

Diversity and Seasonal Dynamics of Spiders In Oak Forests of Black Rock Forest near New York City

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Spiders were monitored for 10 years in Black Rock Forest (BRF). BRF is a 1530-hectare scientific and educational research station located in the Hudson Highlands around 60 miles north of New York City. This project is part of a large scale project entitled “Ecosystem Consequences of Dominant Taxon Loss: the Future of Oak Forests” and, in 2008, we carried out a pilot project on an experimental area of four 75 m square plots. In the first plot, all oak trees were completely removed; in the second plot, all oak trees were girdled; in the third plot, 15% of the canopy oak remained; and the fourth plot was left as an untreated control. We recorded 80 species of spiders belonging to 12 families from the four plots. The seasonal dynamics of spider biomass was similar in all four of the experimental plots, which was characterized by one distinctive peak of spider biomass between mid-June and mid-July. This type of seasonal dynamics tends to be more common for spider species that have one generation per year. Differences in spider biomass in the four experimental plots are discussed.