



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office



Species Account
SOLANO GRASS
Tuctoria mucronata

CLASSIFICATION: ENDANGERED

Federal Register Notice 43:44812; September 28, 1978
http://ecos.fws.gov/docs/federal_register/fr249.pdf (390 KB)
(Listed as *Orcuttia mucronata*).

STATE LISTING STATUS AND CNPS CODE:

This species was listed as endangered by the California Department of Fish and Game, as Crampton's tuctoria. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range), also under the alternate name.

CRITICAL HABITAT: Originally designated in Federal Register 68:46683; August 6, 2003.

The designation was revised in 70:46923; August 11, 2005.

Species by unit designations were published in 71:7117; February 10, 2006.

www.fws.gov/policy/library/2006/06-1080.html
www.fws.gov/policy/library/2006/06-1080.pdf (6.6 MB)

RECOVERY PLAN: Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon; December 15, 2005.

http://www.fws.gov/sacramento/es/recovery_plans/vp_recovery_plan_links.htm

FIVE-YEAR REVIEW: (Latest info on this species.)

April 8, 2009. We recommended no change in status.

http://ecos.fws.gov/docs/five_year_review/doc2398.pdf



Solano Grass
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Solano Grass
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DESCRIPTION:

Solano grass (*Tuctoria mucronata*), also known as Crampton's tuctoria, is a small 2.5 to 20 centimeter (1 to 8-inch) long annual in the grass family (Poaceae). It produces stems and leaves covered with small droplets of the sticky, acrid secretion. This is characteristic of the genus *Tuctoria*, which includes the endangered [Greene's tuctoria](#) (*Tuctoria greenei*) and the genus *Neostapfia*, which contains only the threatened [Colusa grass](#) (*Neostapfia colusana*) grasses. (See *Orcuttieae* Grasses below)

The several solid stems grow somewhat decumbently (lying on the ground), turning up only at the tips. The leaves lack ligules, the small, scale like leaf outgrowths found on some grasses.

This species blooms from April to July. Seven to 19 spikelets overlap one another the full length of the spike-like inflorescence. Unlike other closely related species, the inflorescence of Solano grass remains partially enclosed by the upper leaf sheath and is never fully exerted from the uppermost leaf. The lemma (bract) ends in a single tooth with a short, narrow point.

See Hickman (1993) in General Information about California Plants, below, for a detailed description of the species (as Crampton's tuctoria.)

VERNAL POOLS:

Vernal pools are a unique kind of wetland ecosystem. Central to their distinctive ecology is their ephemeral nature. Vernal pools fill with water temporarily, typically during the winter and spring, and then disappear until the next rainy season.

In California, where extensive areas of vernal pool habitat developed over a long geological timeframe, unique suites of plants and animals have evolved that are specially adapted to the unusual conditions of vernal pools. Fish and other predators are among species that have been excluded evolutionarily by the annual filling and drying cycles of vernal pools.

The prolonged annual dry phase of the vernal pool ecosystem also has prevented the establishment of plant species typical of more permanent wetland ecosystems.

See the recovery plan (above) for more information about vernal pool species.

ORCUTTIEAE GRASSES:

The genera *Orcuttia*, *Neostapfia* and *Tuctoria* form the Orcuttieae tribe. All members of the Orcuttieae tribe share several characteristics that differ from many other grasses. Most grasses have hollow stems, but the Orcuttieae have stems filled with pith (the soft, spongy center found in many plants). Another difference is that the Orcuttieae produce two or three different types of leaves during their life cycle, whereas most grasses have a single leaf type throughout their life span.

The juvenile leaves of the Orcuttieae, which form underwater, are cylindrical and clustered into a basal rosette. After the pool dries, terrestrial leaves form in all species of the tribe. These leaves have flattened blades and are distributed along the stem.

Another characteristic common to all Orcuttieae is the production of an aromatic exudate, which changes from clear to brown during the growing season. The exudate most likely helps to repel herbivores

Orcuttia species have a third type of leaf that is not found in *Neostapfia* or *Tuctoria*. The terrestrial leaves of the Orcuttieae also differ from other grasses in other respects. Whereas grass leaves typically are differentiated into a narrow, tubular sheath that clasps the stem tightly and a broader blade that projects away from the stem, terrestrial leaves of the Orcuttieae are broad throughout and the lower portion enfolds the stem only loosely.

DISTRIBUTION:

Solano grass was last seen in 1993 at its original location, Olcott Lake within the Solano Land Trust's [Jepson Prairie Preserve](#), when four individual plants were present.

A second population was discovered on private lands in 1985, and another was discovered in 1993 on a former U.S. Air Force Base communication facility that is being transferred to the Yolo County Parks Department.

U.S. Geological Survey 7.5 Minute Quads: Saxon (497B) 3812146, Dozier (498D) 3812137

THREATS:

The known occurrences of the Solano grass are currently threatened by destruction or modification of habitat due primarily to invasion of vernal pools by non-native plants and to altered hydrology. Development in the region may reduce the options for re-introducing the species to suitable habitat.

REFERENCES FOR ADDITIONAL INFORMATION:

[General references about California plants](#)

www.fws.gov/sacramento/es/plant_spp_accts/plant_references.htm

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