

## MOUNTAIN LION PREDATION ON BIGHORN SHEEP IN THE PENINSULAR RANGES OF CALIFORNIA

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**Abstract:** An investigation of cause-specific mortality among 91 radiocollared bighorn sheep was conducted from November 1992 through January 1996 in the Peninsular Ranges of southern California. Mountain lion predation was the most significant cause of mortality and accounted for 63% (27/43) of all mortalities in the 6 sheep populations included in the study. Lions accounted for 0-100% of all mortalities within these populations, and 0-27% of the radiocollared sheep within any given population were killed by lions annually. The age at capture of the sheep varied significantly among populations, and the age distribution of sheep killed by lions did not appear to differ from this pattern. Sheep of both sexes were preyed upon by lions but a statistical comparison between sexes was not possible because only a small number of rams were radiocollared. Predation occurred during all times of the year except for the months of June, July, and August. Sixty-seven percent (18/27) of the predation events occurred between December and March. It appears that lion predation has been a significant limiting factor during the past three years, and sustained high levels of predation by lions may adversely affect the long-term viability of this threatened metapopulation of bighorn sheep.

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