EFFECTIVENESS OF CARBON-SOOTED ALUMINUM TRACK PLATES FOR DETECTING AMERICAN MARTEN [TWS]

Jacob S. Ivan and Kerry R. Foresman
University of Montana, Missoula 59812

Covered, carbon-sooted aluminum track plates have recently been proposed as a means of determining presence/ absence of forest carnivores in a given area. I assessed the effectiveness of covered aluminum track plates for detecting American marten in the Bitterroot Mountains of western Montana. On five 10.44 km^2 survey

units in my study area, I captured and uniquely branded the toe pads of seven marten so that they could be identified by their tracks. Concurrently, I deployed six track plates in each survey unit for a 12-day period as per the USFS protocol. Via telemetery data collected on six of the seven marten, I concluded that the branded individuals spent a majority of their time within the survey units and should have been detected by the track plates. However, I did not collect tracks from any of the toe-branded marten. Further, through modified telemetry systems, I found that two of the seven marten spent several minutes on several different days within 5 m of track plates without ever leaving their tracks. Despite not detecting branded marten known to reside on the survey units, I did collect tracks from unbranded individuals on four of the five survey units. Thus, probability of detecting marten on a survey unit when they are actually present appears to be quite high, but the probability of detecting any given individual may be quuite low. However, trap shyness and lack of durability of the toe brands may have influenced the results.