



Figure 1. Goldfields in the vernal pools. Photo: Virginia Boucher

## Jepson Prairie Preserve, Solano County

by Virginia Boucher<sup>1</sup>

In the midst of the fertile agricultural land of the enormous Central Valley of California, Jepson Prairie is a remnant of the grasslands and freshwater wetlands that dominated the area for millennia. Jepson Prairie is a true grassland — not a native tree in sight (Fig. 1) — but it is a very special type of grassland: The best remaining example of claypan vernal pools and bunchgrass prairie in the state. And although grasses dominate the landscape, the prairie provides sweeping displays of flowers during the spring: concentric rings of brilliant color follow the gradual drying of the pools in the spring — brilliant yellow goldfields (*Lasthenia californica* and other species), deep blue *Downingias* of various species, and snow white meadowfoam (*Limnanthes douglasii*).

The first botanical interest in the site dates from 1892, when botanist and conservationist Willis Linn Jepson first visited and described its unique vernal pool flora. Many of the vernal pool endemic plants have been given special status as rare, endangered, or of concern. In addition to the showy, diminutive flowers, the vernal pool landscape also supports a number of native grasses, some of which are found either exclusively or primarily in vernal pool settings. Large stands of delicate, reddish annual hair grass (*Deschampsia danthonioides*), sway gracefully, and are joined by the aptly named California semaphore grass (*Pleuropogon*

*californicus*), with its flaglike spikelets. Populations of purple needlegrass (*Stipa pulchra*), California melicgrass (*Melica californica*), meadow barley (*Hordeum brachyantherum*), and Pacific foxtail (*Alopecurus saccatus*) also occur.

Although from a distance Jepson Prairie appears quite flat (and, indeed, ranges from an elevation of 2m above sea level to a whopping 8m), it contains surprisingly complex terrain comprised of shallow pools, or hogwallows, that fill in the spring and support fabulous displays of very short wildflowers, and mima mounds, a landscape of bumps resembling miniature volcanoes. The soils in the pools and the mounds are distinctly different and support completely different plant communities — suites of vernal pool specialists that tolerate saturated soils in the swales and “normal” grassland plants on the mounds.

Mima mound topography occurs in the west from northern Alaska to northern Mexico and is found exclusively in treeless, and generally shrubless, areas. Theories of their origin abound, although consensus does not. For more information, see the Jepson Prairie Preserve Handbook (<http://store.cnps.org/collections/books/products/the-jepson-prairie-preserve-handbook-3rd-ed>). The handbook also includes other natural history information and color photos of many wildflowers from the Preserve.

<sup>1</sup>Associate Director, UC Davis Natural Reserve System 11 |

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The centerpiece of the Prairie is Olcott Lake, a large playa lake. Although a number of specialist vernal pool plants have some sort of special status designation, nearly all of the plant and animal species with federal listing status occur in or around the preserve's playa lakes, particularly Olcott. The Conservancy fairy shrimp and the vernal pool tadpole shrimp, both federally listed as endangered, are found in Olcott Lake. The Lake serves as a breeding ground for the California tiger salamander, also endangered (Fig. 2), and provides habitat for the threatened Delta green ground beetle.

In the winter months, during which it is flooded, Olcott Lake is host to a wide variety of ducks and geese, and wading and shore birds. It provides a great layover for migrating waterfowl with its abundance of invertebrates, and a variety of ducks (grebes, mallards, gadwalls, pintails, coots, teal) and wading birds (egrets, avocets, stilts, yellowlegs) take full advantage. Occasionally, a flock of white pelicans snoozes on one of the small islands in the middle of the lake. When you visit, be sure to bring your binoculars!

Perhaps Olcott Lake's best kept secret is the presence of two federally-listed grass species — Colusa grass (*Neostapfia colusana*) and Solano grass (*Tuctoria mucronata*). Both of these endemic vernal pool grasses germinate and bloom in the heat of the summer in the bottom of large playa vernal pools – a time that very little else is green and growing – and both produce a sticky exudate when in bloom. After many years without sightings of Solano Grass at Jepson Prairie, seed from another population (there are only three!) was re-introduced in 2015 in partnership with USFWS, and new plants were found in 2016.

Jepson Prairie was originally acquired for conservation in 1980 when 1,566 acres were purchased by The Nature Conservancy. In 1997, TNC transferred fee title of the property to the Solano County Farmlands and Open Space Foundation (now the Solano Land Trust), while retaining a conservation easement on the land. Since 1983, the University of California Davis Natural Reserve System has administered research and teaching at the site and has provided both management expertise and on-the-ground assistance.

The Jepson Prairie Docents comprise a third, autonomous institution involved in the prairie — and certainly the most relevant. During the prime visitation season at the prairie, early March until early May, they lead natural history tours in vernal pool grasslands and show off the interesting invertebrates and larval salamanders from Olcott Lake. The tours are scheduled every weekend during the flowering season, and special tours may be arranged for weekdays. Although a portion of the property is open to the general public during daylight hours, docent tours



Figure 2. California tiger salamander with downingia, goldfields, and woolly marbles. Photo: Adam Clause

allow access to areas that are not open. The docents scout the area for the best masses of bloom before each weekend so that tour participants are guaranteed to see the best displays. For information on tours, go to <http://www.solanolandtrust.org/Index.aspx> during the spring months.

Jepson Prairie Preserve is about ten miles south of the town of Dixon, just off Highway 113. From Interstate 80, take Highway 113 south through Dixon and continue for ten miles to the point where the highway turns 90 degrees to the left. Do not take the left turn, but continue straight on Cook Lane. Nothing is marked on the highway, but the abrupt turn in the road will force you to slow down and recognize the unpaved road that continues straight. Continue across a small bridge and some railroad tracks to the interpretive and parking area at the eucalyptus grove. A gate directly across the road from the eucalyptus trees leads to the public area north of Olcott Lake.

