Ex-Army Blackhawk pilot now flying for Mosquito Control

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Rita Maiss never thought she'd get hired to fly for the Lee County Mosquito Control District, but not because she's a woman. When Maiss applied, she was missing the 100 hours of low-level spray experience listed on the job posting. As it turns out, finding pilots who meet the flying requirements is a challenge for the District. So after being hired in 2011, Maiss learned to spray from helicopters and airplanes with the help of her coworkers.

Maiss' experience as a Blackhawk pilot in Desert Storm, as a commercial airline pilot, as a breaking-news helicopter pilot in Chicago and her former service as a National Guard pilot, definitely weighed in her favor. She landed the job and completed all the requirements to earn her Public Health Pest Control License-Aerial Category. In record time, she was spraying solo, killing mosquitos all over Lee County. Among her principal targets are Pine Island and the adjacent barrier islands.

The war against mosquitoes

Article Photos

Pilot Rita Maiss with a Lee County Mosquito Control Huey helicopter.

PHOTO PROVIDED

Lee County Mosquito Control is waging an all-out war against mosquitoes. The war has been ongoing since 1958, the year that Lee County was organized into one mosquito-control district. The command center for this war is, appropriately, at the old Buckingham Army Air Base in Lehigh Acres. During World War II, the air base was used to train aerial gunners.

Maiss is not the first female pilot to fly out of Buckingham. Many of the World War II gunnery trainers, the pilots of B17s and C47s (or DC3s), were Women Air Force Service Pilots (WASPS).

The aerial "gunners" at Buckingham today are ex-military and/or civilian, including airline, corporate and forestry pilots, engaged in combat with an enemy that numbers in the billions and reproduces itself continuously.

The earliest form of mosquito control was one-on-one; the mosquito attacked and you killed it with a slap. Humans have also experimented with coating their bodies with tar-like substances and plant oils, surrounding themselves with fine-mesh netting and chemical-laden fogs. People have even have tried electric and ultrasonic devices, oils, herbs and vitamins, mosquito coils and incense.

After World War II, crop dusters and ex-Army pilots were enlisted to launch aerial bombing raids with what sounded like Grumman bombers. The fliers would sweep area rooftops at dawn, jerking practically everyone, hearts pounding, from their sleep. As their eyes flew open, many would see the belly of the plane swooping over with streaming jets of DDT, which, of course, billowed into windows and sent everyone diving for cover - that is, they threw themselves face down and pulled sheets over their heads.

Today, the Lee County Mosquito Control District effectively controls mosquito populations through integrated ground, marine and aerial larvicide and adulticide and disease surveillance programs. Through the scientific collection and analysis of data, and in partnership with research scientists who are working to develop the safest and most cost-effective products and application techniques, the LCMCD seeks to control larval and adult mosquitoes, and the often deadly diseases they may carry, with minimal impact upon the environment.

Maiss is one of seven full-time pilots working in the aerial larvicide and adulticide division of the mosquito-control program. Depending on her mission, she might fly helicopters or airplanes. These include: the Bell 206, a Bell 407, the Vietnam-era Huey, the "Goon" C47 (DC3) or the King Air. Her favorite helicopters are the Bell 407s, "Shamu," (the black one) and "Mary Kay," (the lipstick-red one), because they're air-conditioned. One of the challenges of her job, Maiss said, is the smothering combination of tropical heat and humidity with a fire-retardant flight suit, survival vest and protective helmet.

Another challenge of the job is the counter-attack by the mosquitoes. Here's where the war on mosquitoes gets personal. When the enemy gets into the cockpit with her and starts biting, Maiss can't defend herself because she has to keep both hands and both feet on the controls. So she carries her own personal weapon; a spray can of insect repellent.

'I am not the norm.'

Maiss joined the Army right out of college. Born and raised in Chicago, she graduated with a liberal arts degree from the University of Illinois, but, "Even as a teenager," she said, "I had this fantasy about being a pilot. I wanted to do something that required specific technical skills, and the military intrigued me."

Maiss' mother had enjoyed service in the Army and had instilled in Maiss a positive image of the military, so before she knew it, Maiss had enlisted and qualified for flight school.

She served six years. Deployed from Germany to Saudi Arabia, she was assigned to a combat-support unit of 16 Blackhawk pilots transporting personnel and equipment for Operation Desert Storm. Precision flying was to Maiss the best part of her mission.

"One of the reasons I loved flying Blackhawks was because it has a hook on its belly that can hold up to 8,000 pounds. So I could lift and move military vehicles or other equipment with the 'Hawk, but not without a lot of teamwork. The problem is that the hook trails way behind the pilots, and it's impossible to see equipment once it goes under the belly. So one soldier stands atop the equipment to attach it to the hook while another stands outside giving general hand-and-arm signals, guiding me toward the load. Once the load is within a few feet of the hook, a crew chief in the back of the helicopter gives commands and it's really important to hold altitude so the guy on the equipment doesn't get squashed not killing the people you're working with is always a good thing.

"I'd listen to the crew chief count down 10 feet, 9 feet, 8 feet1 foot, and then I'd hear the clunk when the hook was attached," she continued. "That's when the guy who was on the equipment would jump off and run away fast! That's the time to pull in power and fly off. I did a bunch of that in Saudi, moving everything from nets filled with maintenance parts to containers with engines. I really enjoy the precision of that kind of flying."

She said they slept in tents in the desert, in encampments surrounded by sand berms thrown up to protect them by the Army Corps of Engineers. Maiss survived freezing temperatures at night, horrific sand storms and "some of scariest flying I've ever done."

Admitting that the only time she has ever been shot at "was in flight training when a deer hunter shot at us because we chased his deer away," Maiss explained that in the desert, the terrain of sand looks the same whether you're a few feet off the ground or at 1,000 feet, so when you're flying at night with night-vision goggles, you can be on a collision course with the ground and never know it. Watching your altitude requires a great deal of vigilance. CFIT (Controlled Flight into Terrain) happens because of human error."

Fighting in defense of our county

As a LCMCD pilot, Maiss is once again flying with night-vision goggles. She flies the DC3 or King Air on adulticiding missions carried out between 9 p.m. and 2 a.m. when adult mosquitoes are most active. The airplanes are equipped with ULV (Ultra Low Volume) spray systems with atomizers. Flying at 300 feet, the plane releases a 1,000-foot-wide swath of the product that kills mosquitoes in flight. A computerized mapping system creates a box-like grid of the area to be sprayed. The pilot follows the lines of the grid.

"You have a light bar that tells you how many feet you're off left or right of the line," she said.

A map of the actual mission is created in flight and saved to a disk. After the mission, the data is downloaded to a computer where the map of the flight path is overlaid with the map of the assigned treatment area to determine how accurately the mission was performed.

"If you guys get relief, it's because we were on those grids," Maiss explains.

The aerial larviciding program focuses on inspecting the coastal areas of Lee County that are often flooded by tides or rainfall and that are not accessible to ground vehicles. Lee County has five aerial inspectors, each assigned a specific area to enable them to become familiar with that area's mosquito-breeding sites.

Trained to land a Blackhawk on the pitching deck of an aircraft carrier, Maiss has no problem landing Pine Island inspector, Robert Hedrick, in any tight spot anywhere on Pine Island.

"The inspector decides when and where we're going and what we're flying. I'm just the driver," Maiss laughs. "I land him where he tells me to and he walks over and dips up water to see if there's any larvae in it, and if there is, it depends on how close the larvae are to emerging whether tomorrow's going to be a spray day. Robert will determine what areas I'm to treat and what aircraft I'm flying and I go back the next day and spray."

Depending on the area she needs to cover, Maiss will use an 80-gallon tank on a smaller helicopter or a 350-gallon tank on a Huey.

"The spray is mostly water," she said. "We typically use about a half ounce per gallon and 2.33 gallons per acre. It only takes a small amount to kill the larvae."

The LCMCD pilots fly nearly every day, depending on heat temperatures and rainfall. Larvae emerge faster in warmer temperatures, so in the summertime, if it rains on a Thursday, the Hueys and DC3s might be airborne all weekend.

Again, an electronic device aboard the aircraft draws lines on a map of the area to be treated, enabling the pilot to disburse the material evenly. The pilots are flying along the lines of a box, so when they make a turn at the corners of the box, "we do the fastest turn we can and that's when you see us doing the loop.

"Sometimes the canopy's so thick, it's hard to get the product down into the water. And what will kill one kind of mosquito won't kill another. One kind lives underwater and breathes through a straw-like thing so we can get them with a product that suffocates them. But there's another kind of mosquito that pokes a hole in plant matter and takes oxygen from the plant, so we have to use another kind of product for them. Mosquitoes are really kind of creative," Maiss grins.

'If you wanta breed mosquitoes '

"All I know is," Maiss drawls, "if you wanta breed mosquitoes, come to Southwest Florida. When Robert dips up larvae, he might find 500 in the 12-ounce dipper. The lighthouse on Sanibel has the record number of mosquitoes captured in one night - 350,000. So when people say they don't think we should spray for mosquitoes, they don't understand how many we kill. Mosquitoes can, and have smothered cows in Southwest Florida. I think all of us [at LCMCD] are dedicated to doing a good job of keeping the mosquitoes under control."

Maiss smiled, remembering her flight with Inspector Hedrick earlier that day.

"We flew past a lady in her garage and she saw us and she was clapping. Sometimes people see me in my flight suit and say, 'Thank you for your service,' and I say, 'Well, you know, I fly for Lee County Mosquito Control,' and they say, 'If you fly for Lee County Mosquito Control, thank you for your service.'

"And sometimes people will ask me, 'Can't you kill mosquitoes without using chemicals?' and I say, 'Yes, we can.'" Maiss slaps her hands together hard and laughs. "But it's going to be a long night, I tell ya."

For more information about Lee County's mosquito control program, please visit www.lcmcd.org.