



AIRPORT II AIRPLANE WASH WINTER CLOSURE

The plane wash at Airport II is closed for the winter. We'll freeze-protect the system and open it for business again in the spring. Call the General Aviation Manager at 801-647-5532 to confirm its status before traveling out to U42 to wash your plane.

BIRD STRIKE!

By Alton K. Marsh

What do you do when you see a bird just ahead? Should you descend, climb, continue straight ahead, or turn? Most pilots believe that the bird will dive away from their flight path. Well... not always.

Some of the best insight into bird behavior comes from wildlife biologists at the U.S. Department of Agriculture Wildlife Services laboratory near Sandusky, Ohio. Research biologist Richard A. Dolbeer and his colleagues recently combed 56,000 civil-aviation bird strike records from 1990 to 2003, and found 633 in which pilots noted what the bird did or didn't do.

There were 266 reports out of the 633 involving birds encountered in the air. Of those, the greatest number (73) dived or descended to avoid the airplane, as you might expect. But 46 of the birds climbed. Sixty-two had no reaction at all... perhaps they just shrugged their wings as if to say, "Oh well." Five unfortunate birds attempted to out-fly the aircraft. Four, including those on the ground, got angry, attacked, and lost. Of those, a killdeer intentionally flew at a landing aircraft at Morgantown, West Virginia. A Canada goose attacked an Ohio State University training aircraft at Columbus, Ohio, as it taxied by a nest. It first bit at the wing tips and then swooped toward the prop... its

last swoop before becoming a wheel chock. The pilot got out, removed it, and taxied on.

Continuing with the findings, 27 of the 266 birds attempted to avoid the aircraft using an "unknown maneuver," and another 19 flew away but circled back toward the aircraft. So what's the lesson? Scientists are coming up with the answers.

Dolbeer also found that the more dangerous altitudes for bird strikes are at two levels, between 600 and 800 feet and between 1,000 and 2,000 feet—in other words, traffic pattern altitudes. Here are some lessons you can take with you into the cockpit:

He and his and fellow scientists Carol Washburn and Sandra E. Wright found that at altitudes higher than 500 feet, birds would typically dive to avoid an aircraft. Thus, above 500 feet, pilots should expect to fly over birds. Below 500 feet, birds exhibit a variety of behaviors including climbing. Also, birds try to avoid light beams at night.

Anecdotal evidence and limited experimental data suggest pulsating landing lights might reduce bird strikes. Research is continuing into this at Sandusky by research wildlife biologist Bradley Blackwell.

In the jet world, it appears that as jet engines become quieter, bird strikes increase. One air carrier detected slightly reduced bird strike rates after painting the jet engine spinners white. Anything that increases contrast seems to help birds to avoid airplanes. Birds see colors in the ultraviolet range beyond what humans can see, and that information may be useful in future research on markings for aircraft that could reduce bird strikes.

The biggest airports often have a resident wildlife biologist on staff who works full time to keep birds away. Grid squares of wires above water bodies such as detention basins prevent geese from making their required long glide to a landing, and geese are afraid to try to dive between the squares. Rapid drainage systems assure that even after a heavy rain there is no standing water to attract birds. Trained dogs race to herd the birds away at some airports, while at others airport officials pull out the

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paint-ball guns, blasting away to give larger birds a bad day. Robot machines simulate gunshots and play calls of predator birds over loudspeakers. But what can smaller airports do?

Airports with limited budgets are contracting with wildlife biologists to seek advice. Pilots can help the biologists by making bird strike reports. Report forms are available online at www.aopa.org/members/files/topics/wildlife.html Military researchers are attempting to forecast bird activity in military airspace and often post the information on the Web.

There are few exact answers for the pilots hoping to avoid a blast of bird guts, feathers, and blood through the windscreen. There are general rules, however, to help reduce the risk.

Airports near water usually have bird problems. Increase your awareness when you operate at these airports.

Increased bird activity is not closely associated with nesting activities. The worst months for bird strikes are August through October, not in the spring, because young birds have grown up enough to learn to fly, but lack air smarts. They're neither wise to airplanes nor skilled in avoiding them, but they don't hit aircraft on purpose. "No species of bird is suicidal," Dolbeer said.

About twice as many bird strikes occur during the day (63 percent) compared to night (27 percent), with the remainder (10 percent) occurring during dawn and dusk. The majority of strikes occur in the approach phase of flight, but most have little effect on the flight.

The Aeronautical Information Manual lists the location of flyways and suggestions for reducing strikes. These include a general response of climbing over birds (above 500 feet) and also avoiding areas of known bird concentrations, especially when flying at low altitudes during bird migration. Migrating birds generally climb to 5,000 or 6,000 feet, ascending higher as they burn fat. They like it up there because there is less drag where the air is thinner. The

late astronaut Gordon Cooper said in an interview years before his death that he once hit a duck while flying his twin-engine airplane at 20,000 feet. Emperor geese have



HELPFUL POINTS OF CONTACT

For GA operational, facilities maintenance, aviation, newsletter, airfield and SLC Title 16 questions call: Steve Jackson, General Aviation Manager, 647-5532 or e-mail at steve.jackson@slcgov.com.

For hangar lease and repair questions call: Johnathan Liddle, Properties Management Specialist, at 575-2894 or e-mail at johnathan.liddle@slcgov.com.

For aviation security questions call: Connie Proctor at 575-2401.

For gate access problems call: Airport Control Center at 575-2401.

For emergencies call: at SLCIA, 575-2405 at TVY or U42, 911 then 575-2405

For common General Aviation information call the GA Hotline: 575-2443

been seen at 35,000 feet above Mount Everest. Awareness of migratory patterns is useful for pilots. Today there are 3.6 million Canada geese in the United States.

The scientists in Sandusky take their work seriously, realizing the millions of dollars of damage that birds can do to airplanes, and they hope one day to forecast the bird threat day to day, as the military now does for some of its special-use airspace. For now, don't trust anything with feathers.

UPCOMING EVENTS

The second Saturday of every month, Cornerstone Aviation, located in the Executive Terminal at Salt Lake City International Airport (337 North 2370 West) provides a free lunch and an informative program at 12:30 p.m. It is a great opportunity to share flying experiences and learn new things.

The first Saturday of each month, Dave Coats' AIR CENTER at Salt Lake Airport II hosts on a fly-in/drive-in breakfast from 8:00 a.m. to 11:00 a.m. No charge but donations are welcome.

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