

A.M. Shapiro, R. VanBuskirk, G. Kareofelas, and W.D. Patterson. 2003. Phenofaunistics: Seasonality as a Property of Butterfly Faunas. In C.L. Boggs, W.B. Watt and P.R. Ehrlich, eds. *Butterflies: Ecology and Evolution Taking Flight*. University of Chicago Press, Chicago. pp. 111-147.

1997 Quail Ridge, California. Presence /absence data from surveys

0 = absence, 1 = presence; total = total number surveys on which species was present.

	25-Feb	4-Mar	9-Mar	19-Mar	3-Apr	11-Apr	24-Apr	1-May	16-May	28-May	8-Oct	Totals
<i>Thorybes pylades</i>	0	0	0	0	0	0	1	1	1	1	0	4
<i>Erynnis b. lacustra</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Erynnis propertius</i>	0	1	1	1	1	1	1	1	1	1	0	9
<i>Erynnis tristis</i>	0	0	1	1	1	1	1	1	1	1	1	9
<i>Erynnis pacuvius</i>	0	0	0	0	0	0	0	0	0	1	0	1
<i>Pyrgus communis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Heliopetes ericetorum</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hylephila phyleus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Hesperia columbia</i>	0	0	0	0	1	1	1	1	1	1	0	6
<i>Hesperia lindseyi</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atalopedes campestris</i>	0	0	0	0	0	0	0	1	0	0	1	2
<i>Ochlodes sylvanoides</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Ochlodes agricola</i>	0	0	0	0	0	0	0	1	1	0	0	2
<i>Paratrytone melane</i>	0	0	0	0	0	0	0	1	1	0	0	2
<i>Amblyscirtes vialis</i>	0	0	0	0	0	0	1	1	1	1	0	4
<i>Battus philenor</i>	0	0	0	1	1	1	1	1	1	1	0	7
<i>Papilio zelicaon</i>	0	1	1	1	1	1	1	1	1	1	0	9
<i>Papilio rutulus</i>	0	0	0	0	0	0	0	0	1	1	0	2
<i>Papilio eurymedon</i>	0	0	1	0	1	1	1	1	1	1	0	7
<i>Pontia sisymbrii</i>	0	0	1	0	1	0	0	0	0	0	0	2
<i>Pontia protodice</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Pieris napi</i>	1	1	1	1	1	1	0	0	1	0	0	7
<i>Pieris rapae</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Euchloe ausonides</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Anthocaris sara</i>	1	1	1	1	1	1	1	1	1	1	0	10
<i>Colias eurhytheme</i>	1	0	1	0	1	1	1	1	1	0	1	8

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<i>Zerene eurydice</i>	0	0	0	0	1	1	0	0	0	0	0	2
<i>Lycaena xanthoides</i>	0	0	0	0	0	0	0	0	1	0	0	1
<i>Lycaena gorgon</i>	0	0	0	0	0	0	0	0	1	0	0	1
<i>Lycaena helloides</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Habrodais grunus</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Atlides halesus</i>	0	1	0	1	1	0	1	1	0	0	0	5
<i>Satyrium californicum</i>	0	0	0	0	0	0	0	1	1	1	0	3
<i>Satyrium auretteorum</i>	0	0	0	0	0	0	0	1	1	1	0	3
<i>Satyrium tetra</i>	0	0	0	0	0	0	0	0	1	1	0	2
<i>Satyrium saepium</i>	0	0	0	0	0	0	0	0	1	1	0	2
<i>Callophrys dumetorum</i>	0	1	1	1	1	1	1	1	1	0	0	8
<i>Mitoura johnsoni</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Incisalia a. iroides</i>	0	0	0	0	1	1	1	1	1	1	0	6
<i>Strymon melinus</i>	0	0	0	0	0	0	0	0	1	0	0	1
<i>Brephidium exile</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Everes comyntas</i>	0	0	0	0	0	0	0	0	1	0	0	1
<i>Celastrina a. echo</i>	1	1	1	1	1	0	1	1	1	1	0	9
<i>Glaucopsyche lygdamus</i>	0	1	1	1	1	1	1	0	0	0	0	6
<i>Icaricia icarioides</i>	0	0	0	0	0	0	0	1	0	0	0	1
<i>Icaricia acmon</i>	0	1	1	1	1	1	1	1	1	1	0	9
<i>Speyeria callippe</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Speyeria coronis</i>	0	0	0	0	0	0	0	0	1	0	0	1
<i>Thessalia leanira</i>	0	0	0	0	0	0	0	0	1	0	0	1
<i>Charidryas palla</i>	0	0	0	0	1	0	0	0	1	1	0	3
<i>Phyciodes mylitta</i>	0	0	1	1	1	0	0	0	1	1	0	5
<i>Euphydryas chalcedona</i>	0	0	0	0	1	1	1	1	1	1	0	6
<i>Euphydryas editha</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Polygonia satyrus</i>	1	1	0	0	0	0	0	0	0	0	0	2
<i>Nymphalis californica</i>	1	1	1	1	1	0	1	1	0	0	0	7
<i>Nymphalis antiopa</i>	1	1	1	1	1	0	0	0	1	1	0	7
<i>Vanessa virginiensis</i>	0	0	0	0	0	0	1	0	0	0	0	1
<i>Vanessa cardui</i>	0	0	1	1	1	1	0	1	0	0	0	5
<i>Vanessa annabella</i>	0	1	1	1	0	0	1	1	0	0	1	6
<i>Vanessa atalanta</i>	1	1	1	1	1	1	1	1	0	0	1	9

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<i>Junonia coenia</i>	1	1	1	1	1	1	1	1	1	1	1	11
<i>Limenitis lorquini</i>	0	0	0	0	0	0	1	1	1	1	0	4
<i>Adelpha bredowii</i>	0	0	0	0	1	1	1	1	1	1	1	7
<i>Coenonympha tullia</i>	0	1	1	1	1	1	1	1	1	1	1	10
<i>Cercyonis p. boopis</i>	0	0	0	0	0	0	0	0	0	0	0	0
<i>Danaus plexippus</i>	0	0	0	0	1	0	0	0	1	0	0	2