

AN EVALUATION OF THE BEAR CREEK BURN  
MARTEN HABITAT IN INTERIOR ALASKA

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Recent research has indicated that openings in mature coniferous forests may be beneficial to marten (Martes americana). Wildfire is the primary agent responsible for creating forest openings in interior Alaska; however, very few studies have focused on marten use of burns. This study was carried out in the 1977 Bear Creek burn near McGrath, Alaska. The study area was primarily black spruce (Picea mariana) forest interspersed with wet meadows and bog; white spruce (Picea glauca) forest lined the waterways. Sixteen marten were radio-tagged in and adjacent to the burn to determine movements in relation to habitat type and forest successional stage, and small mammals and berries were sampled to determine food availability in burned and unburned areas. Microtus spp. were more common within the burn, and the red-backed vole (Clethrionomys rutilus) was more common outside the burn. Success in trapping small mammals was highest in the riparian white spruce stands, both burned and unburned. Berry production was quite variable, with more consistent but moderate production in unburned habitat and sporadic, abundant production in burned habitat. Cover provided by dead, windthrown trees was considered to be a critical feature of marten habitat in the burn. Some marten lived entirely within the burn. Results indicate that marten are adapted to fire-driven ecosystems. Management of marten in interior Alaska, therefore, should be aimed at maintaining a mosaic of forest types through the judicious management of wildfires.

# **ABSTRACTS**

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