

THE SEEDING HABITS OF WHITE SNAKEROOT, *EUPATORIUM URTICAEFOLIUM* REICHARD.¹

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On account of the economic importance of white snakeroot, *Eupatorium urticaefolium* Reichard, as a poisonous species in Indiana, the destruction of the plant is a live question among farmers. The only practical method of eradication, aside from clearing the infested woods and cultivating the land, is hand pulling during September when the bright flowers are conspicuous and preferably following rain when the ground is soft and the roots yield readily. Mowing is of little avail since the perennial roots sprout readily.

In connection with this method of eradication, a knowledge of the seeding habits of the plant is of importance. To obtain this knowledge, 200 mature seeds were gathered in White County on October 1, 1923, and submitted to the Seed Laboratory at Purdue University. A germination test of 28 days' duration, starting on October 5, 1923, failed to germinate a single seed. On November 1, 1924, another lot of mature seed was gathered near Lafayette, and attempts to germinate them on moist blotting paper were equally unsuccessful.

On August 15, 1924, a single specimen of white snakeroot in full flower was transplanted from a woodlot near Lafayette to a shady situation under a large ninebark, *Opulaster opulifolius* (L.) Kuntze, located on the Purdue University campus where no white snakeroot was present or has ever been known to grow. The plant ripened seed in a normal manner. The following summer numerous seedlings appeared, although no attempt was made to count them. Several of these plants in turn formed seeds. On October 22, 1926, the snakeroot plants were counted and it was found that in two years the single plant had developed 81 progeny, in spite of the fact that the shade under the ninebark was so deep that only a few of the snakeroot plants actually formed seeds. The plants were all true seedlings since white snakeroot has no means of vegetative reproduction aside from the branches that grow directly from the center of the perennial root cluster.

This simple experiment proved that white snakeroot can reproduce freely from seed when allowed to grow under natural conditions. The production of numerous seedlings of white snakeroot was also noted in the garden of Prof. H. S. Jackson at West Lafayette. The practical importance of this information is obvious in the eradication of white snakeroot. Since the plants go to seed, it is necessary to remove them from the woods after hand pulling rather than merely to shatter the soil from the roots and then cast the plants aside to die. When the latter is done, the pulled plants readily go to seed. Complete

¹ Contribution from the Botanical Department of the Purdue University Agricultural Experiment Station.

eradication should also be practiced, otherwise the remaining plants will go to seed and reinfest the area. Furthermore, on account of the seeding habit, the hand pulling during early September should be repeated several years in order to destroy the plants that originate from seeds that have remained dormant in the soil for two or more years.

RECENT INDIANA WEEDS, 1926¹

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The present paper is a continuation of a series of contributions, started in 1922, which attempts to record the occurrence in Indiana of plants new to the state, particularly species with weedy habits. Established plants that have recently exhibited troublesome tendencies are also considered. The growing season of 1926 is the basis of the following record. In each case, the identification was verified by the United States Department of Agriculture, the New York Botanical Garden, or the Gray Herbarium of Harvard University. Specimens have been deposited in the herbarium of Purdue University Agricultural Experiment Station.

Field Peppergrass.—*Lepidium campestre* (L.) R. Br. Although not included in Coulter's catalogue of Indiana plants, this species is at present so widespread that it probably occurs in every county in the state and has recently taken rank as one of the worst weeds of meadows, pastures and grain crops. The wide distribution of the plant is probably due to the use of impure clover, timothy and alfalfa seed. Field peppergrass is an exceedingly troublesome and persistent plant that is difficult to eradicate under Indiana conditions.

Creeping Yellow Water Cress.—*Radicula sylvestris* (L.) Druce. A native of Eurasia with perennial roots and creeping stems from which new plants arise in abundance. Specimens in full flower were collected in a pasture field and along fencerows near Elwood. Palmer J. Davis, vocational instructor at Elwood High School, states that the plant is causing some alarm among farmers in the vicinity due to its persistence and the habit of reproducing from the creeping stems. Prefers moist ground. The identification was confirmed by S. F. Blake of the U. S. Department of Agriculture.

Squaw-weed.—*Senecio obovatus* Muhl. Found in Montgomery County, notably on the J. F. Dice farm, R. 1, Crawfordsville. Mr. Dice states that the species has recently appeared in his locality and it spreads rapidly, the young plants forming a solid mat on the ground. On the Dice farm a hillside in bluegrass pasture is thoroughly infested with the squaw-weed. The identification was verified by Percy Wilson of the New York Botanical Garden.

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