SHORT-TERM RESPONSE OF SNOWSHOE HARES TO WESTERN LARCH RESTORATION AND SEASONAL NEEDLE DROP

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Old-growth western larch has been degraded throughout much of its historic range due to extensive timber harvest and fire suppression. We examined the effects of a restoration treatment of western larch on snowshoe hares, a denizen of the boreal forest serving as a focal animal species to indicate the health of the restored ecosystem. In western Montana, we implemented a restoration treatment using "doughnut thinning" to accelerate development of old-growth attributes in larch stands and simultaneously examined the short-term effects on snowshoe hare density, survival and movement. Although typical forest management activities tend to have adverse effects on hares especially in the short-term, we found that the restoration treatment did not affect hare density or survival in the short-term. In addition, despite significant decreases in cover coinciding with the larch needle drop, we found evidence of year-round immigration into larch stands by hares suggesting larch stands are suitable year-round hare habitat. Taken together, our findings suggest that a larch restoration treatment designed to accelerate the development of old-growth attributes can be implemented so as to have no measurable short-term detrimental effects on hares.