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NWRC Research Areas: Predator Management Research

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Our scientists are developing control methods, evaluating impacts, and applying ecology to manage carnivores.

Data on predator population dynamics, ecology, and behavior in relation to predation patterns on species of human concern, mainly livestock, game species, other predators, and threatened and endangered species, are needed for effective depredation management. In addition, these data can be used as a basis for developing accurate methodologies for indexing predator abundance, monitoring programs, and damage assessment. Such programs are increasingly important because they provide evidence of regulatory compliance (i.e., NEPA and ESA). While many data exist, significant gaps remain regarding predator-prey, predator-predator, and predator-livestock relationships, and methods of damage assessment and management. Despite increasing interest in selective strategies for reducing depredations, few practical alternatives exist. In addition, conflict between humans and predators is increasing, particularly at the interface between urban areas and wildland environments.

Damage caused by predators occurs in many forms. Direct predation of livestock can cause losses of millions of dollars by ranchers and farmers throughout the United States. Indirect effects also can be substantial in terms of lost productivity and increased costs to the livestock producer. Predation on big game species is an important issue for state wildlife management agencies as reduced revenues from hunting can occur if herds decline and harvest is consequently affected. Predation on threatened and endangered species is also becoming more important to wildlife and land management agencies attempting to recovery or enhance imperiled species.

To address these needs, we adopt a multi-disciplinary approach. Studies on development of control methodologies and examination of the influence of nutrition and social dominance involve physiologists, nutritionists, chemists, behaviorists, and wildlife biologists, using the kennel and pen facilities atf the National Wildlife Research Center’s (NWRC) Utah Field Station. Ecological studies will involve the efforts of field station wildlife biologists working in collaboration with biologists, specialists, and graduate students within federal and state agencies, and academic institutions. Genetic studies are conducted in the Wildlife Genetics Laboratory at the NWRC headquarters campus in Fort Collins, CO. Cooperating faculty and graduate students at Utah State University, Colorado State University, and other academic institutions are critical participants in the research activities.

Project Goals and Objectives

Managing Human-Wildlife Conflict with Mammalian and Avian Predators

Goal: To generate and disseminate ecological information related to both mammalian and avian predator management, particularly aimed at reducing conflicts with livestock, humans, and native prey species. We use multi-disciplinary approaches to develop lethal and non-lethal techniques and evaluate control methods to manage predation on livestock and natural resources; improve the current knowledge of predator ecology, behavior, genetics, and demographics relative to predators and depredation to improve management; and assess predator responses to management strategies.

Objectives:

1. Develop and evaluate lethal and nonlethal tools to mitigate and prevent conflicts with mammalian and avian predators.
2. Assess the impacts of anthropogenic factors influencing mammalian and avian predator behavior, population ecology, demography, physiology, and genetics in urban and wild environments to improve management.
3. Document ecological and economic impacts of native, nonnative, and feral mammalian and avian predators on natural resources.
4. Develop foundational knowledge of predator behavior, physiology, evolution, and ecology that informs applied mammalian and avian predator management.

Related Links

- Predator Management (project publications)

Contact Us

Predator Management

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