

****Drones Outperform Dogs for Hazing Bears - A Comparison of Aversive Conditioning Tools**

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Human-wildlife conflicts can result in harm to people and their livelihoods, and frequently ends in reduced tolerance for species and/or removal of animals. Resolving and preventing conflict is essential for conserving carnivore populations. Here I conducted a six-year study of the efficacy of non-lethal hazing tools to deter grizzly bears (*Ursus arctos*) away from people on the prairies of North-Central Montana. I tested a new technology, drones, and traditional methods of hazing bears including dogs, projectiles, and vehicular pursuit. These various hazing techniques were successful at stopping undesirable bear behaviors and caused a significant increase in avoidance behavior and distance to human infrastructure. Results from these 163 hazing events suggest aversive conditioning may have occurred over longer time scales as older bears required less hazing and hazing events decreased over each calendar year. Drones outperformed other hazing techniques where the odds of a pursuit of a bear being possible increased 127% relative to vehicular chasing due to accessibility issues. Relative to vehicular pursuit, dogs required high maintenance and had an 86% reduction in the odds a hazing event would be successful relative to vehicular pursuit. Grizzlies fled to locations that were farther from roads and human development. Hazing tools were effective for immediately resolving complaints and preventing further conflicts.