

## RESEARCH PROGRAM

Native rangelands, at more 700 million acres in the US, are a major contributor to the natural resource base of the nation. With over 2/3 of this resource held as private lands, a large portion of our future water, wildlife, and livestock productivity depends on the stewardship of privately-held ranches. Texas alone has over 92 million acres of native rangelands on private ranches, representing some of the nation's most valuable wildlife habitats while also the source of our country's greatest cattle production. Notwithstanding their value, native rangelands are under increasing threat from drought, disease, invasive plants, and exotic animals.



**The purpose of our research program is to understand and improve the productivity of native rangelands for both wildlife conservation and livestock production.** Our approach is to generate research-based solutions to help ranchers conserve wildlife habitats while sustaining livestock production.

Our research program emphasizes work in 3 overlapping areas.

**Biological inventory & monitoring.** Using state-of-the-art techniques, we track the occurrence and distribution of over 625 wildlife species that potentially occur across our ranchlands. We monitor response to drought, grazing and other factors that influence the

composition and productivity of native rangelands. We maintain biological collections of all vertebrate species to serve as a long-term reference for scientific study.

**Herbivore ecology & management.** We use novel techniques to understand the competition among cattle, native wildlife, and exotic animals. We document the dynamics of annual changes in productivity and population structure on one of the largest pristine white-tailed deer populations in the state (both un-hunted and un-managed). We are developing one of the nation's largest grazing management trials designed to test the influence of cattle stocking rates and grazing systems on both wildlife and cattle productivity.

**Species – Habitat Relationships.** We determine habitat use and genetic structure for the largest population of endangered ocelots in the US. Through our replicated monitoring efforts, we have document habitat relationships for over 68 species of native wildlife, including northern bobwhites, Texas horned lizards, southern plains woodrats, and ferruginous pygmy-owls.



In accomplishing our research goals, we create partnerships with university faculty. Not only does this allow us access to some of the nation's foremost natural resource experts, but it also brings the advantage of engaging young scientists. Our university partnerships create on-the-ground opportunities for training dozens of graduate researchers.