red sandspurry
Spergularia rubra (L.) J. Presl & C. Presl

Synonyms: *Arenaria rubra* L., *A. campestris* L., *Spergularia campestris* (L.) Ascherson, *S. rubra* var. *perennans* (Kindb.) B. L. Robins, *Tissa rubra* (L.) Britt.
Other common names: purple sandspurry, red sand-spurrey
Family: Caryophyllaceae

Invasiveness Rank: **34** 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
Red sandspurry is an annual to short-lived perennial plant. Taproots are slender. Stems are prostrate to erect, branched, glandular-hairy, 4 to 30 cm long, and 0.3 to 0.5 mm in diameter. Leaves are opposite, clustered, fleshy, dark green, linear, glabrous or hairy, 4 to 20 mm long, and 1 mm or less wide with pointed tips. Stipules are silvery, lanceolate, and 3.5 to 5 mm long; they unite to surround the nodes. Basal leaves are absent. Flowers consist of five sepals, five petals, and six to ten stamens. They are arranged singly or in small clusters in leaf axils. Sepals are glandular-hairy and are fused at the base for 0.5 to 0.7 mm. Sepal lobes are three-veined, lanceolate, and 2.5 to 4 mm long. Petals are pink to pale red, obovate to ovate, and 2 to 3.5 mm long. Capsules are green to tan, three-valved, and 3.5 to 5 mm long. Seeds are brown and 0.4 to 0.6 mm long with net-like veins (Hartman and Rabeler 2005, eFloras 2008, Klinkenberg 2010, NatureGate 2011).

Spergularia rubra (L.) J. Presl & C. Presl. Photo by R. Old.

Similar species: Red sandspurry can be confused with Canadian sandspurry (*Spergularia canadensis*), which is native to the Pacific Maritime ecogeographic region of Alaska (Hultén 1968). Unlike red sandspurry, Canadian sandspurry has two to four stamens per flower, stipules that are inconspicuous, fused, and 1 to 2.8 mm long, and leaves that are not clustered (Hultén 1968, eFloras 2008). Corn spurry (*Spergula arvensis*), a non-native species known to occur in Alaska, can also be confused with red sandspurry. Corn spurry can be distinguished from red sandspurry by the presence of leaves that appear whorled in groups of 8 to 30 in tight clusters at the stem nodes and five-valved capsules. *Sagina* species can be distinguished from red sandspurry by the absence of stipules on the leaves and the presence of four- or five-valved capsules (Cody 1996, DiTomaso and Healy 2007, eFloras 2008). *Minuartia* species also lack stipules (Cody 1996, eFloras 2008).

Flower and foliage of *Spergularia rubra* (L.) J. Presl & C. Presl. Photo by Rasbak.

Ecological Impact
Impact on community composition, structure, and interactions: Infestations of red sandspurry in Alaska have been observed at up to 59% ground cover

(AKEPIC 2011), suggesting that this species has the potential to reduce populations of native colonizing species and increase the density of low herbaceous layers in disturbed sites. Red sandspurry is self-fertile but can also be pollinated by flies (Plants for a Future 2010).

Impact on ecosystem process: Red sandspurry has only minor impacts on soil conditions and rarely occurs outside of anthropogenically disturbed areas (Cody 1996, NatureGate 2011, AKEPIC 2011, UAM 2011).

Biology and Invasive Potential

Reproductive potential: Red sandspurry reproduces by seeds only (DiTomaso and Healy 2007). The number of seeds produced per plant has not been quantified. This species forms persistent seed banks (Calvo et al. 1999), but the amount of time seeds remain viable in the soil has not been documented.

Role of disturbance in establishment: Red sandspurry grows in disturbed areas and waste places in British Columbia (Klinkenberg 2010) and along roadsides in Yukon (Cody 1996). Most infestations recorded in Alaska are associated with anthropogenically disturbed sites (AKEPIC 2011, UAM 2011). However, this species has also been documented from the tidal zone of the Buskin River on Kodiak Island (UAM 2011). In New Zealand, the ground cover of red sandspurry increased in grassland plots that were subjected to grazing (Allen et al. 1995).

Potential for long-distance dispersal: Seeds are 0.4 to 0.6 mm long and lack specific adaptations for long-distance dispersal (Hartman and Rabeler 2005).

Potential to be spread by human activity: Red sandspurry is likely spread by road graders (Cody 1996).

Germination requirements: Seeds do not germinate in darkness but can germinate in moderately saline conditions (Okusanya 1979).

Growth requirements: Red sandspurry is tolerant of saline conditions (Okusanya 1979) and nutrient-poor soils. It grows best on open, well-drained, sandy or gravelly substrates. This species is not shade tolerant (Plants for a Future 2010).

Congeneric weeds: Boccone's sandspurry (*Spergularia bocconii*), coast sandspurry (*S. media*), La Plata sandspurry (*S. platensis*), and hairy sandspurry (*S. villosa*) are known to occur as non-native weeds in California (DiTomaso and Healy 2007).

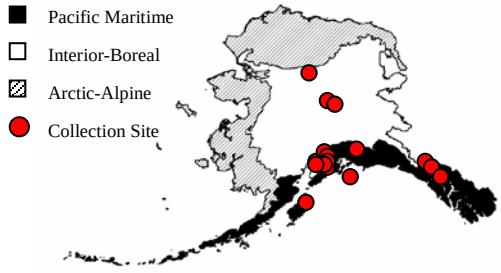
Legal Listings

☒ Has not been declared noxious
☐ Listed noxious in Alaska
☐ Listed noxious by other states
☐ Federal noxious weed
☐ Listed noxious in Canada or other countries

Distribution and Abundance

Red sandspurry is known to occur as a weed in wheat crops in Pakistan (Ahmad and Shaikh 2003) and forest nurseries in the Pacific Northwest (Owston and Abrahamson 1984).

Native and current distribution: Red sandspurry is native to Europe and Asia. It was introduced to North America before 1870, likely in contaminated ship ballast (Hartman and Rabeler 2005). It grows in 31 states of the U.S. and in eastern and western Canada (USDA 2011). This species has also been introduced to South America, Australia, and New Zealand (Hartman and Rabeler 2005, Landcare Research 2011). It grows in arctic regions in western Russia (Elven 2007) and as far north as 69.9°N in Norway (Vascular Plant Herbarium Oslo 2011). Red sandspurry has been documented from the Pacific Maritime and Interior-Boreal ecogeographic regions of Alaska (Hultén 1968, AKEPIC 2011, UAM 2011).



Distribution of red sandspurry in Alaska

Management

Control methods for red sandspurry have not been documented. However, spot herbicide treatments have provided effective control in Alaska (AKEPIC 2011).

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