

MULE DEER GENETICS AND DEMOGRAPHICS IN MOJAVE NATIONAL PRESERVE

Graduate Student Research – half time Research Assistantship supported by NPS

Mojave National Preserve is a 1.6 million acre area of the East Mojave Desert in Southern California bounded by Interstates 15 and 40. The New York and Providence Mountains lie along a nearly north – south axis, separating the Soda Lake – Devils Playground basin to the west from Lanfair Valley to the east. In March of 1948 California Department of Fish and Game introduced 40 mule deer (*Odocoileus hemionus hemionus*), nine bucks and 31 does from Arizona, into the New York and Providence Mountains and allowed hunting of this population starting in 1955. Buck kill data from 1959 through 2005 show an average of 31 reported kills annually, with a maximum of 67 reported in 2000. California Department of Fish and Game sells 500 permits each year for this zone but does not collect demographic or habitat data other than reported buck kills because the mule deer density and harvest are too low.

Mule deer habitat in Mojave National Preserve, roughly the zone above 4000 feet elevation, connects the New York and Providence Mountains to the historical range of mule deer in the Spring Mountains through Potosi, Clark Mountain, Ivanpah, and Cima Dome. Mule deer may have existed in the Providence – New York Mountains prior to 1948, according to anecdote, but may now be isolated by the Interstates. Over the course of about five years, starting in 1999, approximately 4,000 burros were removed and about 6,000 livestock grazing units were retired. Since establishment of the Preserve, annual buck kill data show a slight upward trend, however some long-time residents in the area have reported recent declines in mule deer and other wildlife populations. Reduced grazing pressure, dramatic differences in annual precipitation, loss of water distribution systems for livestock, and other unknown factors may have affected populations.

Park management is interested in supporting a thesis project on mule deer demographics and genetics in the Mojave National Preserve including population size, trends, genetics, distribution, range, habitat conditions, and meta-populations. Support would be for a half-time research assistant up to three years and may also be available for radio telemetry, a field vehicle, and aircraft flight time. A brief statement of interest not exceeding five single-spaced pages should be addressed to:

Mojave National Preserve
Science Advisor
2701 Barstow Road
Barstow, CA 92311

Park management and staff will review statements of interest starting June 30, 2006 and will notify the selected researchers by July 20, 2006. Depending on availability of funds the project could commence either late in Fiscal Year 2006 or at the beginning of Fiscal Year 2007. Contact Debra Hughson (debra_hughson@nps.gov 760-252-6105) or Larry Whalon (larry_whalon@nps.gov 760-252-6140) for additional information.