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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 will adopt a multi-disciplinary approach. Studies on development of control methodologies and examination of the influence of nutrition and social dominance will involve physiologists, nutritionists, chemists, behaviorists, and wildlife biologists, using the kennel and pen facilities of the NWRC's Logan, UT, 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 will be conducted in the Wildlife Genetics Laboratory at the National Wildlife Research Center Fort Collins, CO, research facility. Cooperating faculty and graduate students at Utah State University, Colorado State University, and other academic institutions will be critical participants in the research activities.

# Project Goals and Objectives

## Developing Control Methods, Evaluating Impacts, and Applying Ecology, Behavior, Genetics, and Demographics to Manage Predators

**Goal:** Improve the current knowledge of predator ecology, behavior, genetics, and demographics relative to predators and depredation on species of human concern, assess predator responses to management strategies, and develop techniques and control methods to effectively assess and manage mammalian predation on livestock and natural resources.

### Objectives:

1. Document the ecological relationships between predators and livestock, natural resources, and human health and safety in wild and urban environments.
2. Document the effects of behavior and nutrition on coyote reproduction, social dominance, and space use as it relates to predation and population demographics.
3. Development of control methodologies for managing predation on livestock and natural resources.
4. Develop, optimize, and use molecular markers for species ID and individual ID of predators and other wildlife for estimation of population differentiation, population membership, population connectivity, relatedness, assignment of individuals to population of origin, and evolutionary relationships.

## Related Links

- [Predator Management](#)

## Contact Us

Predator Management

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