

SHORT COMMUNICATIONS

RELATIONSHIP BETWEEN ASPEN HEARTWOOD ROT AND THE LOCATION OF CAVITY EXCAVATION BY A PRIMARY CAVITY-NESTER, THE RED-NAPED SAPSUCKER

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Abstract. We investigated nest-hole excavation by the Red-naped Sapsucker (*Syphrapicus nuchalis*) in aspen (*Populus tremuloides*) woodlands in western Colorado. Sapsuckers excavate nest cavities primarily in aspens infected with a heartwood rot fungus (*Phellinus tremulae*), which softens the heartwood of infected trees. We assessed the interior condition of fungus-infected aspen trunks by extracting wood samples with an increment corer to determine whether sapsuckers chose nest-hole locations based on the extent of healthy sapwood remaining. Comparing fungus-infected trees with and without cavities, cavity-bearing trees had thinner healthy sapwood. The depth of healthy sapwood also varied with compass direction, being thinnest on the south sides of fungus-infected aspens. Cavity entrance orientations were significantly biased to the south-southeast, corresponding with the directional bias in heartwood rot. These results suggest that the depth of healthy sapwood, and hence excavation effort, may be important in determining nest hole location for the Red-naped Sapsucker.

Key words: cavity-nesting birds, heartwood fungus, nest-site selection, *Phellinus tremulae*, *Populus tremuloides*, *Red-naped Sapsucker*, *Syphrapicus nuchalis*.