Observations and Recommendations During Capture of Bighorn Sheep

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ABSTRACT: Bighorn sheep are captured routinely for monitoring and research, yet questions remain regarding numerous aspects of handling procedures and the effects of handling on individuals and populations. We evaluated a variety of factors that have the potential to affect the demography and behavior of bighorn following captures. We captured 653 Sierra Nevada bighorn sheep using helicopter net-gun during 2001 – 2017. Animals were restrained using hobbles and blindfolds. Captures occurred at elevations between 5,000 and 14,000 feet and most were ferried to a central location for handling. Handling times varied between 10 minutes and 2 hours. Body temperatures ranged from 99.0 to 107.7o F. Our rate of capture mortality was 2.7%. We examined the relationship among survival, vital rates (temperature, respiration and heart rate), and handling time. Movement rates and home range sizes of animals with previously deployed GPS collars were compared pre- and post-capture. We recommend continuing to hold animals with elevated temperatures to ensure adequate cooling rather than releasing hot animals. We also provide detailed recommendations for collar fitting.

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