# Carolina Medina-Nava — BRI Undergraduate Researcher

My name is Carolina Medina-Nava and I was born and raised in Monterrey, Nuevo León, Mexico. Since I was a child I have developed a love for wildlife and exotics by spending most of my time volunteering as a veterinarian technician and working on my parent's cattle ranch located southeast of Monterrey. In the summer of 2010 I decided to move to Texas to obtain a better high-level education. I have been beyond blessed to work and volunteer with multiple ranches in south Texas and the hill country on deer breeding facilities. In the fall of 2014 I had the opportunity to travel most of the eastern United States and northern Mexico as an artificial insemination technician on white-tailed deer, mule deer, and elk. In the spring of 2015 I transferred to Sul Ross State University as a junior. Since then I have been involved with trapping Montezuma quail, translocating pronghorn, and conducting radio telemetry on bighorn sheep. Last year I conducted my first undergraduate research project studying trail use preferences by visitors in Big Bend National Park and cataloging carnivore sighting reports from visitors. This year I am analyzing antler characteristics of mule deer for my second research project with the Borderlands Research Institute. I will graduate with my B.S. degree in May of 2017, after which I intend pursue a M.S. degree in the field of wildlife.

**Age Class Antler Characteristics of Mule Deer in the Trans-Pecos, Texas**

***16 May — 31 August 2016***

Beginning in 2002, the Texas Parks and Wildlife Commission implemented experimental antler restrictions on white-tailed deer in 6 counties with the goal of improving (increasing) the age structure of the bucks in those areas. Within 3 years, the proportion of bucks < 3.5 years of age harvested dropped from 79% to 29% in those counties. By 2014, 117 counties adopted antler restrictions for their white-tailed deer. Landowners and TPWD biologists in the western part of Texas are now wanting to increase the age structure of mule deer bucks; potentially implementing antler restrictions in certain areas to obtain this. In order to do this, we must first develop a better understanding of the antler and body measurements of each age class of mule deer bucks. There are currently 3 on-going studies in the Trans-Pecos with marked known-aged mule deer bucks. Using trail camera data and known inside spread antler measurements from these 3 sights, along with measurement analysis computer software, I will estimate the ear tip-to-tip and outside spread measurements of each buck and categorize the data by age class. Data from this study will be shared with TPWD to allow for further investigation into antler and body characteristics of differing age classes of mule deer.

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