

A COMPARISON OF SIN NOMBRE VIRUS PREVALENCE IN PERIDOMESTIC VERSUS SYLVAN POPULATIONS OF DEER MICE ^{TWS}

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Most cases of hantavirus pulmonary syndrome (HPS) are likely acquired in peridomestic settings, including human dwellings, out-buildings, corrals and ranch yards, yet studies of the ecology and infection dynamics in the reservoir host, the deer mouse (*Peromyscus maniculatus*) have focused on sylvan populations. We describe a 2.5-year study of hantavirus infection in rodents associated with peridomestic habitats at three study sites in west-central Montana. Antibodies reactive with Sin Nombre virus (SNV) were found in 5 species. Overall SNV antibody prevalence was highest among deer mice (25% of individuals tested). Characteristics of these peridomestic populations of deer mice were then compared with those of sylvan populations from 6 different sites in western and central Montana. In both types of populations, the antibody-positive component of the deer mouse population consisted of a higher proportion of adults and males. However overall SNV antibody prevalence and average monthly prevalence was significantly higher in the peridomestic populations. The higher SNV antibody prevalence in peridomestic compared with sylvan settings may be related to behavioral differences and/or potentially longer survival of the virus deposited inside buildings. Peridomestic settings presented higher concentrations of virus and may present a higher risk of human infection than do sylvan settings.