## UC Santa Cruz Arboretum Phenology Walk: Datasheets

For data collection instructions please use instructional booklet. Please return completed datasheets to drop box at entrance to Native Plant Garden.

Date:\_\_\_\_\_

Time:

Level of expertise (circle):

No plant/botany experience Studied plants/botany in high school or college Amateur botanist/gardener Professional botanist

Other:\_\_\_\_\_

Corylus con	nuta (Hazelnut)								
	Phenophase								
Replicate Number	Breaking leaf buds	Colored leaves: % leaves colored yellow (partly or fully) Do not include dead leaves.	Flowers and flower buds: # male catkins and female flowers	Open flowers: % open male catkins and female flowers	Pollen release	Fruits	Ripe fruits		
Number 1	Y (circle #):	Y (circle %):	Y (circle #):	Y (circle %):	Y	Y (circle #):	Y (circle %):		
(Marker 6)	Less than 3,	Less than 5%,	Less than 3,	Less than 5%,	Ν	Less than 3,	Less than 5%,		
	3 to 10, 11-100,	5-24%, 25-49%,	3 to 10, 11-100,	5-24%, 25-49%,	?	3 to 10, 11-100,	5-24%, 25-49%,		
	101-1000,	50-74%, 75-94%,	101-1000,	50-74%, 75-94%,		101-1000,	50-74%, 75-94%,		
	1,001 or more	95% or more	1,001 or more	95% or more		1,001or more	95% or more		
	Ν	Ν	Ν	Ν		Ν	Ν		
	?	?	?	?		?	?		
Number 2	Y (circle #):	Y (circle %):	Y (circle #):	Y (circle %):	Y	Y (circle #):	Y (circle %):		
(Marker 8)	Less than 3,	Less than 5%,	Less than 3,	Less than 5%,	Ν	Less than 3,	Less than 5%,		
	3 to 10, 11-100,	5-24%, 25-49%,	3 to 10, 11-100,	5-24%, 25-49%,	?	3 to 10, 11-100,	5-24%, 25-49%,		
	101-1000,	50-74%, 75-94%,	101-1000,	50-74%, 75-94%,		101-1000,	50-74%, 75-94%,		
	1,001 or more	95% or more	1,001 or more	95% or more		1,001or more	95% or more		
	Ν	Ν	Ν	Ν		Ν	Ν		
	?	?	?	?		?	?		
Number 3	Y (circle #):	Y (circle %):	Y (circle #):	Y (circle %):	Y	Y (circle #):	Y (circle %):		
(Marker	Less than 3,	Less than 5%,	Less than 3,	Less than 5%,	Ν	Less than 3,	Less than 5%,		
10)	3 to 10, 11-100,	5-24%, 25-49%,	3 to 10, 11-100,	5-24%, 25-49%,	?	3 to 10, 11-100,	5-24%, 25-49%,		
	101-1000,	50-74%, 75-94%,	101-1000,	50-74%, 75-94%,		101-1000,	50-74%, 75-94%,		
	1,001 or more	95% or more	1,001 or more	95% or more		1,001or more	95% or more		
	N	N	N	N		N	Ν		
	?	?	?	?		?	?		

Encelia californica (California brittlebrush)							
	Phenophase						
<b>Replicate Number</b>	Young leaves	Flowers and flower buds: # flower heads					
Number 1	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,					
(Marker 14)	101-1000, 1,001 to 10,000, more than 10,000	101-1000, 1,001 to 10,000, more than 10,000					
	Ν	Ν					
	?	?					
Number 2	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,					
(Marker 15)	101-1000, 1,001 to 10,000, more than 10,000	101-1000, 1,001 to 10,000, more than 10,000					
	Ν	Ν					
	?	?					
Number 3	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,					
(Marker 17)	101-1000, 1,001 to 10,000, more than 10,000	101-1000, 1,001 to 10,000, more than 10,000					
	Ν	Ν					
	?	?					

Epilobium canum (Hummingbird trumpet)							
	Phenophase						
<b>Replicate Number:</b>	Leaves Flowers and flower bud		Open flowers	Fruits	Ripe fruits		
Number 1	Y	Y (circle #): Less than 3,	Y (circle %): Less than 5%,	<b>Y</b> (circle #): Less than 3,	Y (circle %): Less than 5%,		
(Marker 4)	Ν	3-10, 11-100, 101-1000,	5-24%, 25-49%, 50-74%,	3-10, 11-100, 101-1000,	5-24%, 25-49%, 50-74%,		
	?	more than 1,000	75-94%, 95% or more	more than 1,000	75-94%, 95% or more		
		Ν	Ν	Ν	Ν		
		?	?	?	?		
Number 2	Y	Y (circle #): Less than 3,	Y (circle %): Less than 5%,	<b>Y</b> (circle #): Less than 3,	Y (circle %): Less than 5%,		
(Marker 9) N		3-10, 11-100, 101-1000,	5-24%, 25-49%, 50-74%,	3-10, 11-100, 101-1000,	5-24%, 25-49%, 50-74%,		
	?	more than 1,000	75-94%, 95% or more	more than 1,000	75-94% , 95% or more		
		Ν	Ν	Ν	Ν		
		?	?	?	?		
Number 3	Y	<b>Y</b> (circle #): Less than 3,	Y (circle %): Less than 5%,	<b>Y</b> (circle #): Less than 3,	Y (circle %): Less than 5%,		
(Marker 18)	Ν	3-10, 11-100, 101-1000,	5-24%, 25-49%, 50-74%,	3-10, 11-100, 101-1000,	5-24%, 25-49%, 50-74%,		
	?	more than 1,000	75-94%, 95% or more	more than 1,000	75-94% , 95% or more		
		Ν	Ν	N	Ν		
		?	?	?	?		

Salvia spathacea (Hu	ummingbiro	d sage)			
	Phenophases				
<b>Replicate Number:</b>	Leaves	Flowers and flower buds	Open flowers		
Number 1	Y	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,	<b>Y</b> (circle percent): Less than 5%, 5 to 24%, 25-49%,		
(Marker 1)	Ν	101-1000, more than 1,000	50-74%, 75-94%, 95% or more		
	?	Ν	Ν		
		?	?		
Number 2	Y	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,	<b>Y</b> (circle percent): Less than 5%, 5 to 24%, 25-49%,		
(Marker 5)	Ν	101-1000, more than 1,000	50-74%, 75-94%, 95% or more		
	?	Ν	Ν		
		?	?		
Number 3	Y	<b>Y</b> (circle amount): Less than 3, 3 to 10, 11-100,	<b>Y</b> (circle percent): Less than 5%, 5 to 24%, 25-49%,		
		101-1000, more than 1,000	50-74%, 75-94%, 95% or more		
	?	Ν	Ν		
		?	?		

Phenophase								
Replicate Number:	Leaves	Flower heads	Open flowers	Pollen release	Fruits	Ripe fruits		
Number 1	Y	<b>Y</b> (circle #): Less than 3,	Y (circle %):	Y	<b>Y</b> (circle #): Less than 3,	Y (circle %): Less than 5%,		
(Marker 2)	Ν	3-10, 11-100,	Less than 5%, 5-24%,	Ν	3 to 10, 11-100,	5 to 24%, 25-49%, 50-74%,		
	?	101-1000,	25-49%, 50-74%,	?	101-1000, more than 1,000	75-94%, 95% or more		
		more than 1,000	75-94%, 95% or more		Ν	Ν		
		Ν	Ν		?	?		
		?	?					
Number 2	Y	<b>Y</b> (circle #): Less than 3,	Y (circle %):	Y	Y (circle #): Less than 3,	Y (circle %): Less than 5%,		
(Marker 3)	Ν	3-10, 11-100,	Less than 5%, 5-24%,	Ν	3 to 10, 11-100,	5 to 24%, 25-49%, 50-74%,		
	?	101-1000,	25-49%, 50-74%,	?	101-1000, more than 1,000	75-94%, 95% or more		
		more than 1,000	75-94%, 95% or more		Ν	Ν		
		Ν	Ν		?	?		
		?	?					
Number 3	Y	<b>Y</b> (circle #): Less than 3,	Y (circle %):	Y	<b>Y</b> (circle #): Less than 3,	<b>Y</b> (circle %): Less than 5%,		
(Marker	Ν	3-10, 11-100,	Less than 5%, 5-24%,	Ν	3 to 10, 11-100,	5 to 24%, 25-49%, 50-74%,		
13)	?	101-1000,	25-49%, 50-74%,	?	101-1000, more than 1,000	75-94%, 95% or more		
		more than 1,000	75-94%, 95% or more		Ν	Ν		
		Ν	Ν		?	?		
		?	?					

Vaccinium ovatu	m (California huckleb	erry)					
	Phenophase						
Replicate number:	Breaking leaf buds	Young leaves	Flowers and flower buds	Open flowers	Fruits	Ripe fruits	
Number 1	Y (circle amount):	Y (circle amount):	Y (circle amount):	Y (circle percent):	Y (circle amount):	Y (circle percent):	
(Marker 7)	Less than 3,	Less than 3,	Less than 3,	Less than 5%,	Less than 3,	Less than 5%,	
	3 to 10, 11-100,	3 to 10, 11-100,	3 to 10, 11-100,	5 to 24%, 25-49%,	3 to 10, 11-100,	5 to 24%, 25-49%,	
	101-1000,	101-1000,	101-1000,	50-74%, 75-94%,	101-1000,	50-74%, 75-94%,	
	1,001 to 10,000,	1,001 to 10,000,	1,001 to 10,000,	95% or more	1,001 to 10,000,	95% or more	
	more than 10,000	more than 10,000	more than 10,000	Ν	more than 10,000	Ν	
	Ν	Ν	Ν	?	Ν	?	
	?	?	?		?		
Number 2	Y (circle amount):	Y (circle amount):	Y (circle amount):	Y (circle percent):	Y (circle amount):	Y (circle percent):	
(Marker 11)	Less than 3,	Less than 3,	Less than 3,	Less than 5%,	Less than 3,	Less than 5%,	
	3 to 10, 11-100,	3 to 10, 11-100,	3 to 10, 11-100,	5 to 24%, 25-49%,	3 to 10, 11-100,	5 to 24%, 25-49%,	
	101-1000,	101-1000,	101-1000,	50-74%, 75-94%,	101-1000,	50-74%, 75-94%,	
	1,001 to 10,000,	1,001 to 10,000,	1,001 to 10,000,	95% or more	1,001 to 10,000,	95% or more	
	more than 10,000	more than 10,000	more than 10,000	Ν	more than 10,000	Ν	
	Ν	Ν	Ν	?	Ν	?	
	?	?	?		?		
Number 3	<b>Y</b> (circle amount):	<b>Y</b> (circle amount):	Y (circle amount):	Y (circle percent):	<b>Y</b> (circle amount):	Y (circle percent):	
(Marker 12)	Less than 3,	Less than 3,	Less than 3,	Less than 5%,	Less than 3,	Less than 5%,	
	3 to 10, 11-100,	3 to 10, 11-100,	3 to 10, 11-100,	5 to 24%, 25-49%,	3 to 10, 11-100,	5 to 24%, 25-49%,	
	101-1000,	101-1000,	101-1000,	50-74%, 75-94%,	101-1000,	50-74%, 75-94%,	
	1,001 to 10,000,	1,001 to 10,000,	1,001 to 10,000,	95% or more	1,001 to 10,000,	95% or more	
	more than 10,000	more than 10,000	more than 10,000	Ν	more than 10,000	Ν	
	Ν	Ν	Ν	?	Ν	?	
	?	?	?		?		

**Notes/Questions/Comments:**