

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PMALI040J0

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Sagittaria longiloba*
COMMON NAME: Flecha de agua, Longbarb Arrowhead
SYNONYMS: *Sagittaria greggii*
FAMILY: Alismataceae

AUTHOR, PLACE OF PUBLICATION: Engelman, Georg. North American Species
of *Sagittaria* and *Lophotocarpus*...16-17. 1894.

TYPE LOCALITY: Western Texas.

TYPE SPECIMEN: NY 311474. Gunnison's Expedition #4911. No date. (Holotype).
MO 139305. J. Gregg #833. May 12, 1849. (Lectotype).

TAXONOMIC UNIQUENESS: *Sagittaria* is a relatively large genus with 25 species and 10 varieties found in the U.S. *S. longiloba* is one of five species that occur in Arizona, four of which are considered critically imperiled because of limited distribution within the State.

DESCRIPTION: Herbs, perennial, to 100 cm; rhizomes absent; stolons present; corms present. Leaves emersed; petiole 5-ridged, ascending to erect, 24.5--60 cm; blade sagittate, 11.5--26.5 ´ 0.8--15 cm, basal lobes longer than remainder of blade. Inflorescences racemes, rarely panicles, of 5--17 whorls, emersed, 20--37 ´ 5--27 cm; peduncles 25--96 cm; bracts connate more than or equal to ¼ total length, lanceolate, 6.5--15 mm, delicate, not papillose; fruiting pedicels spreading, cylindric, 1.5--4.4 cm. Flowers to 3 cm diam.; sepals recurved to spreading, not enclosing flower; filaments cylindric, shorter than anthers, glabrous; pistillate flowers pedicellate, without ring of sterile stamens. Fruiting heads 0.9--1.5 cm diam; achenes oblanceoloid, abaxially keeled, 1.2--2.5 ´ 0.8--1.6 mm, beaked; faces tuberculate, wings absent, glands 0--1; beak lateral, erect, 0.1--0.6 mm.

AIDS TO IDENTIFICATION: Perennial aquatic plant growing from a spherical tuber. The leaves are sagittate, or shaped like arrowheads with two longer, narrower, pointed lobes opposite the shorter tip.

ILLUSTRATIONS:

Photo and Herbarium Mounts:

[http://swbiodiversity.org/seinet/taxa/index.php?taxon=Sagittaria longiloba](http://swbiodiversity.org/seinet/taxa/index.php?taxon=Sagittaria%20longiloba).

TOTAL RANGE: From south, central Nebraska south through Kansas, western Oklahoma, central Texas into Mexico and Nicaragua. Not contiguous. There are also separate small populations in SW Texas along the Mexican border, southern Arizona and central California.

RANGE WITHIN ARIZONA: The majority of the seven collection sites in Arizona are from the lower San Rafael Valley in Santa Cruz County. In addition, there is a collection from the upper Sulphur Springs Valley in Graham County, and the lower Altar Valley in Pima County.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial herbaceous, aquatic plant.

PHENOLOGY: Flowering: summer to fall. Flowers were noted from Arizona collections made from late August to early October. Fruits were also noted in August.

BIOLOGY: The plant is monoecious, with individuals bearing both male and female flowers. The inflorescence which rises above the surface of the water is a raceme made up of several whorls of flowers, the lowest node bearing female flowers and upper nodes bearing male flowers.

HABITAT: Wet ditches, ephemeral pools, and margins of streams and lakes, and sometimes disturbed and cultivated habitat such as rice fields and irrigation ditches.

ELEVATION: While the range-wide elevation is specified in the Flora of North America as 0 – 985 feet (0-300m), the seven collections from Arizona define a range from 3440 – 4800 feet (1050-1460m).

EXPOSURE: Not specified.

SUBSTRATE: Saturated soils.

PLANT COMMUNITY: Arizona collections have noted the following aquatic plants associated with *S. longiloba*: *Marsilea vestita*, *Polygonum*, *Heteranthera limosa*, *Aster subulatus* and *Juncus* spp.

POPULATION HISTORY AND TRENDS: Not known for Arizona. Two of the historical collection sites from the San Rafael Valley (1977 and 1984) noted the species was plentiful or abundant. At the upper Sulphur Springs Valley collection site the species persisted from at least 1945-1979. Given its habitat association with water points which have high value in Arizona, it is probable that some of the occurrences are still extant.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None.
STATE STATUS: None.
OTHER STATUS: None.

MANAGEMENT FACTORS: Since wetlands in several forms constitute critical habitat for *S. longiloba*, any factors that are detrimental to these habitats (e.g., lowering water tables, land use changes, drainage, etc.) could also be detrimental to the species.

PROTECTIVE MEASURES TAKEN: None specified.

SUGGESTED PROJECTS: Revisit the known collection sites to determine if the species is still extant.

LAND MANAGEMENT/OWNERSHIP: As is not uncommon in Arizona, many water points are privately owned. Private ownership accounts for five of the seven known occurrences of *S. longiloba* in Arizona. The other two sites are on Federal lands: the USFS Coronado National Forest and the USFWS Buenos Aires National Wildlife Refuge.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

Encyclopedia of Life, accessed 5/2/2014, <http://eol.org/pages/1082207/details>.
Flora of North America, accessed 5/2/2014,
http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=222000348.
JSTOR| Global Plants, accessed 5/2/2014, <http://plants.jstor.org/specimen/ny00311474?s=t>.
Tropicos, accessed 5/2/2014, <http://www.tropicos.org/Name/900072>.

MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

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