
BETTER BULLETS: HOW TO SHOOT VARMINTS WITHOUT POISONING SCAVENGERS

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Recreational shooters kill millions of varmints each year. The carcasses can contain fragments of lead that scavengers can ingest. Less toxic bullets may alleviate the problem but their performance needs to be determined. In this study, ground squirrels were shot with

.17 HMR, .22 LR, and .223 Rem rifles with expanding and non-expanding lead and non-lead bullets. We monitored whether the bullets instantly incapacitated ground squirrels and then estimated lead concentrations in each carcass using radiographs. We found lead in the majority of ground squirrel carcasses that were shot with five out of six lead bullets tested. Expanding ammunition in the .17 HMR and the .223 Rem calibers left the highest estimated concentrations of lead in ground squirrels, which had, on average, 23.6 and 91.2 mg/carcass, respectively. Within a caliber, expanding bullets did not contaminate ground squirrels more than non-expanding bullets. Non-lead bullets incapacitated ground squirrels as well as lead bullets. Recreational shooters and land managers may reduce the amount of lead available to scavengers by using non-lead bullets when shooting ground squirrels and other varmints.