

Invasive Species Profile: Crown Vetch (*Securigera varia*)

By Greg Sykes (greg@grsykes.com)

Native Range: Europe, extending into North Africa and southwest Asia

U.S. Introduction: 1869

Life Cycle: herbaceous perennial

Means of Spreading: seeds; root fragments will resprout

Commercially Available: yes

Control Method: hand-pull, taking care to extract the entire root; block over the area with tarp; consistently mowing over the area (may take over a year); herbicidal treatments may be used for large infestations

Good Alternative Species: Downy or prairie phlox (*Phlox pilosa*), whorled milkweed (*Asclepias verticillata*), eastern bluestar (*Amsonia tabernaemontana*)



Figure 1. A) This close-up image of crown vetch shows a classic legume blossom, seed pods, and leaf shape. **B)** The noxious weed overruns a field in Fairfax, VA.



Comments: Until now, the weeds highlighted in this Invasive Species Profile series were woodland invaders or plagues along the forest's edge. Crown vetch (also spelled "crownvetch," formerly under the genus *Coronilla*) rapidly spreads across meadows and sunny clearings. Like peas, beans, and other legumes, crown vetch contains root nodules which house *Rhizobium* bacteria. These microbes feed their host by converting inert atmospheric nitrogen into nitrogen-rich compounds which the plant can utilize.

Crown vetch's initial introduction to the United States was in 1869, and it established wild populations shortly thereafter in New York. By the 1950s, this plant was promoted for erosion control, causing both its popularity and population to skyrocket. The roots remain relatively shallow, but create a soil-retaining network. Above the surface, crown vetch forms a thick, lumpy carpet reaching a foot or so high. Crown vetch was also marketed as having both wildlife benefits (deer graze on the foliage while birds eat the seeds) and aesthetic attributes (pink blossoms). Plenty of sunlight is its primary growth requirement; packing its own private little nitrogen fertilizer factories helps the vetch thrive in many soil conditions.

Sadly, the damage caused by crown vetch outweighs its benefits. This weed earned a ranking on a number of states' noxious weed lists primarily because its aggressive growth smothers native forbs and tree seedlings. It sprawls across fields while killing off the native competition. In some habitat restoration areas recently cleared of other non-native invasive weeds, the opportunistic vetch pops up on the plot before native species take root. Whereas crown vetch supports some animals, the resulting monocultures sustain far fewer wildlife species than a native prairie. Though not as destructive as its Asian wisteria and kudzu kin, crown vetch grows like gangbusters given the chance. Most urbanites see this nuisance as pink floral patches along roadsides in late spring.

Fortunately, many native species, including the ones mentioned earlier, provide excellent substitutes for crown vetch. Be sure to consider false indigo (*Baptisia australis*), a beneficial native legume. The best choice is a mixed species native wildflower meadow, which will establish a denser root matrix for erosion prevention, offer more food and shelter for increased biodiversity, and produce chromatic kaleidoscopes throughout the growing season! Additional species to consider include the showy sunflower (*Helianthus laetiflorus*), green-headed coneflower (*Rudbeckia laciniata*), black-eyed Susan (*R. hirta*), orange coneflower (*R. fulgida*), boneset (*Eupatorium perfoliatum*), Allegheny monkeyflower (*Mimulus ringens*), dense blazing star (*Liatris spicata*), Culver's root (*Veronicastrum virginicum*), butterfly weed (*Asclepias tuberosa*), and New York asters (*Symphotrichum novi-belgii*). Be sure to remember wonderful native grasses, such as purple Muhly (*Muhlenbergia capillaries*), little bluestem (*Schizachyrium scoparium*), and

eastern bottle-brush (*Elymus hystrix*). When using wildflower seed mixes, check the label and use packets containing species native to your area. You can learn more about creating a meadow native to Northern Virginia through the [Audubon-At-Home native meadow guide](#). For a partial list of Mid-Atlantic native plant vendors, click [here](#).

If you would like to help remove non-native invasive weeds around Royal Lake Park or would like to join in becoming an Invasive Management Area site leader, send a message expressing your interest to greg@grsykes.com.

For more information on crown vetch:

<https://www.invasiveplantatlas.org/subject.html?sub=3015>
<http://www.dcr.virginia.gov/natural-heritage/document/fscova.pdf>
https://www.in.gov/dnr/files/Crown_vetch.pdf
<http://www.iucngisd.org/gisd/species.php?sc=276>

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