Habitat Assessment (Long Form) Datasheet

Xerces Society's Western Monarch Count

Date _____ Survey Start Time _____ ☐AM / ☐PM

Observers (first & last names):

_____

Email Address (at least one):

_____

Is this a KNOWN (registered) or NEW (unregistered) site? (Circle one.)
Site ID # _____ Site Name _____

Ownership Information (e.g. List the name and contact info for property owner(s), especially if ownership change occurred. Leave blank if ownership is unclear or remains the same.

_____

_____

Is there a staff and/or docent presence at the site? ☐ Yes / ☐ No

If so, from what agencies/groups (list all that apply)?

_____

_____

Current Land Use(s) (e.g., park, residential, agricultural, industrial, golf course, etc.)

_____

Site Access (defined in protocol document): ☐ Open Access / ☐ Limited Access / ☐ No Access

Site Access Notes (e.g., What coordination is required to gain access to the site? What are the limitations or barriers?)

_____

_____

Directions to Site (Describe any special navigation directions that may be helpful for future volunteers e.g., parking area, trail names, landmarks, etc.)

_____

_____

_____

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Weather and Microclimate

Cloud/fog cover: _____ %

Precipitation: ☐ none ☐ drizzle ☐ rain

Weather OUTSIDE the grove, away from the cluster trees

Temperature: _____ ☐ °F ☐ °C

Relative Humidity: _____

Average wind speed _____ (☐ mph / ☐bft) Maximum wind speed _____ (☐ mph / ☐bft)

Wind Direction (direction wind is coming FROM), check what applies:

☐ N / ☐ NE / ☐ NW / ☐ S / ☐ SE / ☐ SW / ☐ E / ☐ W / ☐ No wind (calm)

Microclimate INSIDE the grove, near the cluster trees

Temperature: _____ ☐ °F ☐ °C

Relative Humidity: _____

Average wind speed _____ (☐ mph / ☐bft) Maximum wind speed _____ (☐ mph / ☐bft)

Wind Direction (direction wind is coming FROM), check what applies:

☐ N / ☐ NE / ☐ NW / ☐ S / ☐ SE / ☐ SW / ☐ E / ☐ W / ☐ No wind (calm)

Monarchs Observed? ☐ Yes / ☐ No

If so, is there an associated count data sheet? ☐ Yes / ☐ No

If not, which monarch activities did you observe at the site (Clusters, flyers, loners, sunners, grounders, mating, dead)? _____

*Once you have completed this habitat assessment form, please complete a monarch count datasheet within the week.

Habitat Information

Is there a wind buffer between the cluster trees/shrubs and the edge of the grove?

☐ Yes / ☐ No / ☐ No monarch clusters present.

If so, in what directions (check all that apply)?

☐ N / ☐ NE / ☐ NW / ☐ S / ☐ SE / ☐ SW / ☐ E / ☐ W / ☐ No wind (calm)

Describe the grove's tree arrangement (e.g., u-shape, linear along a drainage, dense grove with scattered openings, etc.) _____

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Record the tree species present in the grove (check all that apply). If surveying in the Saline Valley, record the shrub species present.

__ ACXX: Acacias (*Acacia spp.*) __ BASA: Mule fat (*Baccharis salicifolia*) __ CUXX: Cypress (*Cupressus spp.*) __ EUCA: Red river gum (*Eucalyptus camaldulensis*) __ EUGL: Blue gum (*Eucalyptus globulus*) __ EUXX: Unknown or other Eucalyptus species (*Eucalyptus spp.*) __ HEMA: Monterey cypress *(Hesperocyparis macrocarpa*) __ LATR: Creosote bush *(Larrea tridentata*)	__ PICA: Canary island pine *(Pinus canariensis*) __ PIRA: Monterey pine (*Pinus radiata*) __ PITO: Torrey pine *(Pinus torreyana*) __ PIXX: Unknown or other pine (Pinus spp.) __ PLRA: Western sycamore (*Platanus racemosa*) __ POFR: Fremont cottonwood (*Populus fremontii*) __ PRPU: Screwbean mesquite (*Prosopis pubescens*) __ PSME: Douglas fir (*Pseudotsuga menziesii*)	__ PSME: Douglas fir (*Pseudotsuga menziesii*) __ QUAG: Coast live oak *(Quercus agrifolia*) __ SAXX: Willow (*Salix spp.*) __ SEGI: Giant sequoia (*Sequoiadendron giganteum*) __ SESE: Coastal redwood (*Sequoia sempervirens*) __ TAXX: Tamarisk (*Tamarix spp.*) __ ULXX: Elm (*Ulmus spp.*) Other: _____ _____ _____ _____

Are there dead/diseased/hazard trees in the grove? ☐ Yes / ☐ No
If so, please describe their location, # of affected trees, and species _____
_____
_____

Is there fresh water (not salty) available nearby? ☐ Yes / ☐ No
If so, what is/are the source(s)? Dew/Irrigation/Lake/Pond/Lagoon/Puddle/Seep/Spring/Stream/None observed/ Other:_____

Where is the water source in relation to the grove boundaries? ☐ Inside the grove/ ☐ Outside the grove

Are nectar plants currently blooming nearby? ☐ Yes / ☐ No

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Record what species are present (check all that apply).

Native Species:	Native Species (cont.):	Non-native Species (cont.):
__Narrow leaf milkweed (*Asclepias fascicularis*)	__ Red alder (*Alnus rubra*)	__ English ivy (*Hedera helix*)
__ Mule fat/seep willow (*Baccharis salicifolia*, *Baccharis glutinosa*)	__ Aster (*Aster* sp.)	__ German ivy (*Senecio mikanioides*)
__ Coyote brush (*Baccharis pilularis*)	__ Seaside fleabane (*Erigeron glaucus*)	__ Passionflower vine (*Passiflora* sp.)
__ Arroyo willow (*Salix lasiolepis*)	Other:	__ Bull thistle (*Cirsium vulgare*)
__ Other willow (*Salix* sp.)	_____	__ Wild radish (*Raphanus sativus*)
__ Monkeyflower (*Mimulus* sp.)	_____	__ English daisy (*Bellis perennis*)
__ Morning glory (*Calystegia* sp.)	_____	__ White nightshade (*Solanum nodiflorum*)
__ Miner's lettuce (*Claytonia perfoliata*)	Non-native Species:	__ Iceplant (*Carpobrotus* sp., *Mesembryanthemum* sp.)
__ Dune groundsel/ragwort (*Senecio blochmaniae*)	__ Tropical milkweed (*Asclepias curassavica*)	__ Field bindweed (*Convolvulus arvensis*)
__ Mock heather (*Ericameria ericoides*)	__ Blue gum (*Eucalyptus globulus*)	__ Chrysanthemum (*Chrysanthemum* sp.)
__ Crisp dune mint (*Monardella crispa*)	__ Red gum (*Eucalyptus camaldulensis*)	__ Klamath weed/tansy mustard (*Senecio* sp.)
__ California blackberry (*Rubus ursinus*)	__ Black mustard (*Brassica nigra*)	__ Lily-of-the-Nile (*Agapanthus africanus*)
__ Manzanita (*Arctostaphylos* sp.)	__ Unknown or other mustard (*Brassica* sp.)	__ Sweet fennel (*Foeniculum vulgare*)
__ Blue blossom (*Ceanothus thyrsiflorus*)	__ Common dandelion (*Taraxacum officinale*)	__ Bottlebrush (*Callistemon* sp.)
__ Western goldenrod (*Euthamia occidentalis*)	__ Ox-eye daisy (*Chrysanthemum leucanthemum*)	__ Lantana (*Lantana* sp.)
__ Bluedicks (*Dipterostemon capitatus*)	__ Periwinkle (*Vinca major*)	__ Lemon (*Citrus limon*)
	__ Butterfly bush (*Buddleia* sp.)	__ Pride of madeira (*Echium fastuosum*)
		Other:
		_____
		_____
		_____

Where is the nectar source in relation to the grove boundaries? ☐ Inside the grove / ☐ Outside the grove

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Did you observe monarchs feeding on nectar? ☐ Yes / ☐ No
If yes, which species? _____

Community Composition

Estimate the community structure composition (total can be >100% for all layers combined).
Tree cover ____% Shrub cover ____% Herbaceous cover ____% Leaf litter ____% Bare soil ____%

Record any threats or disturbances you observed INSIDE or DIRECTLY ADJACENT to the site (check all that apply).

__ Construction (active) __ Drought stress (dead canopy, loss of leaves, epicormic sprouting) __ Erosion __ Fire damage __ Grove is too dense/shady __ Grove is too open/exposed __ High human visitation load (campsite, trail/sidewalk, business/residence) __ Nectar plant removal __ New development/building(s) __ Old/aging trees __ Pesticide use (likely) __ Pesticide use (observed) __ Proposed development or expansion of facilities __ Storm damage __ Tree clearing/cutting (cut to stump)	__ Tree trimming (branches) __ Trees diseased from Eucalyptus leaf beetle __ Trees diseased from Eucalyptus lerp psyllid __ Trees diseased from other/unknown source __ Trees diseased from pitch canker __ Underbrush removal/fuels management __ Utility structures or maintenance (powerlines, utility poles) __ Vehicle traffic (roads, highways, railroad) Other: _____ _____ _____

Describe the disturbances/threats in greater detail, if possible. For example, if you observed dead/dying trees, how many did you observe and are they cluster trees? If the site is affected by erosion, what is the cause of the erosion? _____
_____
_____

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Record any threats or disturbances you observed OUTSIDE the site (check all that apply).

__ Construction (active) __ Drought stress (dead canopy, loss of leaves, epicormic sprouting) __ Erosion __ Fire damage __ Grove is too dense/shady __ Grove is too open/exposed __ High human visitation load (campsite, trail/sidewalk, business/residence) __ Nectar plant removal __ New development/building(s) __ Old/aging trees __ Pesticide use (likely) __ Pesticide use (observed) __ Proposed development or expansion of facilities __ Storm damage __ Tree clearing/cutting (cut to stump)	__ Tree trimming (branches) __ Trees diseased from Eucalyptus leaf beetle __ Trees diseased from Eucalyptus lerp psyllid __ Trees diseased from other/unknown source __ Trees diseased from pitch canker __ Underbrush removal/fuels management __ Utility structures or maintenance (powerlines, utility poles) __ Vehicle traffic (roads, highways, railroad) Other: _____ _____ _____

Record possible FUTURE threats that seem likely to affect this site (check all that apply).

__ Grove may become too dense/shady __ Grove may not regenerate/low tree recruitment __ Grove may become too open/exposed __ Probability of development or facilities expansion __ Probability that cluster trees will be cut __ Probability of vegetation management/prescribed burns	Other: _____ _____ _____

Photos and Notes:

Take photos of relevant site characteristics, and describe them below. Optionally include photo location GPS coordinates if relevant (These may be automatically collected in your photo's metadata).

Camerapoint Description: _____

_____

Photopoint #1 Description: _____

_____

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Photopoint #2 Description: _____

_____

Notes:

Overall Site Sketch

Provide a sketch here or on the back of the datasheet; utilize aerial maps, ArcGIS, Google Earth, Google Maps, or other programs to provide a more detailed map of the site and its major features, including cluster locations, if possible.

Please provide GPS coordinates of the grove's boundaries. If the grove is an odd-shaped polygon or many cluster trees, please draw a map on the back of this sheet, or make a shapefile/kmz using Google Earth or GIS products.

GPS Point of Grove's Northern corner: _____N _____W Accuracy (ft): _____
GPS Point of Grove's Eastern corner: _____N _____W Accuracy (ft): _____
GPS Point of Grove's Western corner: _____N _____W Accuracy (ft): _____
GPS Point of Grove's Southern corner: _____N _____W Accuracy (ft): _____

Datum of GPS Unit: ☐ NAD27 ☐ NAD83 ☐ WGS84 ☐ Smartphone ☐ Unknown

End Time _____ ☐AM / ☐PM

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