

ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM

Plant Abstract

Element Code: PDCHEOR012

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Zuckia brandegeei* var. *brandegeei* (A. Gray) S.L. Welsh & Stutz
COMMON NAME: Brandegee's siltbush, brandegee siltbush, siltbush, spineless hopsage
SYNONYMS: *Grayia brandegeei* A. Gray, *Atriplex brandegeei* (A. Gray) Collotzi ex W.A. Weber
FAMILY: Chenopodiaceae

AUTHOR, PLACE OF PUBLICATION: (A. Gray) S.L. Welsh & Stutz, Great Basin Naturalist 44(2): 208. 1984 (as *brandegei*). *Grayia brandegeei* A. Gray, Proc. Amer. Acad. Arts 11: 101-102. 1876 (as *brandegei*).

TYPE LOCALITY: Sandstone hill near Utah line, Colorado, United States of America. (NYBG accessed 2005). MBG (accessed 2005) reports type locality as Utah, U.S.A.

TYPE SPECIMEN: HT:? T.S. Brandegee 1199, August 187_. IT: NY.

TAXONOMIC UNIQUENESS: Variety *brandegeei* is 1 of 3 in *Zuckia brandegeei*. The others include var. *arizonica* (Arizona siltbush) and var. *plummeri* (Plummer's siltbush).

DESCRIPTION: For the Species (FNA 1993+): Perennial shrub branching from a persistent woody base, 5-20 cm (2-8 in); stems 10-50 cm (4-20 in). Leaves 13-80 x 15-42 mm. Staminate flowers with perianth cleft to middle or below, 1.5-1.8 mm. Pistillate flowers few, intermixed in otherwise staminate spikes; bracteoles laterally or vertically compressed, with vertical or horizontal achenes respectively, when mature either laterally flattened, 2(-4)-winged, 3.4-9 mm diameter, or dorsiventrally compressed and nit or 1-4(-5)-ribbed and 2-winged, (1.8-)2-2.5 mm diameter. Achenes included within bracts, 1.2-2.2 x 1.2-2.2 mm. According to Holifield (1987): "The slender, erect or ascending annual stems are branched from a persistent woody base 20 to 8 inches (5-20 cm) tall. The branches lack spines. Leaves are alternate with linear-oblongate to obovate blades and reach 0.6 to 1.8 inches (1.5-4.5 cm) in length. Silt bush has a spreading root system that provides good resistance to drought."

For the variety *brandegeei* (FNA 1993+): Leaves usually 1.5-6 mm wide, rarely wider. Fruiting bracteoles 2(-4)-winged, samara-like; achenes vertical.

AIDS TO IDENTIFICATION: When comparing var. *brandegeei* to the other varieties in the species *Zuckia brandegeei*, the leaves of var. *plummeri* are usually wider than 6 mm. In var.

arizonica, the fruiting bracteoles without or with (1-)2(-4) prominent and without or with 4-5 smaller crests or ridges; achenes usually horizontal. (FNA 1993+).

ILLUSTRATIONS: Line drawing (FNA 1993+, in http://www.efloras.org/florataxon.aspx?flora_id=1&taxon_id=242415460)

TOTAL RANGE: Arizona, Colorado and Utah.

RANGE WITHIN ARIZONA: Apache (Badlands SW of Chinle, Petrified Forest National Park) and Navajo (near Dinosaur Tracks) counties.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial shrub.

PHENOLOGY: Summer.

BIOLOGY: Reproduces by winged seed that is produced annually, or vegetatively (limited). Germination of seeds is improved by cold stratification.

HABITAT: Alluvial outwash from scarp of Chinle Shale.

ELEVATION: In Arizona, collected at 5,000 ft (1525 m). FNA (1993+) reports elevation from 3,935-8,200 ft (1200-2500 m) for its range.

EXPOSURE:

SUBSTRATE: Fine-textured, often saline and seleniferous substrates. In its range, found on the Entrada, Summerville, Morrison, Moenkopi, Chinle, Shinarump/Mossback, and Cutler formations. (FNA 1993+).

PLANT COMMUNITY: For the species: "Siltbush can be found growing near Stansbury cliffrose (*Purshia stansburiana*) communities, pinyon-juniper and juniper-oak woodlands, and salt desert shrublands. Where siltbush grows with other species it is more commonly found in saltbush communities that are in a very early serial stage [Pendleton pers. comm., 1987]. It may also occur as a pioneer plant restricted by competition to steep 2:1 clay slopes where other plants cannot survive [Pendleton pers. comm., 1987]." (Holifield 1987).

POPULATION HISTORY AND TRENDS: Unknown.

SPECIES PROTECTION AND CONSERVATION

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

MANAGEMENT FACTORS: Siltbush has good tolerance to grazing and is a valuable winter forage. It is browsed by livestock and big game, especially in the spring when it is in full leaf. (Holifield 1987).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BIA; NPS – Petrified Forest National Park.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

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- Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Zuckia brandegeei* (A. Gray) S.L. Welsh & Stutz. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 8 Jul 2005.
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- SEINet. Collections Search Result. Accessed 7/8/2005 at <http://seinet.asu.edu/collections/list.jsp>.
- The New York Botanical Garden. NYBG Specimens Detailed Results. <http://207.156.243.8/emu/vh/specimen.php?irn=493832>. (Accessed: 7/8/2005).

MAJOR KNOWLEDGEABLE INDIVIDUALS:

ADDITIONAL INFORMATION:

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