

BEHAVIORAL ECOLOGY OF BLACK BEAR DAMAGE TO CONIFER STANDS^{TWS}

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Black bear damage to conifer stands can result in substantial forestry losses while little is known about the reasons for black bear damage. This paper tests several hypotheses regarding the behavioral aspects of black bear damage to conifer stands and black bear habitat use. This study took place on the Olympic Peninsula of Washington State on a private industrial forest. Bears were implanted with radio-transmitters and monitored with aerial telemetry one to twice weekly. Site investigations were then made to assess damage occurrence and habitat use. We monitored 21 bears (12 males, 9 females) throughout the damage period (May to August) of 1998. Our preliminary analyses show that adult females appeared to cause more damage than the other sex/age classes ($p=0.004$) and with a higher intensity ($p=0.09$). This supports the hypothesis that adult females are damaging because of sexual competition from adult males. Our habitat analyses demonstrated that there is also habitat segregation of subdominant sex/age classes in this population ($p=0.012$). This supports the hypothesis that all subdominant sex/age classes avoid males because of competition for food. The results for testing if adult females were specifically avoiding adult males were inconclusive due to a small sample size at this time. Males and females appear to be causing damage differentially and to be using different habitats. Whether this is due to sexual competition and adult female segregation from adult males remains to be seen in 1999. Poster