

-State Species Abstract-
-Wyoming Natural Diversity Database-

ABRONIA AMMOPHILA
YELLOWSTONE SAND VERBENA
Family: Nyctaginaceae

Status:

US Fish & Wildlife Service: Petitioned in 2007 (former C2 candidate for listing under the Endangered Species Act).

Agency Status: None.

Heritage Rank:

Global: G1 State: S1

Wyoming Contribution Rank: Very High (State Endemic)

Description: Yellowstone sand verbena is a prostrate, multi-branched perennial herb. Stems are sticky (viscid), densely glandular-hairy, and grow to 30 cm long. Leaves are opposite and long-petioled. Leaf blades are oval to diamond-shaped, smooth-edged, and glandular. The head-like inflorescence consists of 15-35 greenish-white tubular flowers subtended by an involucre of five glandular, oval bracts. The sticky, glandular fruits are 4-6 mm long, beaked, and five-lobed with prominent wings at maturity (Fertig et al. 1994; Galloway 2003).

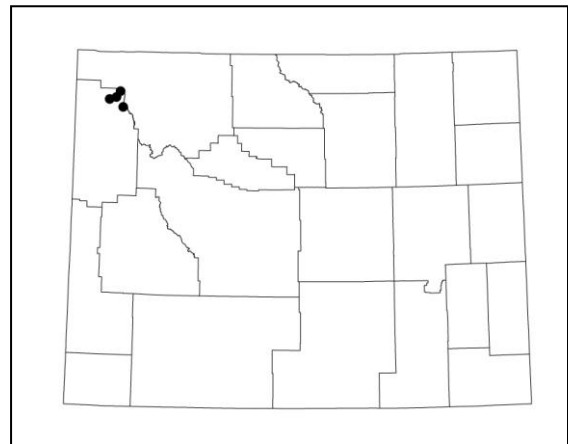
Similar Species: *Abronia mellifera* has more ascending, glabrous to sparsely glandular stems, shorter petioles, and more coarsely pubescent fruit.

Flowering/Fruiting Period: Observations by Jennifer Whipple (Yellowstone National Park botanist) suggest that the usual flowering period is from early July to near the end of August or early September (or until the first killing frost). Herbarium specimens indicate flowering can occur as early as late June.



Above: *Abronia ammophila* by Jennifer Whipple.

Distribution: State endemic known only from the shores of Yellowstone Lake in Park and Teton counties. Erroneously reported from 2 locations in the Green River Basin of Sublette County.



Wyoming distribution of *Abronia ammophila*.

Habitat: Occurs on open, sandy, sparsely vegetated lakeshores within 40 meters of the

shoreline. These open habitats are probably maintained by wave action or erosion (Whipple 1999). Yellowstone sand verbena is commonly associated with *Phacelia hastata*, *Rumex venosus*, *Polemonium pulcherrimum*, and *Lupinus argenteus*.

Occurrences in Wyoming: Known from 4 locations along Yellowstone Lake in Yellowstone National Park. Previously reported for Sublette County by Galloway (1975) and Dorn (2001), but questioned in Sublette County surveys (Marriott 1993) and addressed in later taxonomic publications as *A. mellifera* (Galloway 2003).



Above: Habitat of *Abronia ammophila* along the shores of Yellowstone Lake near Pelican Creek. Photo by Jennifer Whipple.

Abundance: Total population conservatively estimated in 1998 at 8325 plants by Whipple (1999a, b), with 96% in one large colony at Mary Bay. Large numbers of seedlings and small plants were observed, suggesting that recent recruitment has been high.

Trends: Long-term trends are probably downward, based on historical records of populations near the Fishing Bridge area. This habitat is now unsuitable due to high recreation use. Most short-term trends appear to be driven by climate.

Protection status: All known occurrences are protected within Yellowstone National Park.

Threats: Small population size and restricted range makes this species vulnerable to habitat disturbance or chance extinction events. Primary threats in the past may have been heavy recreational use in its shoreline habitat.

Managed Areas: All known populations occur in Yellowstone National Park.

References:

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Fertig, W., C. Refsdal, and J. Whipple. 1994. Wyoming Rare Plant Field Guide. Wyoming Rare Plant Technical Committee, Cheyenne Wyoming.

Galloway, L. A. 1975. Systematics of the North American desert species of *Abronia* and *Tripterocalyx* (Nyctaginaceae). *Brittonia* 27: 328-347.

Galloway, L.A. 2003. *Abronia*. In: Flora of North America Editorial Committee, eds. 1993+. Flora of North America North of Mexico. Vol. 4. Magnoliophyta: Caryophyllidae, part 1. Oxford University Press, New York and Oxford. pp. 61-69.

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Whipple, J. 1999. The Yellowstone sand verbena. *Castilleja* 18(4): 1-3.

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