Beyond Bait:
Opportunities for Passive Bear Hair Collection[TWS]

Katherine C. Kendall
U.S. Geological Survey, Glacier National Park
West Glacier, MT 59936
kkendall@usgs.gov

Jeff Stetz
University of Montana
Science Center, Glacier National Park,
WestGlacier, MT 59936
jstetz@usgs.gov

We surveyed trails, forest roads, power lines, and fences on 32,300 km^2 in northwestern Montana to identify trees and other objects that bears rub against. Genetic analysis of passively deposited hair (as opposed to that obtained by attracting bears with bait) is used to identify individual bears to document bear presence, obtain minimum counts, and as capture events for mark-recapture population estimates. Hair will be collected from barbed wire and other hair snags attached to the rub surface. Hair samples from barbed wire are larger, have more follicles, require less time to collect than hair on bark, and define discrete samples that help prevent getting samples from more than one individual. Of the over 5000 rub objects we identified, the majority were trees along 7500 km of hiking trails. We summarize characteristics of rub trees and other objects including species and diameter of tree, amount and type of bear use, distance from trails, and maximum and minimum height of rubbing. The density of rub trees along forested trails varied widely but it was rare to find any area devoid of rubbing activity. When large diameter trees were not available, such as in clear cut logging units, recently burned areas, and tree line communities, bears used sign posts or small diameter trees to rub against. In areas with high levels of pack animal use, ~ 60 percent of the bear rub trees were also bumped by stock packs. We report on the effectiveness of pack stock-friendly, alternate hair grabbing devices tested in the field.