



RESEARCH INFORMATION BULLETIN

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MODIFIED STEEL TRAPS REDUCE NONTARGET ANIMAL CAPTURES

The Service's Denver Wildlife Research Center and Animal Damage Control Program have completed field evaluation of modified leghold coyote traps that significantly reduce the accidental capture of nontarget species. Selectivity and efficacy were compared for Victor 3N-M steel traps affixed with three types of trap pan-tension devices and for unmodified traps. These tension devices increased the weight required to spring traps so that smaller animals could be excluded while larger ones such as coyotes were captured. One model functioned using a shear pin--a wire placed through aligned holes in the trap dog and pan which sheared when sufficient weight was placed on the pan to spring the trap. Trip weights could be varied by using wires of different thicknesses. A second device consisted of a curved leafspring, that clamped to the base of the trap and rested on the underside of the pan. The third type was a length of steel measuring tape inserted and positioned horizontally under the trap pan. The tape flexed downward when pressure was applied to the pan, thus releasing the trap dog and jaws.

The number of coyote captures and the percent of nontarget species that stepped on, but did not spring, unmodified and device-equipped traps were used to compare efficacy and selectivity. Since it was impractical to collect exclusion-rate data on all species of nontarget animals, we selected gray foxes, kit foxes, striped skunks, opossums, and jackrabbits as representative species. There was very little difference in the performance of the three types of pan-tension devices. In 1981 tests, 92 to 100 percent of the representative nontarget species were excluded, whereas only 6 percent were excluded with unmodified traps. Coyote capture rates for the tension device-equipped traps varied from 86 to 92 percent; the rate for traps without devices was 98 percent. The pan-tension devices, therefore, not only greatly reduced the number of nontarget animals taken but also, by excluding them, left many additional traps operable for taking coyotes.

While private trappers often seek to capture other furbearers along with coyotes, coyote damage control efforts are frequently hampered when traps set for this species are sprung by smaller animals. Traps equipped with pan-tension devices are now being evaluated or used operationally by federally-supervised trappers in Arizona, California, Nevada, New Mexico, Oklahoma, and Texas.

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