



U.S. Department of Defense and U.S. Fish & Wildlife Service

Protecting Endangered Species on Military Lands

The Sonoran Pronghorn

The Sonoran pronghorn (*Antilocapra americana*), federally listed as an endangered species in 1967, is the fastest land mammal in North America, clocking speeds of up to 60 miles per hour. But the species can no longer outrun the myriad threats to its continued existence.

The Sonoran pronghorn once roamed in the thousands throughout the Sonoran Desert, but is now confined to tiny fragments of its former range in Arizona and Mexico. A desert subspecies of the antelope family, the Sonoran pronghorn is smaller and lighter in color than other pronghorn subspecies and is uniquely adapted for survival in harsh desert conditions. Threats to the Sonoran pronghorn include barriers to movement from fencing and highways, loss of habitat, coyote predation, and vehicle collisions.

In southwestern Arizona, the Sonoran pronghorn shares its lands with the Barry M. Goldwater Range (BMGR), an active military flight training range overlaying 1.3 million acres of the low mountains and basins of the Sonoran desert, adjacent to Mexico. In October 1999, Congress passed the Military Lands Withdrawal Act, which designated the Air Force as the manager of the eastern segment of the BMGR and the Marine Corps as the manager of the western segment.

Partners

The Air Force and the Marine Corps work collaboratively with the Army National Guard, U.S. Fish and Wildlife Service (FWS), and Arizona Game and Fish Department (AGFD) to conserve



Five Sonoran pronghorn drinking from free standing water, surprising biologists who thought water requirements were met only through the intake of vegetation.

the remaining subpopulation of the Sonoran pronghorn found primarily on BMGR. FWS staff from the adjacent Cabeza Prieta National Wildlife Refuge (NWR) and the Ecological Services office in Tucson work to support the military training mission and provide protection for the pronghorn. As a partner, AGFD fully supports the military mission, while conducting many of the pronghorn conservation projects through contracts or cooperative agreements with oversight by the military and the FWS.

The 2002 Drought

In 2002, the Sonoran pronghorn population on BMGR dropped nearly 80 percent, primarily due to lack of rainfall. Drought conditions affected all

major Sonoran desert plant communities that the pronghorn relies on during each year. Additional stress to the animals because of land use activities in the region may have also played a part, but lack of virtually any significant rainfall from mid-August 2001 until the winter of 2002 was attributed for the lowest count ever, only 21 pronghorn.

Recovery Efforts

In light of the dire circumstances, the Marine Corps, Air Force, Army National Guard, FWS, and AGFD all stepped up to plan, fund, and implement a series of emergency recovery measures to reverse the low population trend.



Sonoran pronghorn drink straight from constructed wells.

Previous research indicated that Sonoran pronghorn obtained their water solely from vegetation. The recovery team decided to test this theory by hauling water directly to the animals. AGFD, FWS, and Marine Corps staff carried water to a remote site 3 miles from the nearest road, and with great surprise, the pronghorn drank straight from the coolers. This significant finding led to the decision to construct water wells and forage enhancement plots. Water wells not only provide a direct source of water for the pronghorn, but also distribute water above ground to establish and maintain edible vegetation in the harsh desert conditions.

The second major recovery effort was construction of a one-square mile semi-captive breeding enclosure on the non-wilderness portion of the Cabeza Prieta NWR. The FWS contributed funds for the enclosure as well as other recovery activities. Construction of the enclosure was completed in January 2004.

The third action was to get some new genes into the remaining pronghorn population pool by bringing in animals from the larger of two subpopulations in Sonora, Mexico. The goal was to move five pronghorn a year for three years, and to transport them as rapidly as possible to minimize stress. The AGFD did a superb job in working with the Mexican government to obtain approval and required permits. The FWS

obtained the necessary Federal permits from the Department of Agriculture and the approval of the Convention of International Trade of Endangered Species (CITES). The AGFD, the military, and the Mexican government worked together to gain air space clearances to fly the animals by helicopter directly from Mexico to the enclosure.

With all approved permits in hand, and 6 months of planning the capture and transport operations, the capture in Mexico took place January 16-17, 2004. Seven pronghorn were captured, but only two survived and were released into a semi-captive breeding facility on the Cabeza Prieta NWR near Ajo, Arizona. According to the AGFD, one animal died from a medical problem and four others died due to a syndrome called "capture myopathy." Capture myopathy occurs due to the build up of lactic acid in the system following overexertion, which when combined with over stimulation of the nervous system, results in disruption of the animal's metabolism. The animal then suffers from overheating or hypothermia.

The capture operation was immediately shut down when the team realized what was happening to the animals. Unfortunately, capture myopathy is a delayed reaction, which the team of experts did not foresee. The planning involved wildlife biologists with

decades of experience along with veterinarians and experts from the Phoenix and Los Angeles Zoos, and Disney World. Most of these people devoted a significant part of their lives to recovering the Sonoran pronghorn. Everyone was saddened by the loss, but as scientists they knew that, without their assistance, the pronghorn population would never recover.

The two pronghorns successfully captured, both does, are now doing well in the predator-proof 640-acre natural environment located on the refuge. The animals are alert, feeding, and responding naturally. In the spring of 2004, a male pronghorn, thought to be around 2 years old, was captured from the Sonoran desert and released into the enclosure with the females.

Personnel continue to monitor the animals and patrol the perimeter fence daily to check for predator intrusion or other tampering. New fawns have been observed in the area outside of the enclosure, and permits are in place for the next translocation. The recovery team is optimistic that they will improve and continue the breeding effort necessary to reverse the declining trend and preserve the Sonoran pronghorn's heritage in the beautiful Sonoran desert ecosystem.

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