

corn spurry

Spergula arvensis L.

Synonyms: *Spergula arvensis* L. ssp. *arvensis* L., *S. arvensis* L. ssp. *sativa* (Boenn.) Celak., *S. arvensis* L. var. *sativa* (Boenn.) Mert. & Koch, *Spergula linicola* Boreau ex Nyman, *S. maxima* Weihe, *S. sativa* Boenn. *S. vulgaris* Boenninghausen

Other common names: devil's gut, field spurry, pickpurse, sandweed

Family: Caryophyllaceae

Invasiveness Rank: 32 The invasiveness rank is calculated based on a species' ecological impacts, biological attributes, distribution, and response to control measures. The ranks are scaled from 0 to 100, with 0 representing a plant that poses no threat to native ecosystems and 100 representing a plant that poses a major threat to native ecosystems.

Description

Corn spurry is an annual plant that grows 15 to 61 cm tall from a taproot. Plants are covered in glandular hairs. Stems are branched at the base, somewhat sticky, and erect or prostrate. Leaves are thread-like, fleshy, 1 ¼ to 5 cm long, and arranged in whorls of 6. Stipules are membranous. Inflorescences are loose clusters of few to many flowers at the ends of branches. Flowers are small with 5 white petals, 5 sepals, 5 or 10 stamens, and 5 styles. Fruits are round capsules with many dull black, flattened seeds (Hultén 1968, Welsh 1974, Royer and Dickinson 1999, Whitson et al. 2000).



Flowers of *Spergula arvensis* L. Photo by Rasbak.

Similar species: Sand spurry (*Spergularia rubra*) is an introduced plant that resembles corn spurry in its growth habit. Sand spurry has opposite leaves, pale red or pink petals, and 3 styles per flower. The native Canadian sandspurry (*Spergularia canadensis*) is common in the Pacific Maritime ecogeographic region of Alaska and can be confused with corn spurry and sand spurry. Unlike corn spurry and sand spurry, Canadian sandspurry has glabrous stems and leaves. Stickystem pearlwort (*Sagina maxima*) is native to North America

and is similar to corn spurry. It can be distinguished from corn spurry by the lack of thin, membranous, dry stipules (Hultén 1968).



Spergula arvensis L. Photo by D. Tenaglia.

Ecological Impact

Impact on community composition, structure, and interactions: Corn spurry has not been observed in undisturbed areas in Alaska (UAM 2006, Weeds of

Alaska Database 2006). The ecological impacts of corn spurry are largely unknown. Corn spurry is readily eaten by livestock and may also be consumed by wildlife species. It is an alternate host for a number of viruses (Royer and Dickinson 1999). Flowers of corn spurry are self-pollinating, but bees, solitary wasps, and syrphid flies occasionally visit the flowers (New 1961).

Impact on ecosystem processes: It is unlikely that corn spurry causes any measurable impacts to ecosystem processes.

Biology and Invasive Potential

Reproductive potential: Corn spurry reproduces by seeds. An average plant produces between 2,000 and 7,000 seeds (New 1961, Trivedi and Tripathi 1982a, b).

Role of disturbance in establishment: Corn spurry establishes only on disturbed, open ground (Fenner 1978a, b).

Potential for long-distance dispersal: Seeds are rarely dispersed long distances naturally. Occasionally, they can be carried in the digestive tracts of deer or on the fur of mammals (New 1961, Guide to Weeds in British Columbia 2002).

Potential to be spread by human activity: Seeds can contaminate soil and crop seed (Volkart 1924, Broad 1952, Guide to Weeds in British Columbia 2002). They can be spread on vehicles or in mud attached to agricultural equipment (New 1961).

Germination requirements: Seeds generally germinate best in bare soil. They usually germinate in spring; however, seedlings emerge throughout the year (Mann 1939, New 1961). Germination occurs only at soil depths between 6 to 25 ½ mm (Vleeshouwers 1997). Seeds can germinate in temperatures from 12.7°C to 21°C. Light is not required for germination (New 1961).

Growth requirements: Corn spurry tolerates soils of all textures, but it grows best on well-drained, light, sandy soils with pH between 4.6 and 5.0 (Mann 1939, New 1961). Plants can withstand extreme drought and moderate amounts of frost (New 1961).

Congeneric weeds: Other species of *Spergula* have been introduced into North America, but none of them appear to be invasive (USDA, NRCS 2006).

Legal Listings

- Has not been declared noxious
- Listed noxious in Alaska
- Listed noxious by other states

References:

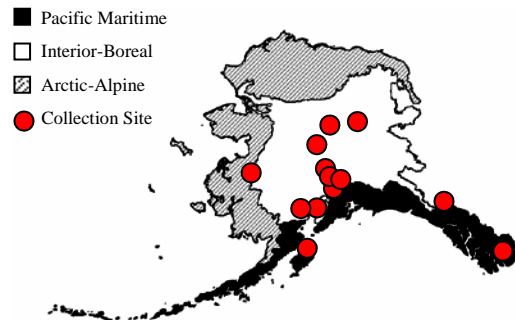
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- Federal noxious weed
- Listed noxious in Canada or other countries (AB, QC)

Distribution and Abundance

Corn spurry is a plant of open habitats. It typically grows in cultivated fields (Royer and Dickinson 1999, Guide to Weeds in British Columbia 2002), roadsides, and seashores (New 1961).

Native and current distribution: Corn spurry is native to Eurasia. It grows throughout Europe, Asia, Africa, North America, South America, Australia, and New Zealand (Hultén 1968). It can be found in nearly all Canadian provinces and in most states of the U.S. (Royer and Dickinson 1999, USDA, NRCS 2006). This species has been recorded growing above the Arctic Circle (Natur Historiska Riksmuseet Database 2005). Corn spurry has been documented from all three ecogeographic region of Alaska (Hultén 1968, UAM 2003, AKEPIC 2010).



Distribution of corn spurry in Alaska

Management

Mechanical methods, such as hand pulling, hoeing, or grazing, implemented before seeds set can successfully control infestations of corn spurry. Control actions must be repeated because soil disturbances favor the germination of dormant seeds. Chemicals can be used to control corn spurry, but this species is resistant to several herbicides. Biological control methods have not been developed (New 1961, Guide to Weeds in British Columbia 2002). Adding lime to the soil can significantly reduce the density of corn spurry in fields (Mann 1939).

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