

A SPATIAL AND RELATIONAL ANALYSIS OF LION CONFLICTS THROUGHOUT MONTANA, 1990-2000 ^{TMS}

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We examined available records of lion (*Felis concolor*) conflicts reported for the fiscal years 1990-2000. Records reviewed included the USDA/APHIS/Wildlife Services animal damage reports, MFWP lion conflict reports, MFWP Enforcement Game Damage Reports, recent and archived newspaper clippings, and Mortality reports from the field. Each record was carefully reviewed and classified as non-incident or incident. Incidents must meet specified requirements and in general did not include mere observations of lions by humans. Incidents included a significant interaction between lions, humans, or livestock or required some significant management action by MFWP or Wildlife Services. In addition, we created a lion mortality data base that included all known non-hunting and hunting mortalities. In addition to these records of mortality, whole lions were extracted from the field whenever possible, and examined at the Wildlife Laboratory in Bozeman. A complete necropsy was performed on each specimen to determine sex, age, reproductive status, animal condition, and general health. We identified 752 total incidents in the record from 1990-2000. There has been a general increasing trend in the number of incidents reported during that period from 26 in 1989-90 to a high of 126 in 1998-99. Livestock-lion incidents increased at a steady rate over this period. The number of human-lion incidents varied annually with a noticeable increase in the past three years following substantially increased lion harvests. We examine various attributes in the mortality data base that includes 5220 hunting and 681 non-hunting mortalities for the 1990-2000 time period. A spatial analysis of these incidents in relation to hunting kills and non-hunting mortality is presented.