

THE ECOLOGICAL ROLE OF MESOPREDATORS AND THE LONG-TERM EFFECTS OF MESOPREDATOR CONTROL

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Abstract: Until approximately 20 years ago, mammalian predators were actively pursued by hunters and trappers for both sport and economic gain. However, during the past two decades fur prices have fallen precipitously, and sport hunting and trapping of mammalian predators is at an all-time low. Some suggest that decreased hunting and trapping pressure on mesomammal predators (e.g., raccoons, opossums, bobcats, foxes, coyotes, etc; hereafter, mesopredators) has resulted in increased mesopredator populations and a decline in many prey species. The role of mesopredators within southern forests is controversial, and there are few empirical studies on which to base management and political decisions regarding predation issues. Moreover, the few studies that do exist focus on the response of a single species or are of too short duration to fully understand the long-term effects of removal efforts. This study will provide empirical, long-term information on the ecological role of mesopredators. Our study uses mesopredator exclosures to experimentally explore the role of mesopredators within the broader wildlife community by artificially reducing mesopredator populations. Because we are using exclosures (electric fences specifically designed to exclude mesopredators, without restricting target prey species), there will be no need to sacrifice mesopredators to accomplish study objectives. Effects of mesopredators on avian, gopher tortoise, and small mammal population dynamics are of primary interest. However, we are also monitoring snake and raptor populations to determine how mesopredators affect their numbers and distribution and whether they, in turn, influence the dynamics of other wildlife populations.

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