach event or on one of the standing subcommittees: **Communications** (website, newsletters), **Conference** (organization of annual BSC Conferences), **Membership** (recruitment and liaison to BSC members), **Operations and Policy** (assimilate and communicate relevant policies and guidance to the BSC members), and **Research and Development** (identify R&D sources applicable to BSC interests). Contact the Steering or Standing Committee Chairs listed on Page 2 for more information or to sign up.

Finally, we look to you for input, ideas, news, and information. Got a newsworthy story? A quotable quote? Item of interest? Just send it along to the BSC Communications Committee!
Wildlife Services Wins 2014 Presidential Award

The United State Department of Agriculture’s Animal and Plant Health Inspection Service, Wildlife Services (USDA-APHIS-WS) has received the 2014 Presidential Migratory Bird Federal Stewardship Award for its nationwide program on “Managing Raptor-Human Conflicts to Promote Safety and Migratory Bird Conservation.” This large, complex program, which highlighted non-lethal methods, addressed efforts over the past decade (2004 to 2013) to reduce conflicts between raptors and people, primarily at airports. The program included operational activities by WS state programs as well as a research component at the USDA-APHIS National Wildlife Research Center.

Through this program, more than 13,700 individual raptors, representing at least 32 different species, were live-trapped and relocated from environments in which conflicts occurred. Approximately five percent of the raptors (650 individuals) represented federal and state species of concern, such as short-eared owls, golden eagles, and Mississippi kites. USDA personnel working at airports conducted much of the work using basic raptor-trapping techniques. The information collected about captured birds and subsequent banding efforts yielded a wealth of information that will be valuable to airport safety and wildlife management professionals.

Research was an essential component of this effort, involving numerous research projects that used both traditional bird-banding as well as cutting-edge satellite telemetry technologies. The research results contributed to the conservation of migratory birds in a variety of ways, including:

- Critical information, such as relocation distance, to increase the efficacy of the raptor relocation management efforts
- Information to identify spatial and temporal patterns in the risk to aviation safety posed by various raptors using airport environments (e.g., bald eagles, ospreys, and red-tailed hawks)
- Quantifying the risk that migrating raptors pose to military training flights
- New and important ecological information on the breeding, migration, and wintering ecology of various raptors

The findings have been used predominantly by agencies and entities involved in reducing raptor-aircraft collisions associated with civil airports, military airfields, and military airspace training areas. In addition, the information and innovative methodologies provided by this research can also be used to evaluate and manage other situations that involve human-raptor conflict, such as wind energy facility development. For more information, visit: https://www.fws.gov/migratorybirds/CCMBA.html

Submitted by: Mike Begier, USDA Wildlife Services
Latest from the Lab

The Smithsonian’s Feather Identification Lab is busy identifying bird strike species for the U.S. Air Force, U.S. Navy, and FAA. With almost 8,000 identifications completed during the 2013 fiscal year, the Lab is eager to see what 2014 will bring.

Identification methods using DNA continue to be invaluable, while traditional morphological methods using whole feathers and feather microstructure are still the go-to method for many cases. The Smithsonian Bird Division’s large bird skin collection (more than 640,000 samples) and the comprehensive DNA sequences in the online Barcode of Life Database (over 52,000 sequences) provide essential references for the Lab’s work. Laboratory staff continuously augment the collections so that “known” references are available for comparison with the “unknown” clues provided by bird strike material submitted for identification.

While most ID cases are submitted from strikes in North America, the Lab works on cases from all over the world. As Marcy Heacker, one of the four full-time Lab staff, says “From Anna’s hummingbird to zebra finch, we will take the case!” The Lab also provides help to identify bats and other mammals — with the occasional fish, amphibian, or reptile to keep them on their toes!

Online reporting continues to be an efficient and useful way for the Feather ID Lab to respond to clients and ensure the ID and case data are included in the appropriate databases. Ultimately, the goal is to provide the best data possible for bird strike mitigation and investigations.

For more information on bird strike reporting and collecting and shipping remains, go to your organization’s wildlife strike or BASH website:

- Civil aviation – go to: [http://wildlife.faa.gov](http://wildlife.faa.gov)
- U.S. Navy – go to: [http://www.public.navy.mil/comnavsafecen/Pages/aviation/AirfieldOperations](http://www.public.navy.mil/comnavsafecen/Pages/aviation/AirfieldOperations)

Submitted by: Marcy Heacker, Feather Identification Lab, Smithsonian Institution

Did you know…. The Smithsonian first began using DNA as an identification tool in 2003. It fully incorporated this relatively new technology in 2006. Today approximately 75% of all samples submitted to the Lab are identified using DNA to determine or verify the species involved in a wildlife strike.
**Strike Report**

A wildlife strike can be defined as an incident that occurs when wildlife and aircraft attempt to occupy the same space at the same time. Based on the FAA Wildlife Strike Database and annual Serial Reports (co-authored with USDA), strikes are still fairly common – despite our tremendous, ongoing efforts to prevent them!

Bird strikes are not uncommon in the news. An Internet search on the term “bird strike” brings up all kinds of news stories, not the least of which is the 2009 “Miracle on the Hudson,” involving US Airways Flight 1549. Serial Report No. 19, which covers the period from 1990 to 2012 (and is the most recent publication on strike data involving U.S. civil aviation), reports that 97 percent of wildlife strikes involved birds. The remainder involved terrestrials (reptiles and mammals) and bats. But wait there’s more!

A strike of a very different kind occurred in Florida last year. On September 10, 2013, a Gulfstream jet departing from MacDill Air Force Base aborted takeoff when the crew realized that the aircraft had been struck by – something. Upon further inspection, the only evidence found on the runway were the remains of a fish! DNA recovered from the aircraft was sent to the Smithsonian Institution’s Feather Identification Lab, which confirmed that the aircraft had been hit by a sheepshead (a fish, not a body part, also known as an *Archosargus probatocephalus*). But how did it happen? It turned out that the fish was apparently dropped by an osprey (a bird, not an aircraft) after it had been startled by another aircraft and subsequently struck by the oncoming Gulfstream (a jet, not an ocean current). Double bad luck for that fish! Read more about this bizarre wildlife strike at: [http://www.macdill.af.mil/news/story.asp?id=123401041](http://www.macdill.af.mil/news/story.asp?id=123401041)

As weird as it seems, the 2013 sheepshead strike was not the first incident involving a fish. A 1987 Newsweek article reported a wildlife strike involving a salmon and an Alaska Airlines jet. Apparently a bald eagle carrying the salmon was startled by the plane and dropped it on the aircraft.

It seems that birds of prey need to fine tune their situational awareness! Maybe the sun was in their eyes? Perhaps this is yet another variable to consider in forthcoming research projects....

*Submitted by: Cathy Boyles, DFW International Airport*
Wildlife Management and Protected Species Discussed at ACI-NA Conference

At the recent Airports Council International-North America (ACI-NA) Environmental Affairs Conference held from April 14 to 16 in Baltimore, Maryland, one session focused on the challenges associated with managing wildlife for safety while complying with requirements for protected species and critical habitat on and around airports.

Balancing airport safety and meeting the requirements of protected species and habitat regulations can present a complex challenge for airport operators. Airport environs often provide habitats that can be highly attractive to wildlife and thus increase the chance of a wildlife strike. While safety remains the top priority at airports, airport operators are also responsible for managing natural resources, including protected wildlife species and their habitats on and near airports. Often, the goals of the U.S. Fish and Wildlife Service and state and local wildlife agencies conflict with FAA management guidance and requirements for airports to reduce wildlife hazard attractants.

At a conference session entitled “Wildlife Hazard Management – Challenges with Protected Species and Critical Habitat,” a four-member panel of experts discussed the ongoing challenges associated with wildlife hazard management and protected species. The panel identified opportunities to bring parties together to better coordinate actions that can balance the unique needs of threatened and endangered species with the overarching mission of aviation safety. Panel members were Nick Atwell from the Port of Portland, Kevin Gurchak from Pittsburgh International Airport, Gina Shultz from the U.S. Fish and Wildlife Service, and John Weller from the Federal Aviation Administration. Conference presentations are available at: http://www.aci-na.org/content/2014-environmental-affairs-conference

Submitted by: Nick Atwell, Wildlife Manager, Aviation, Port of Portland

The streaked horned lark, California red-legged frog, and greater sage-grouse are among the many species that must be protected – even though their presence or habitats may pose hazards to aircraft.
Studies Investigate Effect of Oncoming Vehicle Speed on Animal Response

The United States Department of Agriculture’s Animal and Plant Health Inspection Service, Wildlife Services (USDA-APHIS-WS) National Wildlife Research Center (NWRC) and university colleagues have undertaken two investigations to determine how vehicle speeds influence an animal’s decision to avoid ground vehicles, and may prove valuable to aviation safety.

A recent USDA-WS study, “Effects of Vehicle Speed on Flight Initiation by Turkey Vultures: Implications for Bird-Vehicle Collisions,” found that turkey vultures did not adequately adjust their flight initiation distances to account for increasing vehicle speed, leaving them vulnerable to collisions from oncoming vehicles travelling at speeds of 90 km/h or more. The study is available at: http://www.aphis.usda.gov/wildlife_damage/nwrc/publications/14pubs/14-014%20devault.pdf

In another (not yet published) study, researchers are also investigating the response of free-ranging white-tailed deer to approaching vehicles at night. Deer-vehicle collisions are more frequent from dusk through dawn due to deer activity and poor visibility for both deer and drivers. The ongoing study examines the spatial aspects of deer response (Do deer initiate escape based on distance to the vehicle?) and temporal aspects (Do deer initiate escape based on vehicle speed?). The findings will build on broader, general questions about how animals interpret and respond to modern vehicles (terrestrial or airborne). NWRC researchers intend to use their findings in associated research targeting means of enhancing vehicle detection by birds and mammals.

Submitted by: Travis L. DeVault, APHIS

Back in Time: An Historical Perspective on the FAA–USDA Partnership

I was asked to provide an article for the BSC newsletter that might shed light on the FAA regulations and recommendations intended to reduce hazardous interactions between wildlife and aircraft. To do so, I revisited some regulations that I worked on back in the late 1980s, which marked what I believe was a pivotal time in defining the relationship between the Federal Aviation Administration (FAA) and the United States Department of Agriculture’s Wildlife Services (USDA-WS) programs.

In the mid-1980s, the Animal Damage Control program (ADC) was housed within the United States Fish and Wildlife Service (USFWS). ADC field biologists routinely provided assistance to FAA and airports. However, the USFWS biologists who worked for the ADC program were moved to USDA’s Animal and Plant Health Inspection Service (APHIS) program in 1985, and the program was renamed as the Wildlife Services program. During this same period, the FAA revising Part 139 of its Federal Aviation Regulations.

(Continued on page 9…..)
When the FAA released FAR Part 139 in January 1988, it emphasized wildlife hazards under subpart 337 and used the term “ecological study” in the wildlife hazard management paragraph. Although this should not have posed an issue, it posed a potential problem for USDA as the department assumed its new duties under the ADC program. Wildlife management at airports fell under the category of “urban” control work, while USDA’s primary focus was to protect agriculture. This issue arose in California’s ADC program, where there was concern that conducting ecological studies on airports would cause ADC to spend its scarce funds and place the program in a position of potential liability. Finally, the manager of the Houma Terrebonne Airport in Louisiana wrote to the USDA Administrator, Donald L. Houston, to express his support for ADC to provide services to airports. In a response dated November 27, 1987, Administrator Houston provided Houma Terrebonne’s manager the following reply:

We understand your concern over the impact that a reduction in benefits to urban areas provided by the Department of Agriculture’s (USDA) ADC program would have on California. A recent review of the statutory authority for nonagricultural ADC activities has revealed that the current law does not provide the Animal and Plant Health Inspection Service with the necessary authority to carry out such activities. Congress is currently considering a continuing resolution on appropriations which contains language giving the Agency this authority. If the ADC provision is not adopted, it will be necessary for the Agency to review future actions as they pertain to the urban ADC program.

The issue was resolved by allowing USDA to provide ongoing support to airports. By February 8, 1988, FAA forwarded a Memorandum of Understanding between FAA and USFWS that spelled out each party’s responsibility in implementing FAR Part 139.337. Another interesting outcome was that with the release of FAR Part 139, airports were tasked with developing their own wildlife hazard management plans. This meant that Headquarters FAA found itself short one job description within the Airports Safety and Standards office to support this new initiative. So, for the first time, Airports produced a position description to hire a full-time wildlife biologist with a specialty in wildlife damage control. It just so happened that a young wildlife damage control field biologist, working somewhere near Crowley, Louisiana, was ready to make a career change, and the rest is history.

Submitted by: Gene LeBoeuf, FAA ret. (Honorary Historian, BSC-USA)