ASSESSMENT OF THE HERBACEOUS COMMUNITY IN A DISTURBED WOODLOT

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Baseline community structure information is needed for the management and conservation of sites at risk to invasive species. This study examined plant species diversity, evenness, and importance at Collins Woods (5.36 ha woodlot in East-Central Illinois) to provide baseline information for future site assessment. Two methods characterized the herbaceous community. The first used a 10 x 10 m grid across the entire site creating 455 (1 m²) plots in which species presence and cover were measured. The second used two randomly located 20 x 50 m modified Whittaker plots containing nested sub-plots that were sampled for plant density, cover, and number of species. The two sets of samples were 42.5% similar in herbaceous species composition (Community Similarity Coefficient). The Shannon-Weiner index of diversity was 3.20 for the 455 (1 m²) plots and 2.50 and 1.95 for the two 20 x 50 m plots. A total of 95 species were identified at Collins Woods; Parthenocissus quinquefolia, Sanicula gregaria, Toxicodendron radicans, and Geum canadense had the highest importance values. The species-area relationship within each of the Whittaker plots was used to estimate species diversity and richness. The plot located in a former stream meander and associated floodplain had a lower species richness and diversity than the plot within the mesic portion of the site, approximately 5 m above the meander and floodplain. This information will be essential for evaluating the spread of invasive species such as Alliaria petiolata (garlic mustard) and its impact on the herbaceous community structure.