

APPENDIX T2

June 2009 Botanical Study

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July 8, 2009

Gary Deghi
Huffman Broadway Group
828 Mission Ave.
San Rafael, CA 94901-3209

RE: Botanical Resource Survey "Balloon Property", City of Eureka, CA

Dear Gary,

On June 17 2009, I visited the "Balloon Property" in the City of Eureka to complete floristic surveys that were begun in April of 2006. The timing of this survey corresponds to the flowering period of several rare plant species known to occur in the Humboldt Bay area. Table 1 (attached) provides the special status plant species that were sought during the field surveys.

Changes to the property since the spring survey in 2006 include fencing to prevent trespass, removal of debris, and roads and adjacent areas have been mowed for fire control.

No special status plants were found on the Balloon property during the June 2009 survey of the site. Several late spring and summer flowering plant species, including many natives, were added to the general plant list for the property. An updated list of plant species observed on the site is attached.

Disturbed habitats on the site are not appropriate of any of the target species. All of the plants of concern are restricted to specific habitats that do not include ruderal or disturbed settings. Dune or salt marsh habitats are not present on the site. Freshwater marsh communities found in low-lying areas and drainages were searched for Lyngbye's sedge, flaccid sedge, northern coastal sedge, marsh pea, western lily, and coast checkerbloom, but no plants were found. Other wetland habitats on the site are seasonal, and not appropriate for these species.

Thank you for the opportunity to work on this project. Please contact me if you need any additional information.

Sincerely,


Virginia Dains

Table 1 Special-status plants known or potentially occurring in the Humboldt Bay Area
(Compiled from NDDDB, CNPS, FWS)

Scientific name Common Name	Status ¹ Fed/State /CNPS	General Habitat Description	Flowering Time
<i>Abronia umbellata</i> ssp. <i>breviflora</i> Pink sand-verbena	-/-/1B	Coastal dunes, coastal strand	June- October
<i>Carex arcta</i> Northern clustered sedge	-/-/2	Bogs and fens, north coast coniferous forest	June -August
<i>Carex leptalea</i> Flaccid sedge	-/-/2	Bogs and fens, meadows, marshes and swamps	May- July
<i>Carex lyngbyei</i> Lyngbye's sedge	-/-/2	Marshes and swamps, brackish or fresh	May-August
<i>Castilleja affinis</i> ssp. <i>litoralis</i> Oregon coast Indian paintbrush	-/-/2	Coastal bluff scrub, Coastal dunes and scrub	June
<i>Castilleja ambigua</i> ssp. <i>humboltiensis</i> Humboldt Bay owl's clover	-/-/1B	Coastal Salt marsh	April - August
<i>Cordylanthus maritimus</i> ssp <i>palustris</i> Point Reyes bird's beak	-/-/1B	Coastal salt marsh	June- October
<i>Erysimum menziesii</i> ssp. <i>eurekaense</i> Humboldt Bay wallflower	E/E/1B	Coastal salt marsh	March - April
<i>Gilia millefoliata</i> Dark-eyed gilia	-/-/1B	Coastal dunes	April - July
<i>Hesperexax sparsiflora</i> var. <i>brevifolia</i> Short-leaved evax	-/-/2	Coastal bluff scrub, coastal dunes	March - April
<i>Lathyrus japonicus</i> Sand pea	-/-/2	Coastal dunes	March – April
<i>Lathyrus palustris</i> Marsh pea	-/-/2	Bogs and fens, lower montane coniferous forest, marshes and swamps, North coast coniferous forest, coastal prairie, coastal scrub	March - August
<i>Layia carnosa</i> Beach layia	E/E/1B	Coastal dunes	March-July
<i>Lilium occidentale</i> Western lily	E/E/1B	Coastal scrub, freshwater marsh, bogs and fens, Coastal bluff scrub, coastal prairie, North coast coniferous forest	June - July
<i>Sidalcea oregana</i> ssp. <i>eximia</i> Coast checkerbloom	-/-/1 B	Meadows and seeps, North coast coniferous forest, lower montane coniferous forest	June- August
<i>Spergularia canadensis</i> var. <i>occidentalis</i> Western sand-spurry	-/-/2	Coastal salt marsh	June - August

Plant Species observed at the Balloon Property during field surveys April 2006 and June 2009

Family	Scientific Name	Common Name
Aceraceae	<i>Acer macrophyllum</i>	big-leaf maple
Apiaceae	<i>Conium maculatum</i>	poison hemlock
	<i>Daucus carota</i>	carrot
	<i>Foeniculum vulgare</i>	fennel
	<i>Oenanthe sarmentosa</i>	Pacific oenanthe
Apocynaceae	<i>Vinca major</i>	greater periwinkle
Asteraceae	<i>Aster chilensis</i>	common California aster
	<i>Baccharis douglasii</i>	salt marsh baccharis
	<i>Baccharis pilularis</i>	coyote brush
	<i>Cichorium intybus</i>	chicory
	<i>Conyza canadensis</i>	Canada horseweed
	<i>Cotula coronopifolia</i>	brass-buttons
	<i>Filago gallica</i>	Mediterranean herba impia
	<i>Gnaphalium luteoalbum</i>	cudweed
	<i>Gnaphalium palustre</i>	western marsh cudweed
	<i>Hypochaeris radicata</i>	rough cat's ear
	<i>Leontodon taraxicoides</i>	Hawkbit
	<i>Picris echioides</i>	bristly ox-tongue
	<i>Sonchus arvensis</i>	perennial sow thistle
	<i>Sonchus asper</i> ssp. <i>asper</i>	prickly sow thistle
	<i>Taraxacum officinale</i>	common dandelion
Brassicaceae	<i>Brassica nigra</i>	black mustard
	<i>Brassica rapa</i>	field mustard
	<i>Raphanus sativus</i>	wild radish
Callitrichaceae	<i>Callitriche heterophylla</i>	varied-leaved water-starwort
Caprifoliaceae	<i>Lonicera involucrata</i>	twinberry
	<i>Lonicera japonica</i>	Japanese honeysuckle
Caryophyllaceae	<i>Cerastium glomeratum</i>	mouse-ear chickweed
	<i>Spergularia rubra</i>	red sandspurry
Chenopodiaceae	<i>Atriplex triangularis</i>	spearscale
	<i>Chenopodium album</i>	white goosefoot
	<i>Salicornia virginica</i>	pickleweed
Convolvulaceae	<i>Calystegia sepium</i> ssp. <i>limnophila</i>	marsh morning-glory
	<i>Convolvulus arvensis</i>	field bindweed
Crassulaceae		

Family	Scientific Name	Common Name
	<i>Crassula aquatica</i>	aquatic pygmy-weed
<i>Cyperaceae</i>	<i>Carex dudleyi</i>	Dudley's sedge
	<i>Cyperus eragrostis</i>	tall flatsedge
	<i>Eleocharis macrostachya</i>	common spikerush
	<i>Scirpus americanus</i>	American tule
	<i>Scirpus cernuus</i>	annual tule
	<i>Scirpus maritimus</i>	prairie rush
	<i>Scirpus microcarpus</i>	mountain bog bulrush
	<i>Scirpus pungens</i>	three-square
<i>Dipsacaceae</i>	<i>Dipsacus fullonum</i>	wild teasel
<i>Equisetaceae</i>	<i>Equisetum laevigatum</i>	smooth scouring rush
	<i>Equisetum telmateia</i> ssp. <i>braunii</i>	giant horsetail
<i>Fabaceae</i>	<i>Cytisus scoparius</i>	scotch broom
	<i>Lathyrus latifolius</i>	perennial sweet pea
	<i>Lotus corniculatus</i>	bird's-foot trefoil
	<i>Lotus humistratus</i>	short-podded lotus
	<i>Lupinus bicolor</i>	miniature lupine
	<i>Lupinus rivularis</i>	riverbank lupine
	<i>Medicago polymorpha</i>	California burclover
	<i>Medicago sativa</i>	alfalfa
	<i>Melilotus alba</i>	white sweetclover
	<i>Melilotus indica</i>	sourclover
	<i>Trifolium campestre</i>	hop clover
	<i>Trifolium dubium</i>	shamrock
	<i>Trifolium hirtum</i>	rose clover
	<i>Trifolium pratense</i>	red clover
	<i>Trifolium repens</i>	white clover
	<i>Trifolium subterraneum</i>	subterranean clover
	<i>Vicia benghalensis</i>	purple vetch
	<i>Vicia hirsuta</i>	hairy vetch
	<i>Vicia sativa</i>	spring vetch
	<i>Vicia villosa</i>	hairy vetch
<i>Gentianaceae</i>	<i>Centaurium muehlenbergii</i>	Muhlenberg's centaury
<i>Geraniaceae</i>	<i>Erodium cicutarium</i>	red-stemmed filaree
	<i>Geranium dissectum</i>	cut-leaved geranium
<i>Hypericaceae</i>	<i>Hypericum perforatum</i>	Klamath weed
<i>Iridaceae</i>	<i>Crocasmia Xcrocismiiflora</i>	monbretia
<i>Juncaceae</i>	<i>Juncus bolanderi</i>	Bolander's rush
	<i>Juncus bufonius</i>	toad rush
	<i>Juncus effusus</i>	common bog rush
	<i>Juncus lesueurii</i>	dune rush

Family	Scientific Name	Common Name
	<i>Juncus patens</i>	common rush
<i>Juncaginaceae</i>		
	<i>Lilaea scilloides</i>	flowering quillwort
	<i>Triglochin maritima</i>	seaside arrow-grass
<i>Lamiaceae</i>		
	<i>Mentha pulegium</i>	pennyroyal
	<i>Stachys ajugoides</i> var. <i>rigida</i>	rigid hedge-nettle
<i>Liliaceae</i>		
	<i>Nothoscordum inodorum</i>	false garlic
<i>Linaceae</i>		
	<i>Linum usitatissimum</i>	common flax
<i>Lythraceae</i>		
	<i>Lythrum californicum</i>	California loosestrife
	<i>Lythrum hyssopifolium</i>	hyssop loosestrife
<i>Malvaceae</i>		
	<i>Malva sylvestris</i>	high mallow
<i>Onagraceae</i>		
	<i>Epilobium ciliatum</i>	willowherb
<i>Oxalidaceae</i>		
	<i>Oxalis latifolia</i>	Mexican oxalis
<i>Papaveraceae</i>		
	<i>Eschscholzia californica</i>	California poppy
<i>Pinaceae</i>		
	<i>Picea sitchensis</i>	Sitka spruce
	<i>Pseudotsuga menziesii</i> var. <i>menziesii</i>	Douglas-fir
<i>Plantaginaceae</i>		
	<i>Plantago coronopus</i>	cut-leaf plantain
	<i>Plantago lanceolata</i>	English plantain
	<i>Plantago major</i>	common plantain
<i>Poaceae</i>		
	<i>Agrostis avenacea</i>	pacific bentgrass
	<i>Agrostis capillaris</i>	colonial bentgrass
	<i>Agrostis exarata</i>	spike bentgrass
	<i>Agrostis stolonifera</i>	creeping bentgrass
	<i>Agrostis viridis</i>	green bentgrass
	<i>Aira caryophylla</i>	silver hairgrass
	<i>Alopecurus geniculatus</i>	water foxtail
	<i>Anthoxanthum odoratum</i>	sweet vernal grass
	<i>Avena barbata</i>	slender wild oats
	<i>Briza maxima</i>	big quaking grass
	<i>Briza minor</i>	little quaking grass
	<i>Bromus diandrus</i>	riggut brome
	<i>Bromus hordeaceus</i>	soft chess
	<i>Cortaderia selloana</i>	pampas grass
	<i>Cynosurus echinatus</i>	hedgehog dogtail-grass
	<i>Dactylis glomerata</i>	orchard-grass
	<i>Festuca arundinacea</i>	tall fescue
	<i>Glyceria occidentalis</i>	western mannagrass
	<i>Holcus lanatus</i>	common velvetgrass

Family	Scientific Name	Common Name
	Hordeum marinum ssp. gussoneanum	Mediterranean barley
	Lolium perenne	English rye-grass
	Paspalum dilatatum	dallis grass
	Phragmites australis	common reed
	Poa annua	annual blue grass
	Poa pratensis	Kentucky blue grass
	Polypogon monspeliensis	annual beard grass
	Spartina densiflora	dense-flowered cord grass
	Vulpia myuros var. myuros	rattail fescue
Polygonaceae		
	Polygonum arenastrum	common knotweed
	Polygonum persicaria	lady's thumb
	Rumex acetosella	common sheep sorrel
	Rumex crispus	curly dock
	Rumex occidentalis	western dock
	Rumex salicifolius var. crassus	willow dock
	Rumex salicifolius var. salicifolius	willow dock
Polypodiaceae		
	Polypodium californicum	California polypody
Pteridaceae		
	Pentagramma triangularis	gold-back fern
Ranunculaceae		
	Ranunculus repens	creeping buttercup
Rosaceae		
	Fragaria chiloensis	beach strawberry
	Potentilla anserina	silver-weed cinquefoil
	Rubus discolor	Himalaya-berry
Rubiaceae		
	Galium aparine	common bedstraw
Salicaceae		
	Salix hookeriana	Hooker's willow
	Salix lucida ssp. lasiandra	shining willow
	Salix sitchensis	Sitka willow
Scrophulariaceae		
	Bellardia trixago	Mediterranean linseed
	Parentucellia viscosa	yellow parentucellia
	Scrophularia californica	California figwort
	Triphysaria versicolor	yellow owl's clover
Typhaceae		
	Typha latifolia	broadleaf cattail
Urticaceae		
	Urtica dioica ssp. holosericea	hoary nettle
Zosteraceae		
	Zostera marina	seawrack