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SONORAN PRONGHORN BRIEFING

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BACKGROUND

The Department, in cooperation with a number of various agencies and private organizations has conducted research efforts on the status, life history, movement patterns, periods of mortality and natality, etc. since the first capture in October, 1983. The conclusion of the first period of study (1986) was that additional studies were needed. Specifically, we recommended that studies into causes for fawn mortality should be initiated. Some of the study objectives that were outlined included: affects of predation of neonatal pronghorn; the potential for nutritional stress to cause inability for females to maintain nursing fawns; and to continue the monitoring efforts to document sex and age ratios.

In October 1987, an additional collaring effort took place. The terrestrial studies were conducted by the Fish and Wildlife Cooperative Research Unit at the University of Arizona. The Department continued with some of the study objectives that were initiated in the first study as well as continued to monitor pronghorn movements from the air. Most of the efforts of these studies were done to gather enough biological information to develop a management plan for the subspecies that would allow meeting the goals of the Recovery Plan.

Recently, the US Air Force has indicated that they would like to change the operations on the Barry M. Goldwater Range to include overflights of the F15E. There is some concern that this will have an adverse impact on the Sonoran pronghorn that reside on the Range. In 1989, the environmental officer from Luke Air Force Base requested that the Department prepare a pre-proposal on a study to identify the impacts of these overflights on pronghorn. The approach that we took involved the use of a new technique that measures animal movements and records them using microchip technology. Data are able to be retrieved to a receiver in a remote location. A second aspect of the pre-proposal entailed the use of twice-labeled water to measure energy and water turnover rates as related to the affects of overflights. This was presented to the Air Force and Fish and Wildlife Service several months ago. We await a response to this request.

CURRENT ACTIVITIES

At the request of the Centro Ecologico de Sonora, the Arizona Game and Fish Department has assisted the Centro in efforts to initiate a study of the status of Sonoran pronghorn in Mexico. The first step was to plan and conduct an aerial census in December, 1989. The results of that survey were encouraging as we observed 33 pronghorn which is more than double the number estimated to occur in Sonora by the Mexican biologists. As a result of these surveys, the Centro has decided to undertake a radio-telemetry study. The Director of the Centro has requested the Department's assistance in this effort. The capture and collaring is scheduled for December 1990. A biologist from Mexico was recently in the state for training in collecting and recording radio-telemetry data.

We continue to fly the collared pronghorn on the Cabeza Prieta and the Barry M. Goldwater Range. All of the data that have been collected by the Department since 1983 are being used in some GIS exercises to document use pattern in regard to various col

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such as location of waters, vegetation type, military use zones, roads, elevations, slope and aspect. The GIS covers are being groundproofed now. The report is scheduled to be completed and available for cooperator review no later than December 31, 1990. The major concern is that the collars on the pronghorn are due to fail in the near future leaving us without the ability to monitor population levels or to continue research.