



TRANSLOCATION OF MULE DEER Fact Sheet #10

OVERVIEW

Translocation is used by wildlife managers to restore wildlife in historical ranges, augment populations at low densities, and reduce local overpopulation issues. Capturing and moving large mammals is expensive and labor intensive as well as potentially stressful for the animals. For mule deer, data and detailed analyses on translocation efforts are few compared to species such as elk and bighorn sheep. Recently, mule deer translocation programs in the western US have focused on reducing densities in habitats where harvesting animals is not practical or possible. In some cases translocations have been done to determine if low density populations can be increased. Wildlife agencies need to carefully consider the goals, costs, and potential outcomes and should include a monitoring component when planning to implement deer translocation programs.

BACKGROUND

Translocation of big game species has been part of wildlife restoration efforts for decades. Because of the ubiquitous distribution of mule deer, many agencies have historically not translocated mule deer. Some wildlife agencies have moved mule deer and other deer species in the past and observed low survival compared with other big game translocations. High mortality associated with capture stress or injury during transport, poor post-release survival, and high rates of predation have been observed.



Photo: Teresa Griffin

Photo: David Smedley



The reasons mule deer translocations had limited success in past efforts are not fully understood due to poor or nonexistent post-release monitoring. However, casual reports and observations have indicated such outcomes as not seeing translocated deer frequently after the release and no noticeable increase in deer abundance in that area. To identify limiting factors associated with mule deer translocations, wildlife agencies in Utah and New Mexico have recently initiated mule deer translocations with robust post-release monitoring. After 1 year, survival rates were 50-70% for translocated adult deer compared to about 85% for resident adult deer. Deer were moved from high density areas where lethal removal was not socially acceptable (state parks and urban areas) and from an over-populated winter range to an area where the deer density was considered below carrying capacity. These investigations will help determine if mule deer translocations are a useful strategy to reduce deer density in a nonlethal manner or boost indigenous populations.

COSTS AND OTHER CONSIDERATIONS

Deer translocation is an expensive and time-intensive management activity. Costs have ranged from \$100 to \$1,000 per animal, varying with the process, number of animals translocated, capture and handling methods, and duration of the project. Wildlife agencies have used in-house staff or hired additional personnel to plan and coordinate capture processes, collect health samples, move deer, and monitor success.

Additional costs include radio collars, as well as vehicles and equipment. Agencies may partner with local governments, conservation groups, and other interested parties to fund and perform mule deer translocations. Communities must agree in advance on a suite of proactive practices to reduce deer/human conflicts and address the problem from many directions. The following items are some of the most important considerations to address the societal issues when translocation efforts are being planned: educational outreach on type of fencing and other deterrents available, deer-resistant landscaping, bylaws or regulations to prevent supplemental feeding, vehicle speed restrictions and additional signage.

Migratory populations of mule deer have high fidelity to summer and winter home ranges. It is important to consider what effect innate migratory behavior might have on the survival of mule deer released in non-migratory herds (and vice versa). In addition, translocation must consider the high risk of introducing serious infectious diseases and parasites (such as Chronic Wasting Disease and exotic lice).

PLANNING

When translocation of mule deer is being considered, an important first step is to clearly define the goals, objectives, and criteria for determining the success or failure of the project. Release sites and recipient deer populations should be evaluated well ahead of time. Sites must be historical for mule deer, provide suitable habitat with adequate forage quantity and quality, water, and cover, and have deer densities that can absorb additional animals. Releases will likely be more successful in areas with low predator abundance since released animals will take time to become familiar with the new area. Additionally, release sites should exclude areas that will create future depredation problems in agricultural or developed areas. Wildlife managers must be aware that the genetic composition of the recipient population may be affected by the introduction of additional animals from elsewhere. These changes may be beneficial or detrimental, but should be considered. Perhaps most importantly, animals moved may also move infectious agents and a disease risk assessment should be performed. Disease and parasite exposure in both source and recipient herds should be assessed as part of that risk assessment before any translocation effort is undertaken, and under no circumstances should mule deer be moved from areas endemic with Chronic Wasting Disease.

ANIMAL WELFARE AND CAPTURE

Animal welfare must be considered when selecting the capture technique, method of handling and care and transport. Capture options include dropnets, clover traps, aerial or ground-based chemical immobilization, aerial net gun operations, and drive nets. Handling must be done by trained and experienced personnel with thought given to using tranquilizers or sedatives for transport, as well as providing a method of humane euthanasia should it be required. All existing animal welfare policies of the various agencies involved should be consulted. Regardless of the options used, every effort must be made to reduce handling time and stress on animals, and to use professionally recommended methods. Consulting an experienced wildlife veterinarian during the planning process may help with the success of the translocation.

MONITORING

To evaluate the success of a translocation, a post-release monitoring plan must be incorporated into the program. Radio collars are the only effective way to estimate survival rates, cause-specific mortality, and track movements. Managers should plan for adequate finances, time and personnel to properly conduct telemetry-based monitoring and subsequent data analysis. All information gathered should be shared with cooperators and the public to facilitate and inform future management decisions.

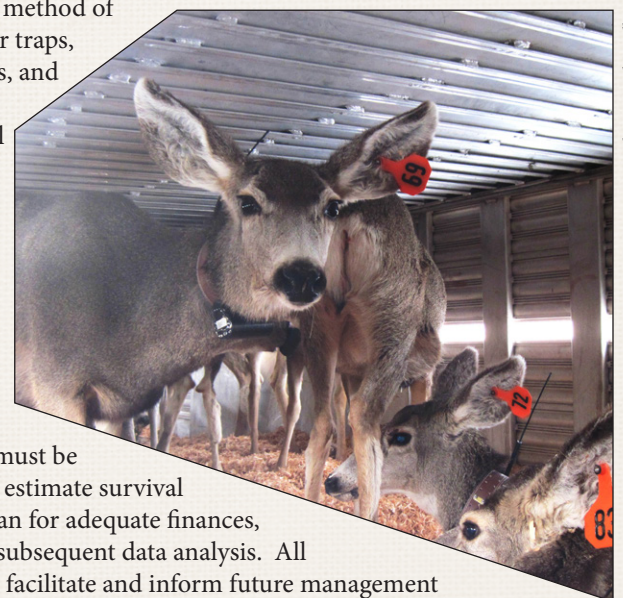


Photo: David Smedley

More information on mule deer can be found at www.muledeerworkinggroup.com

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