STUDY TITLE:

A camera and hook system for viewing and retrieving rodent carcasses from burrows

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EXECUTIVE SUMMARY

Research to evaluate rodenticides often requires determining bait efficacy, retrieving carcasses of poisoned rodents for chemical analyses, and quantifying non-target and secondary hazards and mortalities.

Traditional methods of retrieving carcasses from burrows (telemetry and excavation) are expensive and inefficient. Further, they do not address non-target issues. Researchers need more innovative and effective methods to locate and retrieve poisoned hypogeal rodents. Information on how far rodents die in their burrows is also needed to assess secondary hazards to scavengers. We evaluated a burrow-

probe camera and hook system for viewing inside burrows and retrieving carcasses of poisoned California ground squirrels *(Spermophilus beecheyi).* We probed 654 burrows and found 31 rodent carcasses within 2 m of the burrow entrance, 23 of which were retrieved. The mean depth carcasses were found at was 1 m (SE = 0.07, $n = 31$), too deep to be available to most surface avian or mammalian scavengers. The average time to probe 50 active burrows in 1- to 4-ha plots was 2 hrs 24 min (SE = 17, $n = 11$). The system was also useful for collecting descriptive information on live squirrels and non-target species.