MEASURING BIODIVERSITY OF SPIDERS. 
PITFALL TRAPS VERSES RAMP TRAPS: 
WHICH IS MORE EFFECTIVE?

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ABSTRACT

The loss of biodiversity in communities and ecosystems has become a concern due to changing climate, exotic species invasions, declining habitats and trophic dynamics. Pitfall traps are often used to sample biodiversity, but pose several problems. One alternative is the ramp trap. Although little is known about ramp traps, there are two published studies of their use and therefore we predict that ramp traps will capture more individuals and more species than the traditional pitfall traps. The study site was located in the War Creek Northeast field of the United States Forest Service’s Fort Pierre National Grassland in Stanley Co., SD, USA. Five transects were set throughout the field each consisting of five pitfall traps and three ramp traps. During the two week sampling period, all traps together caught a total of 850 spiders representing 43 species and 9 families. Lycosidae was the most abundant family, followed by Thomisidae, Gnaphosidae and Theridiidae. Linyphiidae was the most speciose family, followed by Gnaphosidae and Thomisidae. Ramp traps were more successful in catching a higher diversity of species from the families Linyphiidae, Theridiidae, Corinnidae, Philodromidae and Clubionidae. Pitfall traps caught more species in the families of Gnaphosidae and Thomisidae. Both trapping methods caught similar numbers of Lycosidae and Salticidae.