COMPARING RAMP AND PITFALL TRAPS
FOR CAPTURING WANDERING SPIDERS

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ABSTRACT

Pitfall traps are a common sampling method used to collect wandering spiders in a variety of habitats, and these traps require soil disturbance to properly set the trap with the top of the trap at the level of the soil surface. However, not all sampling locations are amenable to soil disturbance, either because there is no soil in which to dig (e.g., rock surfaces), or because soil disturbance is not allowed or it is very difficult to obtain permits for soil disturbance (e.g., US national parks). I tested the efficacy of a new trap design (ramp traps), developed by researchers in Canada, against traditional pitfall traps. In two fields of the Fort Pierre National Grasslands, SD, I ran parallel transects of pitfall and ramp traps for three sampling periods of two weeks each, then counted the number of species and the number of individuals of each species in each trap. Ramp traps captured approximately twice as many individuals, and, on average, 1.1 additional species per trap. However, the species composition caught in ramp and pitfall traps varied, with a small number of species captured only in pitfall traps, and a small number of species captured only in ramp traps. Despite these subtle differences, ramp traps generally outperformed pitfall traps and may be easily moved to different locations with little or no soil disturbance. My results indicate that ramp traps would be a viable trapping method, particularly in areas where soil disturbance is not allowed.