Department of Natural Resources (DNRC) is integrating ponderosa pine forest restoration into their timber harvest program with a commercial thin that is combined with a selective cut and followed by a prescribed burn. Many studies have considered the effects of forest management practices on nest availability for cavity nesters, but little published information exists on how thinning combined with prescribed fire affects their foraging patterns. Snags can provide important nesting habitat for cavity nesters, but it has been suggested that food availability may be the limiting factor for woodpeckers. In this project, I examined the foraging patterns of bark-gleaning birds on sites treated by the DNRC versus untreated sites. I determined which tree characteristics are important in the selection of forage trees for five different species: red-breasted nuthatches, white-breasted nuthatches, mountain chickadees, hairy woodpeckers, and black-backed woodpeckers. Treated and untreated sites were analyzed separately to determine if the same tree characteristics were important on both sites. Selection of forage trees with certain characteristics occurred on both sites for most species.

MOLECULAR CELLULAR BIOLOGY AND NEUROSCIENCES

ADAPTATION TO A CHOLESTEROL FREE ENVIRONMENT BY *TRICHOLPLUSIA NI* (TN) INSECT CELLS[MAS]

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For many years, researchers have known that cholesterol is an integral component of eukaryotic cell membranes. Cholesterol is found in the bilayer membrane and helps to maintain cellular membrane structure and fluidity. Recent research has found that a specific invertebrate cell line can be grown in cell culture without any cholesterol contained in the cells. Insect cells are not capable of synthesizing cholesterol and therefore require supplementation in their media. Surprisingly, withdrawal of exogenous cholesterol from a *Trichoplusia ni* cell line is not lethal for these cells. This suggests that sterols are not essential for the viability of certain animal cells. This brings up worthwhile questions. How do these cells maintain membrane structure and fluidity without cholesterol? Is there a structural change in the fatty acids of the membrane lipids or does some other lipid take cholesterol's place in the bilayer membrane? Utilizing analytical gas chromatography the composition of membrane lipids from cholesterol depleted *Trichoplusia ni* cells was analyzed and characterized.