

## ONLINE APPENDIX

Table A1. Raw data census size and the percent of striped individuals early and late in each generation. For each pair of samples, we indicate the population identity, year, whether the population is allopatric (A) or parapatric with a population of the alternate host (P), and the host plant species (C = *Ceanothus*, A = *Adenostoma*). For parapatric populations, we indicate the relative population size, as a percentage of the total area of the parapatric populations. We provide the frequency of the locally maladaptive morph early in each season (maladaptive = less cryptic; unstriped on *Adenostoma*, striped on *Ceanothus*), and the change in the frequency of the locally adaptive morph between early and late sampling periods in each year.

Geography	Population	Year	Host	Relative population size	Census size		% striped morph		% maladaptive morph	Change in % adaptive morph
					early	late	early	late		
A	1	2001	C	n/a	114	82	22	24	22	-2
A	1	2002	C	n/a	114	6	19	0	19	19
A	1	2004	C	n/a	23	6	4	0	4	4
A	5	2002	A	n/a	118	34	81	97	19	16
A	5	2004	A	n/a	88	114	90	92	10	2
A	6	2001	C	n/a	183	85	8	7	8	1
A	6	2002	C	n/a	197	21	12	0	12	12
A	6	2004	C	n/a	71	36	11	8	11	3

A	7	2001	C	n/a	93	119	1	2	1	-1
A	7	2002	C	n/a	45	25	2	0	2	2
A	7	2003	C	n/a	63	49	0	0	0	0
A	7	2004	C	n/a	30	43	2	0	2	2
A	7	2005	C	n/a	74	287	1	1	1	0
A	19	2004	C	n/a	63	25	48	40	48	8
A	38	2004	C	n/a	114	14	4	0	4	4
A	48	2003	A	n/a	62	8	94	100	6	6
A	48	2004	A	n/a	106	60	94	93	6	-1
A	84	2004	C	n/a	61	32	3	9	3	-6
A	116	2004	C	n/a	39	98	3	0	3	3
A	135	2004	A	n/a	115	115	85	97	15	12
P	2	2001	A	66	62	297	65	86	35	21
P	2	2002	A	66	73	18	68	94	32	26
P	2	2002	C	34	29	4	48	75	48	-27
P	2	2003	A	66	75	55	89	93	11	4
P	2	2003	C	34	31	5	65	80	65	-15
P	2	2004	A	66	72	218	88	88	12	0
P	2	2004	C	34	20	25	65	52	65	13
P	2	2005	A	66	36	350	89	86	11	-3

P	4	2001	A	61	64	126	70	83	30	13
P	4	2002	A	61	51	30	86	87	14	1
P	4	2003	A	61	20	10	85	100	15	15
P	6	2001	A	6	91	57	27	21	73	-6
P	6	2002	A	6	23	22	17	59	83	42
P	6	2003	A	6	30	17	23	53	77	30
P	8	2001	A	92	94	123	78	81	22	3
P	8	2002	A	92	84	9	81	78	19	-3
P	10	2001	A	33	110	94	47	48	53	1
P	10	2001	C	67	16	15	19	20	19	-1
P	10	2002	A	33	61	26	34	27	66	-7
P	10	2003	A	33	44	25	52	48	48	-4
P	10	2003	C	67	9	5	11	0	11	11
P	10	2004	C	67	19	12	16	42	16	-26
P	27	2003	C	70	48	6	29	33	29	-4
P	27	2004	A	30	69	13	57	77	43	20
P	27	2004	C	70	167	22	38	50	38	-12
P	75	2002	A	95	10	8	70	100	30	30
P	75	2002	C	5	62	18	69	83	69	-14
P	75	2003	A	95	8	4	100	100	0	0

P	75	2004	A	95	58	11	91	100	9	9
P	75	2004	C	5	69	26	81	88	81	-7
P	78	2002	A	99	20	27	90	96	10	6
P	78	2002	C	1	70	22	69	91	69	-22
P	78	2003	A	99	10	4	90	50	10	-40
P	78	2003	C	1	13	7	69	71	69	-2
P	78	2004	A	99	28	31	82	94	18	12
P	78	2004	C	1	7	24	100	75	100	25
P	126	2003	C	94	25	7	8	14	8	-6
P	126	2004	C	94	11	6	27	33	27	-6
P	127	2003	C		47	14	91	93	91	-2

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