May 5, 2005

Report for the Boething Tree Nursery for Jasper Ridge Biological Preserve (JRBP)

Introduction

Herbarium staff was asked to assess the biological resources at the area known as Boething Tree Nursery. Staff consisted of Toni Corelli, Ann Lambrecht, John Rawlings, and Carol Zabel. This team worked a total of 60 hours; this includes field, lab, and analysis time. The emphasis of this project was to:

1. Make a list of plant species observed (see the attached spreadsheet)
2. Establish which plants were most dominate
3. Mark the areas studied on the aerial photograph provided
4. Collect any new species or species need to be identified in the lab
5. Photograph the area studied
6. Make any other biological observations as needed

The Boething Tree Nursery was removed from this property last year (?) and the ground was scraped (?). The area west of Road 2 will be turned over to JRBP. The herbarium staff assessed the area circled on the attached map.

Methods

The area was labeled as shown on the attached map. Two Roads were labeled (Road 1 and Road 2). One area was labeled "Back Area" and is the area between Road 1 and ledge above the creek. Seven individual blocks were identified east to Road 1. Each block was divided into 3 sections. One large (western) section, one drainage area (except Block B1A which has two drainages) and one smaller section east of each drainage within each block that is berm-like. The map and spreadsheet is labeled as follows:

Block B1A B1B drainage 1a drainage 1b
(Block B1 is the only block that had two obvious drainages)
Block B2A B2B drainage 2
Block B3A B3B drainage 3
Block B4A B4B drainage 4
Block B5A B5B drainage 5
Block B6A B6B drainage 6
Block B7A B7B drainage 7
Back Area

Road 1 - road into Boething from JRBP
Road 2 - road on the eastern boundary

Results
A spreadsheet is attached showing all of the plants encountered. A total of one hundred nine (109) plants were documented, of these ninety (90) were identified to species.

Eighteen were collected for further analysis or cannot be identified to species because they are not in flower or were not recognized by the team. Dominant plants are indicated on the spreadsheet, labeled YD; codominant species are identified as YCD. Seventy-four (74) species are nonnative and thirty-five (35) are native.

Overall, Carduus pycnocephalus was the most dominant plant. It tended to occupy the westerly two-thirds of blocks B1A-B6A and the "back area." The westerly two thirds of these blocks and the outer margins of the long edges along each block were mostly covered by C. pycnocephalus. The easterly exposures of blocks B1A-B6A had areas that are more open, more plant diversity, and less overall plant cover.

Block B7A was the only block in our research area that has an existing cover over it. There was less C. pycnocephalus in this block and possibly more diversity overall. C. pycnocephalus, Picris echioides and Sonchus asper all seemed to be codominants with no over all dominant plant in Block B7A. Percent cover was less in this block than in any other.

Almost all of the blocks had native annual lupine species, especially Lupinus nanus and some L. bicolor (see the spreadsheet for locations). These plants are easy to spot now since they are in flower, some were starting to set seed. Perhaps these plants can be avoided in the mowing process. Also of interest was the presence of Baccharis pilularis, which is a native pioneer plant in disturbed areas. B. pilularis is a codominant in Block B3A; maybe these can also be avoided in the mowing process. We also flagged a large patch of Madia gracilis in block B4A. We though this colony was especially interesting because of its tall stature, and native importance. We used yellow and black plastic tape to mark this patch.

Blocks (B1B-B7B) are the small areas beyond the drainages in each block. These are separated from the main block by the drainages and are adjacent to Road 2. These have become berm-like possibly a result of the soil being deposited from the drainages onto these areas. Some do have Quercus agrifolia trees on them.

Drainages 1a-7 are shown on the map and resource results are shown on the spreadsheet. Some still had standing water (drainages 1a, 1b, 5, 7). Drainage 1a had over a foot of standing water. There were some algae and

other aquatic plants in the drainages with standing water that we were unable to identify because they were not in flower. Some drainages had tadpoles and other aquatic insects and plants that indicate an aquatic habitat. We recommend that the drainages not be mowed, or at least the ones with aquatic habitat indicators. These would be drainages 1a, 1b, 5, 6, and 7. Most drainages are obvious and most are located to the far east of the blocks before the berms. See the attached map for the blue color indicating the drainages.

Block B1A was the only block with two drainages, one on the north side, and one on the east side. In drainages 6 and 7 there are two culverts and these drainages were larger than the other drainages. The other drainages seem to have only one culvert.

We also observed red-winged black bird, kill deer, meadowlark, Admiral butterfly, ladybugs, tree frogs, and other insects not identified.

Submitted by: Toni Corelli

Attachments:
Spreadsheet of plant species and notes * indicates non-native species
Aerial map with locations mapped
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Apiaceae	Anthriscus caucalis *	bur-chervil *
Apiaceae	Torilis arvensis *	hedge parsley *
Asteraceae	Achyrachaena mollis	blow-wives
Asteraceae	Baccharis pilularis	coyote brush
Asteraceae	Carduus pycnocephalus *	Italian thistle *
Asteraceae	Centaurea calcitrapa *	purple star-thistle *
Asteraceae	Centaurea solstitialis *	yellow star-thistle *
Asteraceae	Chamomilla suaveolens *	pineapple weed *
Asteraceae	Cirsium vulgare *	bull thistle *
Asteraceae	Cotula coronopifolia *	brass-buttons *
Asteraceae	Crepis vesicaria ssp. taraxacifolia *	weedy hawksbeard *
Asteraceae	Filago gallica *	narrow-leaved filago *
Asteraceae	Gnaphalium californicum	California cudweed
Asteraceae	Gnaphalium luteo-	weedy cudweed *

	album *	
Asteraceae	Hypochaeris glabra *	smooth cat's-ear *
Asteraceae	Hypochaeris radicata *	rough cat's-ear *
Asteraceae	Lactuca saligna *	willow lettuce *
Asteraceae	Lactuca serriola *	prickly lettuce *
Asteraceae	Madia gracilis	slender tarweed
Asteraceae	Madia sativa	coast tarweed
Asteraceae	Microseris douglasii ssp. douglasii	Douglas' microseris
Asteraceae	Picris echioides *	bristly ox-tongue *
Asteraceae	Senecio vulgaris *	common groundsel *
Asteraceae	Silybum marianum *	milk thistle *
Asteraceae	Sonchus asper ssp. asper *	prickly sow thistle *
Asteraceae	Sonchus oleraceus *	common sow thistle *
Asteraceae	Conyza sp. *	conyza *
Asteraceae	Dittrichia graveolens *	stinkwort
Brassicaceae	Capsella bursa-pastoris *	shepherd's purse *
Brassicaceae	Cardamine oligosperma	few-seeded bitter cress
Brassicaceae	Hirschfeldia incana *	Mediterranean mustard *
Brassicaceae	Lepidium didymum (Coronopus didymus)*	lesser wart cress*
Brassicaceae	Coronopus didymus *	lesser watercress *
Brassicaceae	yellow mustard	
Brassicaceae	mustard family member cream *	*
Brassicaceae	Brassica sp. *	mustard *
Caryophyllaceae	Cerastium glomeratum *	mouse-ear chickweed *
Chenopodiaceae	Chenopodium album *	pigweed *
Cyperaceae	Cyperus eragrostis	tall cyperus
Cyperaceae	Bolboschoenus maritimus	saltmarsh or alkali bulrush
Euphorbiaceae	Euphorbia peplus *	petty spurge *
Fabaceae	Genista monspessulana *	French broom *
Fabaceae	Lotus corniculatus *	birdfoot trefoil *
Fabaceae	Lotus micranthus	small-flowered trefoil
Fabaceae	Lupinus bicolor	miniature lupine
Fabaceae	Lupinus nanus	Douglas' annual lupine
Fabaceae	Lupinus succulentus	arroyo lupine

Fabaceae	Medicago lupulina *	black medick
Fabaceae	Medicago polymorpha *	California burclover *
Fabaceae	Trifolium dubium *	little hop clover *
Fabaceae	Trifolium gracilentum var. gracilentum	pin-point clover
Fabaceae	Trifolium hirtum *	rose clover *
Fabaceae	Trifolium variegatum	white-tipped clover
Fabaceae	Trifolium willdenovii	tomcat clover
Fabaceae	Vicia sativa ssp. sativa *	common vetch *
Fabaceae	Vicia villosa ssp. varia *	winter vetch *
Fabaceae	Trifolium subterraneum *	subterranean clover *
Fabaceae	Melilotus indica *	Indian melilot *
Fagaceae	Quercus agrifolia var. agrifolia	coast live oak
Fagaceae	Quercus lobata	valley oak
Geraniaceae	Erodium botrys *	long-beaked storksbill
Geraniaceae	Erodium cicutarium *	red-stemmed storksbill *
Geraniaceae	Geranium dissectum *	cut-leaved geranium *
Geraniaceae	Geranium robertianum *	herb Robert *
Iridaceae	Sisyrinchium bellum	blue-eyed-grass
Juncaceae	Juncus bufonius var. bufonius	toad rush
Juncaceae	Juncus xiphioides	iris-leaved rush
Lamiaceae	Mentha pulegium *	pennyroyal *
Lamiaceae	Salvia ? - red ornamental *	*
Liliaceae	Lilaea species	flowering quillwort
Lythraceae	Lythrum hyssopifolium *	grass-poly *
Malvaceae	Malva sp *	mallow *
Onagraceae	Epilobium brachycarpum	panicled willow herb
Onagraceae	Epilobium ciliatum ssp. watsonii	Watson's willow herb
Onagraceae	Epilobium sp.	willow herb
Oxalidaceae	Oxalis sp. *	oxalis *
Plantaginaceae	Plantago coronopus *	cut-leaved plantain *
Plantaginaceae	Plantago major *	common plantain *
Poaceae	Aira caryophyllea *	Silver European hairgrass *

Poaceae	Avena barbata *	slender wild oat *
Poaceae	Briza maxima *	big quaking grass *
Poaceae	Briza minor *	little quaking grass *
Poaceae	Bromus carinatus var. carinatus	California brome
Poaceae	Bromus diandrus *	ripgut grass *
Poaceae	Bromus hordeaceus *	soft chess *
Poaceae	Bromus madritensis ssp. madritensis *	foxtail chess *
Poaceae	Lolium multiflorum *	Italian ryegrass *
Poaceae	Nassella lepida	foothill needlegrass
Poaceae	Poa annua *	annual bluegrass *
Poaceae	Polypogon monspeliensis *	annual beard grass *
Poaceae	Hordeum murinum *	foxtail *
Poaceae	Vulpia sp. *	*
Poaceae	Vulpia myuros *	*
Poaceae	Vulpia bromoides *	foxtail fescue *
Polygonaceae	Rumex crispus *	curly dock *
Portulaceae	Claytonia perfoliata ssp. perfoliata	miner’s lettuce
Primulaceae	Anagallis arvensis *	scarlet pimpernel *
Rubiaceae	Galium aparine	goose grass
Salicaceae	Salix sp.	
Salicaceae	Salix exigua	narrow-leaved willow
Salicaceae	Populus sp. *	*
Scrophulariaceae	Castilleja densiflora ssp. densiflora	owl's-clover
Solanaceae	Solanum sp. *	*
Typhaceae	Typha sp.	cat tail

4/25/05 8:38:55

4/25/05 8:39:01

Block B1A and Drainage 1a
4/25/05 8:39:08

Carduus pycnocephalus , Italian thistle Block B1A (4/25/05) 8:45:43

Cotula coronopifolia (brass-buttons)
4/25/05 10:38:44

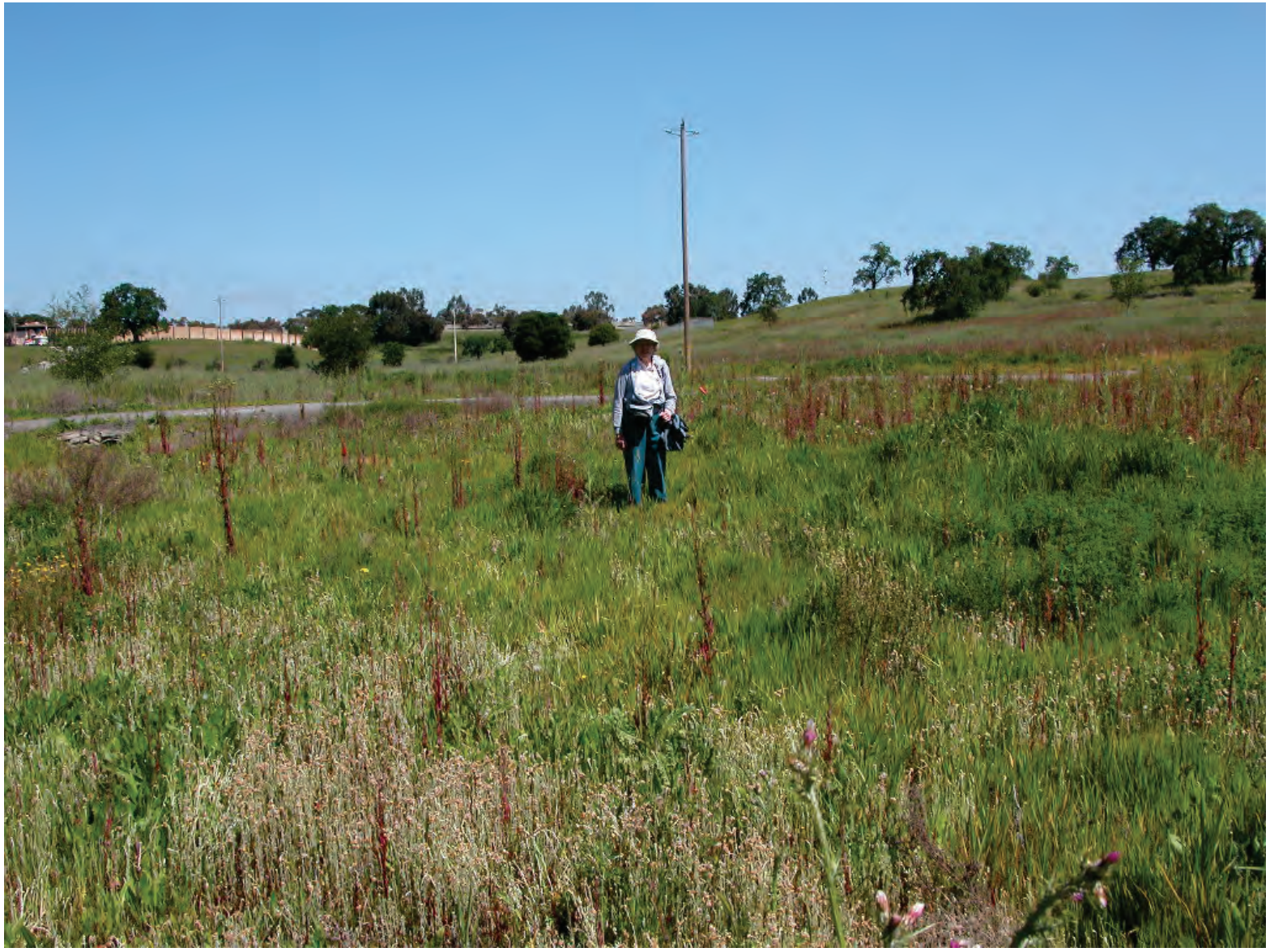
Cotula coronopifolia (brass-buttons)
4/25/05 10:39:42

Scirpus sp. Drainage 6 (5/1/05 9:09:58)

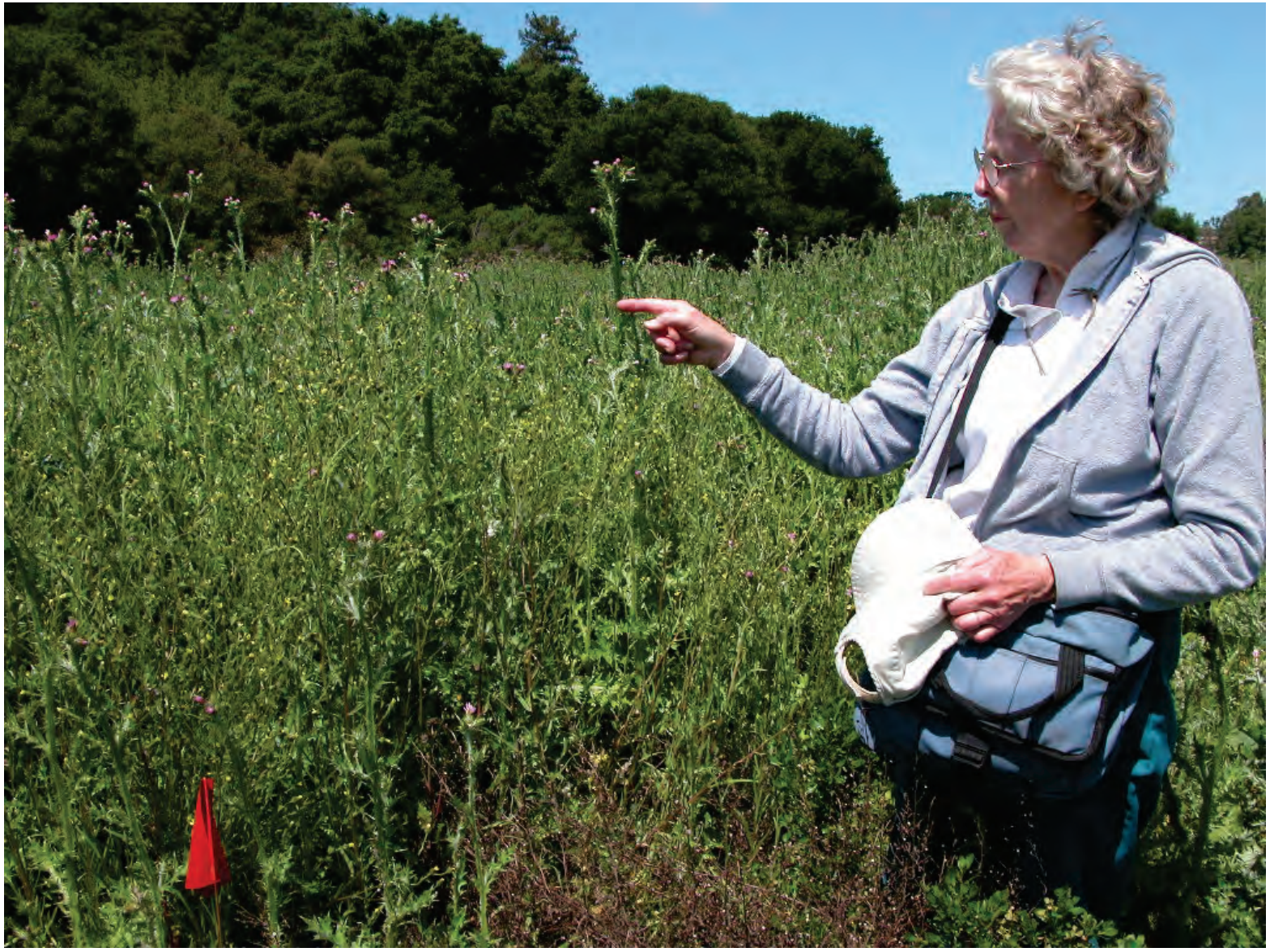
5/1/05 9:10:04

Block B4A showing eastern exposure, dranainage 4 and B4B - Berm area (5/1/05) 9:10:10

5/1/05 - 10:15:30



Carduus pycnocephalus and Carol 5/1/05 - 10:59:42



Madia gracilis (slender tarweed); Block B4A (5/1/05) 10:59:50

Madia gracilis (slender tarweed); Block B4A ; with Carol
5/1/05 10:59:59

Madia gracilis (slender tarweed); Block B4A
5/1/05) 11:00:23

Madia gracilis (slender tarweed); Block B4A 5/1/05) 11:00:23

Carduus pycnocephalus (talian thistle) with Madia gracilis (slender tarweed); Block B4A (5/1/05) 11:00:36

Drainage 1b (5/2/05) 8:00:55

Block B3A, Drainage 2 and B2B showing eastern end of B2A; drainage 2 with no standing water and the berm B3B (5/2/05) 8:01:02

5/2/05 8:01:10

5/2/05 8:01:15

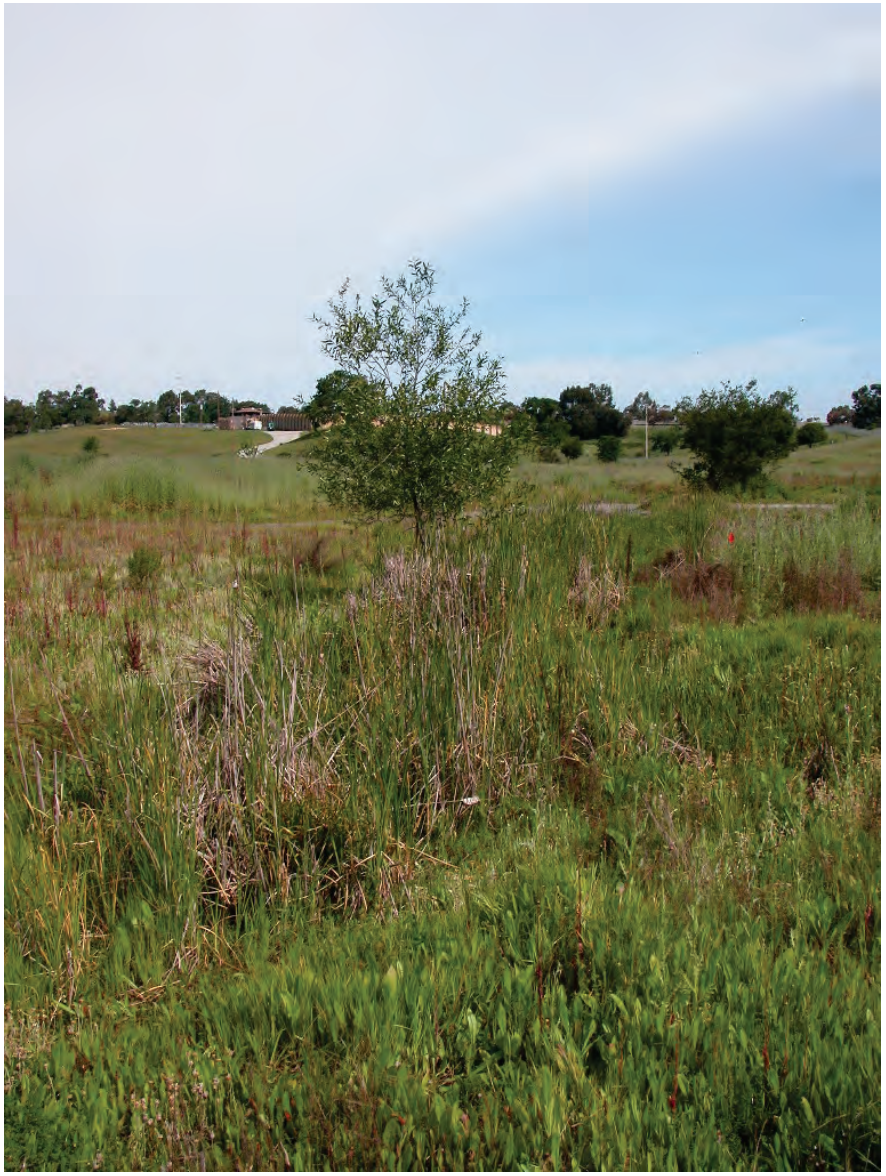
Water plant (Lilaea) Drainage 1a (5/2/05)8:15:29

Drainage 6 with Scirpus sp. (Bolboschoenus maritimus) With Carol
5/2/05 9:12:44

Drainage 6 with Typha sp. And ann 5/2/05 9:12:49

Drainage 5 and Carol
2/5/05 9:24:57

Quercus agrifolia 5/2/05 9:25:02



Drainage 7 Polypogon monspeliensis (grass in front) Populus sp. (ornamental in background) Willow and catail (5/2/05 9:25:18)

Drainage 7 with Salix sp. (5/2/05) 9:25:24

Drainage 7 with Polypogon monspeliensis (grass in front) Populus sp. (ornamental in background) Willow and catail (5/2/05) 9:25:30

Unknown leaf hairy and fragrant
5/2/05 9:29:30

Back Area with Ann
5/3/05 9:45:43

Back Area with Ann
5/2/05 9:45:49

Bark Area with Lupinus nanus (Douglas' annual lupine)
5/2/05 9:45:54

Back Area - 5/2/05 9:45:59

Coronopus didymus (lesser watercress)
Back Area 5/2/05 9:47:05