

Effects of Selection Logging on Amphibian Diversity and Abundance in Shade-Tolerant Hardwood Forests of Algonquin Provincial Park, Ontario

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Despite the widely acknowledged importance of amphibians in forest ecosystems, they are rarely included in forest management plans. Very little is known about the effects of, or amphibian response to, timber management. To determine whether, and if so, how, selection logging affects amphibians in shade-tolerant hardwood forests, I compared amphibian habitat concurrently with amphibian diversity and abundance in managed (logged) and unmanaged (unlogged) forest stands in Algonquin Provincial Park, Ontario. Selection logging significantly altered aspects of shade-tolerant hardwood forest habitat on which amphibians are known to depend. However, with the exception of American toads (*Bufo americanus*) that were more abundant in managed stands, the overall diversity and abundance of amphibians did not differ significantly between managed and unmanaged areas. Therefore, I concluded that selection logging does not alter hardwood forest habitat to the degree that it negatively affects amphibian diversity or abundance. Implications of this conclusion are discussed.

Ecology of the Wood Turtle, *Clemmys insculpta*, in Algonquin Provincial Park

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A population of wood turtles (*Clemmys insculpta*) was studied from May to October 1999 and from April to September 2000 in the eastern part of Algonquin Provincial Park, Ontario. This study expanded on previous work conducted from 1986-1989 in the same general area. The general goal was to investigate the demography, habitat selection and home range of Algonquin wood turtles, and to examine how these characteristics differ from other wood turtle populations. Eighty-two turtles were found during the latest study: 45 females, 20 males and 17 juveniles. Adult sex ratio was 2.25:1 (females:male). Thirteen nests were found in 1999 with an average clutch size of 9.8 eggs. Overall hatching success was 75%, and 69% of the nests were parasitized by fly maggots. Ten nests were found in 2000, but eggs had not hatched by the end of August. Radio-telemetry was used to track 15 turtles in 1999 and 25 turtles in 2000. Turtles selected a wide variety of habitats, including alder swale, mixed forest, coniferous forest, water, roads, and open meadows. The average home range size, calculated using the minimum convex polygon method, was 39.5 ha in 1999 and 34.8 ha in 2000. These are the largest average home ranges ever reported for wood turtles, and this factor may have significant implications for the conservation of this vulnerable species. For example, wood turtles may suffer more than previously expected from habitat fragmentation through practices such as road construction.