Avian Scavengers And Lead Rifle Ammunition: Where We're At, Challenges, And Solutions

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Birds have long been recognized at risk of lead poisoning from ammunition sources, but only in recent years has rifle ammunition been identified as a source of lead toxicity in raptors and other scavenging birds. Several studies have indicated increased lead exposure in eagles but the implications to population dynamics remain unclear. We have monitored blood lead levels of Common Ravens (*Corvus corax*), Bald Eagles (*Haliaeetus luecocehpalus*), and Golden Eagles (*Aquila chrysaetos*) in Jackson Hole, Wyoming, since 2004 to investigate effects of spent rifle ammunition on avian scavengers. Data from ravens and Bald Eagles indicated a strong relationship between big-game hunting seasons and elevated blood lead levels. In 2009, we initiated a voluntary non-lead ammunition program in collaboration with Grand Teton National Park and the National Elk Refuge. Free, non-lead ammunition was distributed to hunters in the area. Hunter surveys indicated that 24 percent of successful hunters on the Park and Refuge used non-lead ammunition and we detected a 28-percent drop in the mean lead levels of ravens monitored from previous years after the harvest totals were controlled for. We continued the voluntary program in 2010 by selling reduced-priced non-lead ammunition, and there was greater participation in the voluntary non-lead program (33%). Further, we have outfitted 13 Bald Eagles with satellite transmitters to document the potential geographic impact our local hunting season has on the continental eagle population and found that 90 percent of eagles outfitted during the big-game hunting season breed/summer in central Canada.