

Notes on Succession in Old Fields in Southeastern Ontario: the Herbs

A. CROWDER^{1,3}, R. HARMSSEN¹, and S. E. BLATT²

¹Department of Biology, Queen's University, Kingston, Ontario K7L 3N6 Canada

²6 Wallace Place, Wolfville, Nova Scotia B4P 2R6 Canada

³Corresponding author

Crowder, A., R. Harmsen, and S. E. Blatt. 2007. Notes on succession in old fields in southeastern Ontario: the herbs. *Canadian Field-Naturalist* 121(2): 182-190.

Vegetation in abandoned hayfields was monitored during 1976-1998. An earlier successional stage followed ploughing. Changes in tree, shrub and vine populations have been reported earlier and showed expected increases in species richness and cover. Highest species richness of herbs occurred three years after ploughing. Non-woody species richness trended irregularly downward, while non-woody cover was variable, peaking in 1987. Within the herbaceous community, year-to-year changes in cover and frequency of species in the following selected groups are reported here: 18 grasses including sown and adventive species; 13 legumes including two sown species; 14 macroforbs of the *Compositae*, including a goldenrod, *Solidago canadensis*, which dominated parts of the fields; a rosette weed, *Taraxacum officinalis*; sedges, horsetails and some other minor components. Grasses and goldenrods were grazed, sometimes intensively and repeatedly, by insects; grasses were impacted by skipper larvae (*Thymelicus lineola*), and goldenrods by beetle larvae (*Trirhabda* spp.). Effects of repeated outbreaks on host plant cover are shown for two plots (100 m²) matching the scale of outbreaks.

Key Words: old field herbs, phytophagous insects, plant succession, goldenrods, grasses, legumes, Ontario.