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Habitat Use and Status of the Pygmy Rattlesnake (Sistrurus miliarius) in Tennessee

Coupled with the impacts of climate change, global declines in biodiversity are being exacerbated by increasing anthropogenic influences and destruction of ecosystems. Amphibians and reptiles are especially susceptible to these stressors, as many species occupy a suite of stringent, sensitive habitats. The Western Pygmy Rattlesnake (*Sistrurus miliarius streckeri*) is classified as Threatened within Tennessee (TN) and primarily occupies floodplain habitat adjacent to early successional habitats (ESH) along the western portion of the Interior Plateau ecoregion. These ESH support unique flora and fauna but have declined over the last few decades, mostly as a result of urban encroachment and disturbance suppression. Assessing snake population status is further complicated by their cryptic and elusive behaviors, brief and patchy movement patterns, and use of inaccessible habitats. We used a combination of drift fence and box trap arrays, road cruising, and radio telemetry to evaluate the importance of ESH for herpetofaunal conservation, with an emphasis on Pygmy Rattlesnakes. Preliminarily, we found box trapping to be an effective method for passive sampling of highly cryptic Pygmy Rattlesnakes, with all individuals captured within 150 meters of field edges. We also documented evidence of breeding and successful reproduction within this population in Tennessee. Evidence from this work suggests the importance of forested edge habitat for herpetofaunal conservation.