

A walk on the wild side: White Sands Testing Facility is naturally interesting

Not many NASA employees can say they come across rare night-blooming flowers, white pelicans or mating roadrunners as part of their jobs. However, that's all in a day's work for Amanda Skarsgard and Harold Harrison, who work as environmental scientists at JSC's White Sands Test Facility (WSTF) near Las Cruces, N.M.

The site has not been open to the public since its completion in 1964 because of the hazardous nature of the rocket engine and materials testing conducted there. Hunting, hiking and other recreational activities are prohibited on WSTF grounds, which means that the site's wildlife and vegetation have been protected for the past 38 years.

The undisturbed wildlife provides plenty of work for the two scientists. Skarsgard and Harrison have cataloged, observed and located a fascinating variety of artifacts, snakes, rare plants and birds on the site.

One night only: Night-blooming Cereus

WSTF is alive with 130 species of cataloged plants. Of these, Skarsgard estimates that 21 species are rare plants, with "rare" defined as threatened, endangered or species of concern. One of those rare plants is the Night-blooming Cereus, a cactus that grows within the branches of shrubs. It takes advantage of the reduced temperature and sunlight provided by the "nurse plant." Sixty-nine of these plants have been located on WSTF grounds.

"The individual flowers bloom for one night only," said Skarsgard, which is where the Night-blooming Cereus gets its name. "Its other name is *reina de la noche* or Queen of the Night," she said.

The plant is notable in other ways as well. Skarsgard cited the flower's extraordinary size and scent, as well as the plant's "cryptic" nature. "Very little is actually known about the Night-blooming Cereus behavior," she said.

Uncertainty about how the Cereus is pollinated is one reason for the decline of the plant's natural populations. Another reason is the collection and sale of the plants by individuals. Also, as the plant grows partially hidden within other plants, a Cereus may be uprooted with its nurse plant before it is even noticed.

Past and present

The WSTF grounds have a rich history: "We have 93 prehistoric archeology sites within the WSTF boundaries, including Love Ranch," Skarsgard said.

J. D. Love was a medical doctor and cattle rancher whose ranch was taken over during World War II for the U. S. Government to compile what is now the White Sands Missile Range. Today, the test facility's acreage backs up to the edge of the missile range, forming 28 square miles of refuge for New Mexico flora and fauna.

"The Test Facility and Missile Range are full of unique wildlife diversity," said Doug Burkett, Wildlife Biologist for the Missile Range. Desert bighorn sheep used to flourish in the area, but the population was devastated by parasitic infections several years ago. Now, "the New Mexico Department of Game and Fish is reestablishing the desert bighorn sheep in this area," Burkett said.

"A total of 176 bird species have been observed at the test facility, with many of them being sighted at Love Ranch," Harrison said.

He listed the following birds as rare sightings: Brown thrasher, a yellow-throated warbler, white pelicans, snipes and a vermilion flycatcher. He has also spotted white-throated swifts at WSTF's overflow lagoons – birds that Harrison said "were surely studied by the engineers and designers for the Stealth airplane."

Another of Harrison's favorite wildlife anecdotes involves what at first looked like "a fluttering pile of feathers in the roadway." He soon realized it to be "two mating roadrunners, the male with a lizard in his mouth. Afterwards, he gave the lizard to his companion."

Legacy of responsibility

Mark Leifeste, Honeywell Program Manager for the test facility, said that WSTF has "an obligation to maintain our facility and the surroundings that interface with our facility in a responsible fashion."

Joseph Fries, NASA Manager of the test facility, agreed. "I believe that we are good stewards of the environment, and that we have a moral obligation to take care of the land and its inhabitants," he said. "Many people have different opinions about taking care of the environment. I feel there should be a balance, rather than a strict policy, in creating regulation."

Fries said WSTF has a proactive plan it has worked out with the State of New Mexico and the U. S. Environmental Protection Agency. "We have accomplished and agreed upon a plan that will work in undoing the past sins of the test facility," he said. "I do want our grandkids to be able to enjoy the outdoors the same way my generation has."

Fries said that protecting and watching over the environment at the test facility is part of NASA's mission: To improve life here, to extend life to there, and to find life beyond. ❖



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