

Rights-of-Way Ecology at Penn State

Plant and animal community response to long-term vegetation management on rights-of-way
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Reptiles & Amphibians

Forest-management practices, such as clear-cutting, can have negative impacts on some species of amphibians and reptiles. A two-year research study of amphibian and reptile populations on SGL33 and GLR&D sites concluded that the right-of-way contained a diverse assemblage of these species. Depending on the location, eight to nine different species were recorded on the right-of-way versus only two recorded in the adjacent forest. The most common species were red-backed salamander (*Plethodon cinereus*), Jefferson salamanders (*Ambystoma jeffersonianum*), northern redbelly snake (*Storeria occipitomaculata occipitomaculata*), and northern ringneck snake (*Diadophis punctatus edwardsii*). Border zones were valuable habitat to salamanders, whereas wire zones were used most often by snakes. The right-of-way contains a much more diverse community of reptiles and amphibians than the adjacent forest and provides an acceptable habitat for these important species of wildlife.



Key Findings

1. Plant diversity and cover type within the right-of-way provided preferred habitat for most reptiles (snakes) and amphibians (salamanders).
2. With exception of the red-backed salamander (*Plethodon cinereus*), amphibians and reptiles were more common within the right-of-way compared to the adjacent forest.
3. Reptiles and amphibians were more prevalent on herbicide treated units compared to hand-cutting units.
4. Properly maintained right-of-way is not a barrier to movement of reptiles and amphibians. (personal communication Carolyn Mahan)

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