

Berger, K. M. 2006. Carnivore-livestock conflicts: effects of subsidized predator control and economic correlates on the sheep industry. *Conservation Biology* 20(3): 751.

Abstract: Despite the importance of carnivores in terrestrial ecosystems, many nations have implemented well-coordinated, state-funded initiatives to remove predators, largely because of conflicts with humans over livestock. Although these control efforts have been successful in terms of the number of carnivores removed, their effects on the viability of the industries they seek to protect are less understood. I assessed the efficacy of long-term efforts by the U.S. government to improve the viability of the sheep industry by reducing predation losses. I used regression analysis and hierarchical partitioning of a 60-year data set to explore associations among changes in sheep numbers and factors such as predator control effort, market prices, and production costs. In addition, I compared trends in the sheep industry in the western United States, where predator control is subsidized and coyotes (*Canis latrans*) are abundant, with trends in eastern states that lack federally subsidized predator control and that were (1) colonized by coyotes before 1950 or (2) colonized by coyotes between 1950 and 1990. Although control efforts were positively correlated with fluctuations in sheep numbers, production costs and market prices explained most of the model variation, with a combined independent contribution of 77%. Trends in sheep numbers in eastern and western states were highly correlated ( $r = 0.942$ ) independent of the period during which they were colonized by coyotes, indicating either that control has been ineffective at reducing predation losses or that factors other than predation account for the declines in both regions. These results suggest that government-subsidized predator control has failed to prevent the decline in the sheep industry and alternative support mechanisms need to be developed if the goal is to increase sheep production and not simply to kill carnivores.