



The Art of Falconry

Centuries-old practice keeps modern-day technology safe

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Even with the most advanced technology available today, an 80-ton U.S. Air Force aircraft still relies on a winged ally that weighs in at about 2 pounds. Thanks to the centuries-old practice of falconry, people and aircraft are protected from the potentially deadly hazards of bird strikes.

Falcon Environmental Services, Inc. (FES), a small business based in Plattsburgh, N.Y., manages the Bird and Wildlife Aircraft Strike Hazard, or BASH, program, at McGuire Air Force Base, N.J.

FES President Mark Adam started the company in 1990 after working with falcons at an airport in Montreal.

"I was asked to do a pilot project using falcons to deter birds from the

airfield," said Adam, who became interested in falconry at age 13.

"They gave me the worst months to do work, which was during the fall migration. The first month they had a 77 percent reduction in bird strikes and they thought it was a pure fluke. They said it was impossible," Adam said. "The subsequent month it was a 75 percent reduction, so they were sold. They couldn't believe it."

Adam said that 15 years of recordkeeping had shown significant numbers of bird strikes with significant damage to the aircraft. Using falcons basically cleared the airfield.

"What was intriguing was that the work was being done on the perimeters and the falcon obviously didn't need any clearance to cross a field. So using a falcon reduced the bird strikes and also reduced the number of calls being made to the control tower to access different areas. Things were moving a lot more efficiently and a lot more safely. That's how it all started out and I thought, 'I'm on to something.'"

The company's first military contract began in 2003 at McGuire. They run a similar program at March Air Reserve Base, Calif.

Andrew Barnes, the FES program manager

at McGuire, said work-days for the falcons and their handlers last from sunrise to sunset.

"We're out there in all kinds of weather," Barnes said. "As long as there's flying going on, we're out there."

The day begins with visual sweeps of both runways at McGuire to see if there were nighttime strikes and to note what activity has started so they can plan accordingly. They then travel to neighboring Fort Dix to drive out any Canadian geese that may have roosted overnight on the golf course ponds, which can take up to 90 minutes, and then return to patrol the airfield.

"Flying a falcon takes about 30 minutes or longer, depending on the weather and what time of year it is and/or if we have problem birds on the airfield. If not, we'll fly a bird once every hour or two throughout the day just because we have to maintain the bird's fitness. They are athletes and we have to maintain their fitness," Barnes said.

"When there are aircraft transitioning in the area, we are basically on the airfield the whole time," he said. "There are vultures in the area and we need to be an extra pair of eyes for the aircrews and advise the tower where vultures are situated in



Courtesy photo/Andrew Barnes



Andrew Barnes releases Monty, a Peregrine tiercel, for a prevention flight on the flightline at McGuire Air Force Base, N.J. (Courtesy photo/Rob Turnbo)

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relation to the traffic pattern. That basically takes up the whole day.”

Barnes, whose interest in falconry began when he was 10 years old, said a team of eight to 10 birds is needed to maintain the program at McGuire.

“Depending on the severity of the bird problems at the time, that will vary,” he said. “The falcons have to molt once a year so if we can let the birds molt out completely in the summer, we give certain birds rest so they can be ready for the winter and fall which is our biggest problem period.”

All the birds are captive-raised, due to U.S. Fish and Wildlife Service regulations. Adam said FES has a falcon breeding center in New Jersey and California.

“It ensures that we have a smooth continuous service,” he said. “If we are low on birds we’re not restricted to using local falcon breeders. We’re somewhat self-sustained.”

Things move very fast in the falcon world, he added.

“When the bird is hatched, it is capable of flight in 42 days, and it usually leaves the parents within 60 to 90 days,” Adam said. “We’re usually flying and training the falcons at about 60 days of age. They can enter service on an airfield usually when they’re about 120 days old after about two months of training. From there, we can usually expect about 10 to 12 years out of a bird.”

Even with all that training, some birds try to spread their wings a little further than their job requires.

“There are a few situations when a falcon is lost and we don’t recoup the bird. We put transmitters on the bird to help find it,” Adam said.

“We had one bird fly from Niagara Falls all the way to Maine. We were chasing the bird down in a Cessna, and when we hit the Maine border, we said ‘Forget it.’ We had another falcon that went from New York to Ohio. We got the bird back



Monty, a Peregrine tiercel, is recalled by Andrew Barnes after a successful prevention flight on the flightline at McGuire Air Force Base, N.J. (Courtesy photo/Rob Turnbo)

because a police officer had found it after it had killed a starling. He gave the bird over to the local humane society. They put it on a plane back to us and we still have the bird – that was five years ago.”

The falcons aren’t the only deterrent to bird strikes.

“We run a fully integrated program,” Barnes said. “A successful BASH program on an airfield has to be fully integrated. You have to use all the available methods of reducing bird strikes. That encompasses the use of dogs, falcons, noise (pyrotechnics) and bio-acoustics, which are distress calls and predator calls that will make the birds leave when they hear that sound.”

He stressed that by far though, the most effective means of getting birds off the airfield and keeping them off are the falcons.

“That’s because falcons are the apex predator in the avian world and all other birds recognize that shape as being a predator,” Barnes explained. “I use the scenario of when you’re swimming in the ocean and you see a shark fin, you get out of the ocean. Same thing with birds on the airfield. They see a falcon flying and they go for cover, which is off the airfield.”

FES has approximately 50 employees and nearly 200 birds. In addition to the programs at McGuire and March, they handle landfill sites in New Jersey and New York, and are also working at vineyards and agricultural sectors in Connecticut and California. One of their biggest and most successful programs is at John F. Kennedy International Airport in New York.

“We’ve had a very successful run at JFK,” Adam said. “It’s been an excellent working relationship with the port authority as well as the company. We try to do the best we can to go above and beyond what the contracts specify.”

Adam said he measures his company’s success by learning something from every experience, whether good or bad, and using it to move forward.

“So if we made a mistake we learn from it, and make sure it doesn’t happen again,” he said.

“If we look back 10 years, how much have we grown? It doesn’t have to be 50 percent, but have we moved ahead?” Adam asked. “I also like to look at it with our employees. Are they happy? Are we moving ahead? In my case, it has been all positive.”