

MONTEZUMA QUAIL MANAGEMENT IN ARIZONA: ADDRESSING NEEDS OF A CONSISTENT, DEDICATED PUBLIC WITH A VARIABLE, INCONSISTENT RESOURCE

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ABSTRACT

Montezuma quail (*Cyrtonyx montezumae*) are unique among species of quail in habitat, diet, and behavior; these distinctions combined with an exotic appearance, and distribution in warmer climates in the United States have made them a popular game bird among a dedicated cadre of upland bird hunters. Montezuma quail are not, however, unique in population fluctuations which are largely affected by climatic factors. The history of harvest management for Montezuma quail in Arizona has generally been one of increasing season lengths and bag limits since the first 2-day hunt in 1960. There have, however, been several instances when season dates and bag limits have been changed, largely in response to public demand from individuals and groups that believed efforts to reduce harvest would protect populations and reduce fluctuation of bird numbers. Research directed specifically at the influence of harvest on Montezuma quail populations has found quail numbers fluctuate independent of potential harvest levels. Density-dependent survival, compensatory mortality, and self-regulating hunter numbers are often invoked to explain fluctuation of quail numbers independent of harvest regulations. We reviewed current literature relative to these issues and investigated Montezuma quail harvest characteristics to inform management options. Hunter numbers, based on hunter questionnaire data collected between 1987 and 2009, had greater influence ($r^2 = 0.616$) on Montezuma quail harvest than either birds/day ($r^2 = 0.474$), or days/hunter ($r^2 = 0.229$) suggesting restricting hunter numbers would affect harvest more than reducing bag limits or season length. The average Montezuma quail hunters in Arizona harvested < 2 birds/day, < 6 birds/season, and hunted < 4 days/season. Dedicated hunters typical of those seeking harvest restrictions are not 'average' hunters and often have inflated views of the impact of hunting on annual fluctuations in bird numbers. Efforts to control harvest commensurate with perceived bird populations would be ineffective at maintaining reliable bird numbers and would be inconsistent with the current state of knowledge relative to effects of hunting on Montezuma quail numbers. Alternative management options including increasing public information and education efforts may be more effective at satisfying the needs of the dedicated community of Montezuma quail enthusiasts.

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