Transect	**Ascending CSS (ACSS 1)**			**Comments**	Kenny Pomeroy; Katy Settlemyre; Evan Morey; Max Klaskey		
Garmin Unit	**Y1104 (CSS) Y1105 (grass)**				**elevation was off on 10 (higher)**		
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	CSS	*Rhus integrifolia*	006 Y1104	N33.75415	W118.36510	256	Y
1	CSS	*Rhus integrifolia*					
2	CSS	*Artemisia californica*					
3	CSS	*Rhus integrifolia*					
4	CSS	*Rhus integrifolia*					
5	Grass	grass litter					Y
6	Grass	grass litter					
7	Grass	*Brassica nigra*					
8	Grass	*Brassica nigra*					
9	Grass	*Fœniculum vulgare*					
10	Grass	grass litter	008 Y1105	N33.75407	W118.36510	254	Y

Transect	**Ascending CSS (ACSS 2)**			**Comments**	Maribel Ramos; Katherine Jena; Paola DuCoing; Mystin Mills; Thoaei Nguyen		
Garmin Unit	**Y1102 (CSS) Y1101 (grass)**						
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	CSS	*Rhus integrifolia*	002 Y1102	N33.75420	W118.36522	251	Y
1	CSS	*Rhus integrifolia*					
2	CSS	*Artemisia californica*					
3	CSS	*Artemisia californica*					
4	CSS	*Artemisia californica*					
5	Grass	*various grasses*					Y
6	Grass	*various grasses*					
7	Grass	*Centaurea melitensis*					
8	Grass	*Brassica nigra*					
9	Grass	*Brassica nigra*					
10	Grass	*Brassica nigra*	005 Y1001	N33.75414	W118.36522	252	Y

Transect	**Ascending CSS (ACSS 3)**			**Comments**	Joseph Diminutto; Anthony Sandoval; Paola DuCoing; Mystyn Mills		
Garmin Unit	**Y1104 (CSS) Y1102 (grass)**				**grs middle, CSS asc both sides**		
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	CSS	*Baccharis pilularis*	003 Y1102	N33.75418	W118.36536	249	Y
1	CSS	*Baccharis pilularis*					
2	CSS	*Hazardia squarrosa*					
3	CSS	*Hazardia squarrosa*					
4	dead litter	dead grass mostly					
5	Grass	grass and dead litter					Y
6	CSS	grass					
7	CSS	*Salvia leucophylla*					
8	CSS	*Salvia leucophylla*					
9	CSS	*Salvia leucophylla*					
10	CSS	*Salvia leucophylla*	007 Y1104	N33.75412	W118.36534	249	Y

Transect	**Descending CSS (DCSS 1)**			**Comments**	Paola Ducoing; Mystyn Mills; Thoai Nguyen		
Garmin Unit	**Y1103 (CSS) Y1101 (grass)**						
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	Grass	grass	002 Y1103	N33.75383	W118.36472	261	Y
1	Grass	grass					
2	Grass	*Brassica nigra*					
3	Grass	*Fœniculum vulgare*					
4	CSS	*Hazardia squarrosa*					
5	Grass	grass litter					Y
6	CSS	*Hazardia squarrosa*					**Y**
7	CSS	*Hazardia squarrosa*					
8	Grass	*Centaurea melitensis*					
9	Grass	*Brassica nigra*					
10	Grass	*Centaurea melitensis*	001 Y1101	N33.75389	W118.36469	258	**N**

Transect	**Descending CSS (DCSS 2)**				**Comments**	Joseph Diminutto; Anthony Sandoval; Kenny Pomeroy	
Garmin Unit	**Y1101 (CSS) Y1105 (grass)**						
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	CSS	*Artemisia californica*	003 Y1101	N33.75374	W118.36458	261	Y
1	CSS	*Artemisia californica*					
2	CSS	*Artemisia californica*					
3	CSS	*Artemisia californica*					
4	CSS	*Artemisia californica*					
5	Grass	*Fœniculum vulgare*					Y
6	Grass	*Brassica rapa*					
7	Grass	grass litter					
8	Grass	grass litter					
9	Grass	*Centaurea melitensis*					
10	Grass	grass litter	005 Y1105	N33.7537	W118.36471	220	Y

Transect	**Descending CSS (DCSS 3)**			**Comments**	Max Klasky; Katy Settlemyre; Evan Morey; Brendan Boyes		
Garmin Unit	**Y1104 (CSS) Y1101 (grass)**						
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	CSS	*Artemisia californica*	001 Y1104	N33.75374	W118.36453	264	Y
1	CSS	*Artemisia californica*					
2	CSS	*Artemisia californica*					
3	CSS	*Artemisia californica*					
4	CSS	*Salvia leucophylla*					
5	CSS	*Encelia californica*					Y
6	Grass	grass litter					
7	CSS	*Encelia californica*					**Y**
8	Grass	*Brassica nigra*					
9	Grass	grass litter					
10	Grass	grass litter	004 Y1101	N33.75381	W118.36452	259	Y

Transect	Descending CSS (DCSS 4)			Comments	Jesse Mantia; Thoai Nguyen		
Garmin Unit	Y1103 (CSS) Y1105 (grass)						
Meters	Vegettn*	Species*	WayPoint	Y_LatN	X_LonW	Elev_m	Soil?
0	Grass	*Fœniculum vulgare*	002 Y1103	N33.75377	W118.36447	263	Y
1	Grass	*Fœniculum vulgare*					
2	Grass	*Fœniculum vulgare*					
3	Grass	*Leymus condensatus*					
4	Grass	*Leymus condensatus*					
5	Grass	*Marrubium vulgare*					Y
6	Grass	*Marrubium vulgare*					
7	Grass	*Marrubium vulgare*					
8	Grass	grass					
9	Grass	*Marrubium vulgare*					
10	Grass	*Fœniculum vulgare*	006 Y1105	N33.75381	W118.36450	249	Y

Transect	**Mustard "Forest" (M 1)**			**Comments**	**Dense foliage - black mustard endemic except at 10 meters** Maribel Ramos, David Marks; Mystin Mills		
Garmin Unit	**Y1103 (mustard forest) Y1105 (Peacock Trail)**						
Meters	**Vegettn***	**Species***	**WayPoint**	**Y_LatN**	**X_LonW**	**Elev_m**	**Soil?**
0	shrub or tree	*Juglans californica* (uncertain)	003 Y1103	N33.75453	W118.36333	264	Y
1	CSS	*Encelia californica*					
2	Mustard	*Brassica nigra*					
3	Mustard	*Brassica nigra*					
4	Mustard	*Brassica nigra*					
5	Mustard	*Brassica nigra*					Y
6	Mustard	*Brassica nigra*					
7	Mustard	*Brassica nigra*					
8	Mustard	*Brassica nigra*					
9	Mustard	*Brassica nigra*					
10	Grass	grass litter	009 Y1105	N33.75445	W118.36334	270	Y

* Vegetation: what it is mostly made up of: CSS, grass, mustard, fennel, or exotic trees (pepper trees, acacias, pines)

* Species: identify shrubs, subshrubs, succulents; if you can't, try key; if you still can't, cut off a small representative sample to key out later. With grasslands, just write grasses or fennel or mustard

On Main menu, scroll to Setup, then to Units, then make sure Position Format is hddd.ddddd°, Map Datum is WGS 84, and everything else is meters/metric

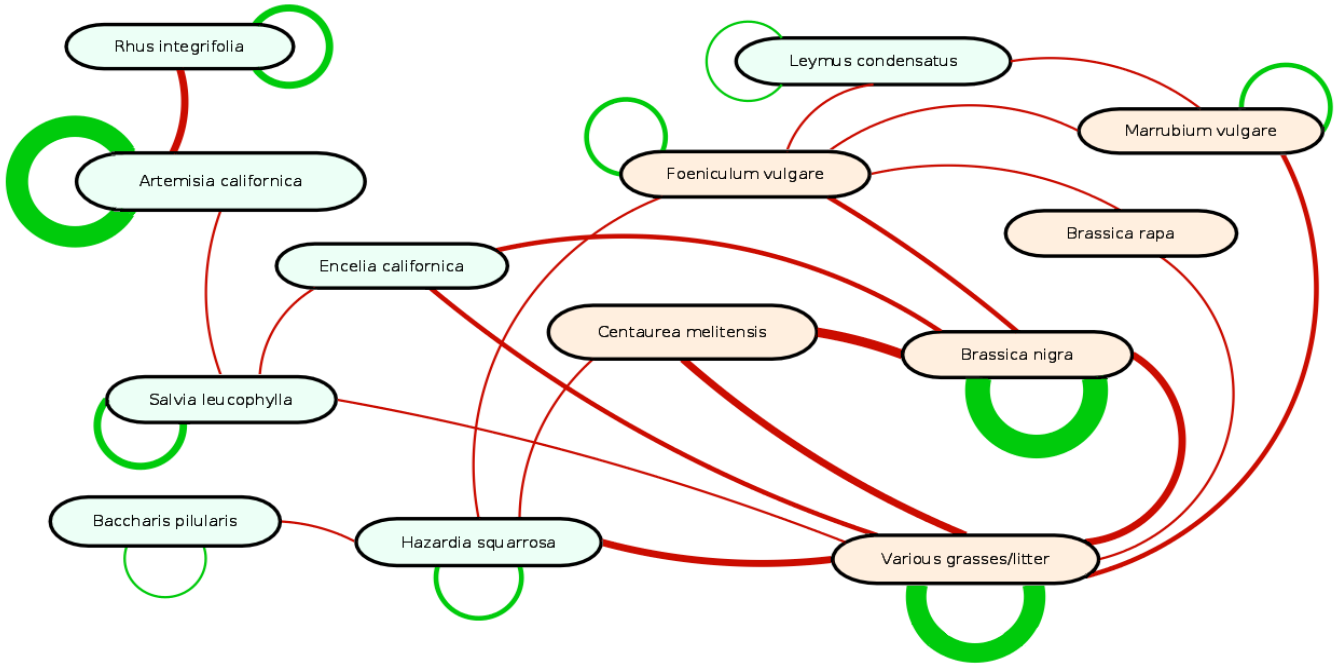
Mark waypoints by going to Main Menu, scrolling to Mark, depressing rocker button, write down Waypoint, latitude, longitude, and elevation, then hit OK

Team members Brendan Boyes; Joseph Diminutto; Paola DuCoing; Katherine Jena; Maxwell Klasky; Jesse Mantia; David Marks; Mystyn Mills; Evan Morey; Thoai Nguyen; Kenneth Pomeroy; Maribel Ramos; Anthony Sandoval

nearest transect neighbor, going from 1 to 10 (usually from CSS into grass)	*Artemisia californica*	*Rhus integrifolia*	*Baccharis pilularis*	*Salvia leucophylla*	*Encelia caliofornica*	*Hazardia squarrosa*	*Leymus condensatus*	*Brassica nigra*	*Brassica rapa*	*Fœniculum vulgare*	*Marrubium vulgare*	*Centaurea melitenis*	*grass/litter*	*Juglans californica???*	counts	cumulative counts
Artemisia californica	9	1		1						1			1		13	13
Rhus integrifolia	2	3											1		6	19
Baccharis pilularis			1			1									2	21
Salvia leucophylla				3	1										4	25
Encelia caliofornica								2					1		3	28
Hazardia squarrosa						2						1	2		5	33
Leymus condensatus							1				1				2	35
Brassica nigra								10		2		2	1		15	50
Brassica rapa													1		1	51
Fœniculum vulgare						1	1		1	2			1		6	57
Marrubium vulgare										1	2		1		4	61
Centaurea melitenis								2					1		3	64
grass/litter				1	1	1		2			1	2	7		15	79
Juglans californica???					1										1	80
counts	11	4	1	5	3	5	2	16	1	6	4	5	17	0		
cumulative counts	11	15	16	21	24	29	31	47	48	54	58	63	80	80		

Species Associations in Palos Verdes, CA

Near intersection of Burma Road, Peacock Valley Trail, and Ailor Trail, ~33.754°N and ~118.365°W
Nearest Transect Neighbor along eight 10 m transects, species identification every 1 m
Transects placed across California sage scrub and exotic grassland ecotone
C.M. Rodrigue's Geography 442 (Biogeography) students, CSULB, 5 November 2011



Red connections are interspecific associations
Green loops are intraspecific (nearest transect neighbor is the same species)

Thickness of lines represents number of associations

native spp.

exotic spp.