

BOTANICAL SURVEY OF PROPOSED BARONI PARK SITE

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SITE DESCRIPTION

The proposed Baroni Park site is comprised of 7 acres of land within the Chico Creek Estates subdivision, Chico, CA, Butte County. The site is situated in the California Central Valley annual grassland at approximately 250' elevation. There is little topographic relief at the site.

The site is bordered on the east by the Little Chico Creek diversion channel, on the west by Baroni Dr.; the north and south borders are fairly well-defined by the fenced lots of the homes in the subdivision. For ease of reference, the property can be roughly divided into 2 main areas: the "west section" is a 5 acre rectangle fronting Baroni Dr., while the "east section" is a 2 acre triangle bordering the diversion channel.

The site has been greatly disturbed. It is reportedly part of an abandoned olive orchard that was developed into the subdivision (Bill Smith, pers. comm.). Currently, the "west section" is a vacant lot where children play, neighbors walk dogs, etc. Its northern edge appears to be mowed and sprayed with herbicide, probably to control weeds in the neighboring yards. The southern edge is bordered by a ditch and associated puddle that collect runoff water from the road and neighboring lawns; just inside the ditch is an unimproved dirt access road. The "east section" is also disturbed; in addition to the access road and herbicide spraying, it is also dotted with piles of fill dirt from other locations.

SURVEY METHODS

The site was surveyed on six dates from winter-summer 2003: February 9, March 9, April 8, April 20, May 11, and July 16. On each survey date, new plant taxa that were found were added to the plant list (see Table 1).

Much of the small flat site had homogeneous weedy annual grass cover, therefore it was surveyed by intuitive-control methods. The perimeter of the site, which contained most of the plant diversity, was surveyed intensively. Particular attention was focused on

any interior site features that differed: these included scraped or lowlying bare areas, disturbed soil piles, ditches, and pools of standing water.

FINDINGS

It is clear that the site has been greatly disturbed in the past. The botanical surveys yielded a list of 138 plant taxa (see Table 1); of these 69 (50%) were native, and 69 (50%) were non-native. This figure is considerably higher than the 17.4% non-native taxa reported for California as a whole (Jepson Manual 1996). Most of the site, particularly the “west section,” was covered in weedy annual grasses (e.g., *Taeniatherum caput-medusae*); there were a few colorful finds of common native wildflowers, particularly in the “east section” (e.g., *Dichelostemma*, *Clarkia*, *Layia*, *Allium*). A few species (e.g., *Alyssium*, *Populus*) were horticultural escapees, probably from the surrounding yards.

There were only a few minor botanical issues with further development of this proposed park site. One rare taxon was found on the site: *Mimulus glaucescens* Greene (shield-bracted monkeyflower, CNPS list 4). However, this species was likely to have been imported to the site from elsewhere; only a few individuals were found and they were all located on fill dirt piles in the “east section.”

The ditch, associated puddle, and ruts in the dirt road contained native wetland indicator species such as *Eleocharis macrostachya*, *Eryngium castrense*, *Limnanthes douglasii* ssp. *rosea*, and *Plagiobothrys* species. However, these “wetland” situations seemed to be artificially created, either from the ditch and runoff from Baroni Dr. and surrounding lawns, or compaction along the dirt road.

There were two other plant findings of note at the proposed park. The first was a lone blue elderberry (*Sambucus mexicana*) bush in the “east section.” This bush had stems large enough (>1 in) to be habitat for the federally threatened valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). Consideration for this finding should be made when planning the use of this site.

The second finding was an occurrence of *Lotus denticulatus* in the “east section.” Although this taxa is neither rare nor listed, it is interesting to note that there has not been a confirmed finding of it in Butte County since the 1940's. Again, however, this species

was most likely imported to the site from elsewhere; it was only found on the fill dirt piles.

RECOMMENDATIONS

Conversion of this vacant lot to a park will have very minimal impact on any plant species of conservation concern. The few individuals of *Mimulus glaucescens* (Shield-bracted Monkey Flower) were found only on fill dirt piles; this species may not persist at this location.

The *Sambucus mexicana* (blue elderberry) in the “east section” poses a larger problem. At the least, this plant should be examined by an entomologist for evidence of the valley elderberry longhorn beetle. Ideally it should be left undisturbed if the park is built.

This site does present an interesting opportunity for native plant salvage. Many of the colorful native wildflowers on site are geophytes (bulb plants); this includes the *Allium*, *Dichelostemma*, and *Brodiaea* species. These bulbs could be dug up and salvaged in the mid- to late- spring. These could be given to a restoration or gardening project with the city or a conservation group. Alternatively, if there are plans to create a native landscaped area as part of the park, these bulbs could be stored properly and replanted on site.

TABLE 1: Plant species identified during botanical surveys of Baroni Park.
 (*=non-native species, **bold** = rare species)

Genus	Specific epithet	var/ssp	infraspecific	Family	Date
<i>Achyrrachaena</i>	<i>mollis</i>			Asteraceae	4/8/2003
* <i>Aira</i>	<i>caryophyllea</i>			Poaceae	4/8/2003
<i>Allium</i>	<i>amplectens</i>			Liliaceae	4/20/2003
* <i>Alyssum</i>	<i>sp.</i>			Brassicaceae	7/16/2003
* <i>Amaranthus</i>	<i>albus</i>			Amaranthaceae	7/16/2003
<i>Amaranthus</i>	<i>powellii</i>			Amaranthaceae	7/16/2003
<i>Amsinckia</i>	<i>menziesii</i>	var.	<i>intermedia</i>	Boraginaceae	4/20/2003
<i>Amsinckia</i>	<i>menziesii</i>	var.	<i>menziesii</i>	Boraginaceae	4/20/2003
* <i>Anagallis</i>	<i>arvensis</i>			Primulaceae	7/16/2003
<i>Antennaria</i>	<i>sp.</i>			Asteraceae	7/16/2003
<i>Astragalus</i>	<i>gambelianus</i>			Fabaceae	5/11/2003
<i>Avena</i>	<i>fatua</i>			Poaceae	2/9/2003
* <i>Avena</i>	<i>sativa</i>			Poaceae	4/8/2003
<i>Baccharis</i>	<i>salicifolia</i>			Asteraceae	2/9/2003
<i>Blennosperma</i>	<i>nanum</i>	var.	<i>nanum</i>	Asteraceae	3/9/2003
* <i>Briza</i>	<i>minor</i>			Poaceae	4/8/2003
<i>Brodiaea</i>	<i>californica</i>	ssp.	<i>californica</i>	Liliaceae	5/11/2003
<i>Brodiaea</i>	<i>minor</i>			Liliaceae	5/11/2003
<i>Brodiaea</i>	<i>sp.</i>			Liliaceae	2/9/2003
* <i>Bromus</i>	<i>diandrus</i>			Poaceae	4/8/2003
* <i>Bromus</i>	<i>hordeaceus</i>			Poaceae	4/8/2003
<i>Calandrinia</i>	<i>ciliata</i>			Portulacaceae	3/9/2003
<i>Callitriche</i>	<i>sp.</i>			Callitrichaceae	4/8/2003
* <i>Capsella</i>	<i>bursa-pastoris</i>			Brassicaceae	2/9/2003
<i>Cardamine</i>	<i>oligosperma</i>			Brassicaceae	2/9/2003
<i>Castilleja</i>	<i>attenuata</i>			Scrophulariaceae	4/8/2003
* <i>Centaurea</i>	<i>solstitialis</i>			Asteraceae	2/9/2003
* <i>Cerastium</i>	<i>glomerata</i>			Caryophyllaceae	4/8/2003
* <i>Chamaesyce</i>	<i>maculata</i>			Euphorbiaceae	4/20/2003
<i>Chamomilla</i>	<i>suaveolens</i>			Asteraceae	4/8/2003
* <i>Chenopodium</i>	<i>album</i>			Chenopodiaceae	4/8/2003
<i>Chenopodium</i>	<i>vulvarium</i>			Chenopodiaceae	7/16/2003
<i>Chlorogalum</i>	<i>angustifolium</i>			Liliaceae	5/11/2003
<i>Chlorogalum</i>	<i>pomeridianum</i>	var.	<i>pomeridianum</i>	Liliaceae	3/9/2003
<i>Clarkia</i>	<i>purpurea</i>	ssp.	<i>quadrivulnera</i>	Onagraceae	5/11/2003
<i>Claytonia</i>	<i>parvifolia</i>	ssp.	<i>parvifolia</i>	Portulacaceae	4/8/2003
<i>Claytonia</i>	<i>perfoliata</i>			Portulacaceae	4/8/2003
* <i>Convolvulus</i>	<i>arvensis</i>			Convolvulaceae	3/9/2003
* <i>Conyza</i>	<i>floribunda</i>			Asteraceae	7/16/2003
* <i>Cotula</i>	<i>australis</i>			Asteraceae	4/20/2003
<i>Crassula</i>	<i>connata</i>			Crassulaceae	2/9/2003
<i>Crassula</i>	<i>tillaea</i>			Crassulaceae	3/9/2003

Genus	Specific epithet	var/ssp	infraspecific	Family	Date
<i>Cryptantha</i>	<i>flaccida</i>			Boraginaceae	4/8/2003
* <i>Cynodon</i>	<i>dactylon</i>			Poaceae	7/16/2003
<i>Cyperus</i>	<i>strigosus</i>			Cyperaceae	7/16/2003
<i>Dichelostemma</i>	<i>capitatum</i>			Liliaceae	3/9/2003
<i>Dichelostemma</i>	<i>multiflorum</i>			Liliaceae	4/8/2003
<i>Downingia</i>	(<i>cuspidata</i>)			Campanulaceae	4/20/2003
* <i>Echinochloa</i>	<i>crus-galli</i>			Poaceae	7/16/2003
<i>Eleocharis</i>	<i>macrostachya</i>			Cyperaceae	4/20/2003
<i>Epilobium</i>	<i>sp.</i>			Onagraceae	7/16/2003
* <i>Eragrostis</i>	<i>cilianensis</i>			Poaceae	7/16/2003
<i>Eremocarpus</i>	<i>setigerus</i>			Euphorbiaceae	4/20/2003
<i>Eriogonum</i>	<i>vimineum</i>			Polygonaceae	7/16/2003
* <i>Erodium</i>	<i>botrys</i>			Geraniaceae	2/9/2003
* <i>Erodium</i>	<i>brachycarpum</i>			Geraniaceae	3/9/2003
* <i>Erodium</i>	<i>cicutarium</i>			Geraniaceae	3/9/2003
* <i>Erodium</i>	<i>moschatum</i>			Geraniaceae	4/8/2003
<i>Eryngium</i>	<i>castrense</i>			Apiaceae	4/20/2003
* <i>Euphorbia</i>	<i>peplus</i>			Euphorbiaceae	2/9/2003
<i>Euphorbia</i>	<i>spathulata</i>			Euphorbiaceae	2/9/2003
<i>Galium</i>	<i>aparine</i>			Rubiaceae	4/8/2003
<i>Galium</i>	<i>sp.</i>			Rubiaceae	3/9/2003
* <i>Geranium</i>	<i>dissectum</i>			Geraniaceae	4/8/2003
* <i>Geranium</i>	<i>molle</i>			Geraniaceae	3/9/2003
<i>Grindelia</i>	<i>hirsutula</i>	var.	<i>davyi</i>	Asteraceae	2/9/2003
<i>Hemizonia</i>	<i>fitchii</i>			Asteraceae	2/9/2003
<i>Hemizonia</i>	<i>sp.</i>			Asteraceae	3/9/2003
* <i>Hirschfeldia</i>	<i>incana</i>			Brassicaceae	7/16/2003
* <i>Hordeum</i>	<i>marinum</i>	ssp.	<i>glaucum</i>	Poaceae	2/9/2003
* <i>Hordeum</i>	<i>murinum</i>	ssp.	<i>murinum</i>	Poaceae	3/9/2003
<i>Hypochaeris</i>	<i>glabra</i>			Asteraceae	4/20/2003
* <i>Ipomoea</i>	<i>sp.</i>			Convolvulaceae	7/16/2003
* <i>Iris</i>	<i>sp.</i>			Iridaceae	4/20/2003
<i>Juncus</i>	<i>bufonius</i>	var.	<i>bufonius</i>	Juncaceae	4/20/2003
* <i>Kickxia</i>	<i>elatine</i>			Scrophulariaceae	7/16/2003
* <i>Lactuca</i>	<i>serriola</i>			Asteraceae	2/9/2003
* <i>Lamium</i>	<i>amplexicaule</i>			Lamiaceae	2/9/2003
<i>Layia</i>	<i>fremontii</i>			Asteraceae	4/8/2003
<i>Lepidium</i>	<i>nitidum</i>			Brassicaceae	2/9/2003
<i>Limnanthes</i>	<i>douglasii</i>	ssp.	<i>rosea</i>	Limnanthaceae	3/9/2003
* <i>Lolium</i>	<i>multiflorum</i>			Poaceae	2/9/2003
<i>Lotus</i>	<i>denticulatus</i>			Fabaceae	7/16/2003
<i>Lotus</i>	<i>wrangelianus</i>			Fabaceae	4/20/2003
<i>Lupinus</i>	<i>bicolor</i>			Fabaceae	3/9/2003
<i>Lupinus</i>	<i>sp.</i>			Fabaceae	2/9/2003
* <i>Malva</i>	<i>neglecta</i>			Malvaceae	7/16/2003

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* <i>Medicago</i>	<i>polymorpha</i>			Fabaceae	3/9/2003
* <i>Medicago</i>	<i>sativa</i>			Fabaceae	4/20/2003
* <i>Melilotus</i>	<i>officinalis</i>			Fabaceae	5/11/2003
<i>Micropus</i>	<i>californicus</i>	var.	<i>californicus</i>	Asteraceae	4/20/2003
<i>Mimulus</i>	<i>glaucescens</i>			Scrophulariaceae	4/8/2003
<i>Montia</i>	<i>fontana</i>	ssp.	<i>amportitiana</i>	Portulacaceae	3/9/2003
<i>Montia</i>	<i>perfoliata</i>			Portulacaceae	3/9/2003
<i>Navarretia</i>	<i>leucocephala</i>			Polemoniaceae	4/8/2003
<i>Navarretia</i>	<i>sp.</i>			Polemoniaceae	5/11/2003
<i>Panicum</i>	<i>capillare</i>			Poaceae	7/16/2003
* <i>Paspalum</i>	<i>urvillei</i>			Poaceae	7/16/2003
<i>Pentagramma</i>	<i>triangularis</i>	ssp.	<i>triangularis</i>	Pteridaceae	3/9/2003
<i>Petrorhagia</i>	<i>dubia</i>			Caryophyllaceae	4/8/2003
<i>Phyla</i>	<i>nodiflora</i>			Verbenaceae	4/8/2003
* <i>Physalis</i>	<i>lanceifolia</i>			Solanaceae	7/16/2003
<i>Plagiobothrys</i>	<i>canescens</i>			Boraginaceae	4/8/2003
<i>Plagiobothrys</i>	<i>fulvus</i>			Boraginaceae	4/8/2003
<i>Plagiobothrys</i>	<i>spp.</i>			Boraginaceae	3/9/2003
<i>Plantago</i>	<i>erecta</i>			Plantaginaceae	3/9/2003
* <i>Plantago</i>	<i>lanceolata</i>			Plantaginaceae	2/9/2003
* <i>Poa</i>	<i>annua</i>			Poaceae	3/9/2003
* <i>Polygonum</i>	<i>arenastrum</i>			Polygonaceae	4/20/2003
<i>Polygonum</i>	<i>sp.</i>			Polygonaceae	4/8/2003
* <i>Polypogon</i>	<i>maritimus</i>			Poaceae	7/16/2003
<i>Populus</i>	<i>sp.</i>			Salicaceae	2/9/2003
* <i>Portulaca</i>	<i>oleracea</i>			Portulacaceae	7/16/2003
* <i>Proboscidea</i>	<i>louisianica</i>	ssp.	<i>louisianica</i>	Martyniaceae	7/16/2003
<i>Psilocarphus</i>	<i>tenellus</i>	var.	<i>tenellus</i>	Asteraceae	4/20/2003
<i>Quercus</i>	<i>lobata</i>			Fagaceae	4/20/2003
* <i>Ranunculus</i>	<i>muricatus</i>			Ranunculaceae	4/8/2003
* <i>Raphanus</i>	<i>raphanistrum</i>			Brassicaceae	3/9/2003
* <i>Rumex</i>	<i>crispus</i>			Polygonaceae	3/9/2003
<i>Salix</i>	<i>exigua</i>			Salicaceae	4/20/2003
<i>Salix</i>	<i>goodingii</i>			Salicaceae	4/20/2003
<i>Sambucus</i>	<i>mexicana</i>			Caprifoliaceae	3/9/2003
* <i>Senecio</i>	<i>vulgaris</i>			Asteraceae	4/8/2003
* <i>Silybum</i>	<i>marianum</i>			Asteraceae	2/9/2003
* <i>Solanum</i>	<i>rostratum</i>			Solanaceae	7/16/2003
* <i>Solvia</i>	<i>sessilis</i>			Asteraceae	4/20/2003
* <i>Sonchus</i>	<i>asper</i>			Asteraceae	4/8/2003
* <i>Sonchus</i>	<i>oleraceus</i>			Asteraceae	3/9/2003
* <i>Spergularia</i>	<i>bocconii</i>			Caryophyllaceae	4/20/2003
* <i>Stellaria</i>	<i>media</i>			Caryophyllaceae	2/9/2003
* <i>Taeniatherum</i>	<i>caput-medusae</i>			Poaceae	2/9/2003
* <i>Torilis</i>	<i>arvensis</i>			Apiaceae	3/9/2003

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* <i>Tribulus</i>	<i>terrestris</i>			Zygophyllaceae	4/8/2003
<i>Trichostema</i>	<i>lanceolata</i>			Lamiaceae	7/16/2003
<i>Trichostema</i>	<i>sp.</i>			Lamiaceae	3/9/2003
<i>Trifolium</i>	<i>depauperatum</i>			Fabaceae	4/8/2003
* <i>Trifolium</i>	<i>dubium</i>			Fabaceae	4/8/2003
* <i>Trifolium</i>	<i>hirtum</i>			Fabaceae	4/20/2003
* <i>Trifolium</i>	<i>incarnatum</i>			Fabaceae	4/20/2003
<i>Trifolium</i>	<i>sp.</i>			Fabaceae	2/9/2003
<i>Triphysaria</i>	<i>eriantha</i>	ssp.	<i>eriantha</i>	Scrophulariaceae	3/9/2003
<i>Triteleia</i>	<i>hyacinthina</i>			Liliaceae	5/11/2003
<i>Triteleia</i>	<i>laxa</i>			Liliaceae	4/20/2003
* <i>Triticum</i>	<i>aestivum</i>			Poaceae	5/11/2003
<i>Veronica</i>	<i>peregrina</i>	ssp.	<i>xalapensis</i>	Scrophulariaceae	4/20/2003
* <i>Veronica</i>	<i>persica</i>			Scrophulariaceae	4/8/2003
* <i>Vicia</i>	<i>sativa</i>	ssp.	<i>sativa</i>	Fabaceae	3/9/2003
<i>Vicia</i>	<i>sp.</i>			Fabaceae	2/9/2003
* <i>Vicia</i>	<i>villosa</i>	ssp.	<i>varia</i>	Fabaceae	3/9/2003
<i>Vitis</i>	<i>californica</i>			Vitaceae	4/20/2003
<i>Vulpia</i>	<i>microstachys</i>	var.	<i>ciliata</i>	Poaceae	4/8/2003
<i>Xanthium</i>	<i>strumarium</i>			Asteraceae	7/16/2003