



From Daly &  
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FIG. 1. Map of Hastings Reservation, Carmel Valley, Monterey Co., California. The three study fields and the position of the drift fences are indicated.

TABLE 3. Summary of allele frequencies for five polymorphic loci of adult *Thomomys bottae* in control and experimental fields. Data for 1976 and 1977 are derived from Patton and Feder (1981). Sample sizes are given in Table 1.

Locus	Allele	Year	Control (HTF)				Control (LF)				Experimental			
			1	2	3	4	1	2	3	4	1	2	3	4
<i>Icd</i>		1976	0.17	0.46	0.38	—	0.27	0.39	0.34	—	0.08	0.46	0.46	—
		1977	0.23	0.50	0.27	—	0.11	0.50	0.39	—	0.15	0.54	0.31	—
		1980	0.25	0.40	0.34	—	0.08	0.43	0.49	—	0.21	0.43	0.36	—
		1981	0.19	0.44	0.37	—	0.09	0.42	0.50	—	0.21	0.35	0.45	—
		1982	0.12	0.49	0.38	—	0.11	0.53	0.36	—	0.13	0.38	0.5	—
<i>i-1</i>		1976	1.0	0	—	—	0.94	0.06	—	—	0.94	0.06	—	—
		1977	0.98	0.02	—	—	0.95	0.05	—	—	1.0	0	—	—
		1980	0.99	0.01	—	—	0.95	0.05	—	—	1.0	0	—	—
		1981	0.99	0.01	—	—	0.98	0.02	—	—	0.98	0.02	—	—
		1982	1.0	0	—	—	0.94	0.06	—	—	0.96	0.04	—	—
<i>Trf</i>		1976	0.77	0.23	—	—	0.63	0.38	—	—	0.37	0.63	—	—
		1977	0.80	0.20	—	—	0.56	0.44	—	—	0.52	0.48	—	—
		1980	0.68	0.32	—	—	0.53	0.47	—	—	0.46	0.54	—	—
		1981	0.70	0.30	—	—	0.48	0.52	—	—	0.54	0.46	—	—
		1982	0.69	0.31	—	—	0.58	0.42	—	—	0.65	0.35	—	—
<i>Pgd</i>		1976	0.75	0.25	—	—	0.92	0.08	—	—	0.93	0.07	—	—
		1977	0.88	0.13	—	—	0.96	0.04	—	—	0.96	0.04	—	—
		1980	0.90	0.11	—	—	0.97	0.03	—	—	0.93	0.07	—	—
		1981	0.87	0.13	—	—	0.97	0.03	—	—	0.83	0.17	—	—
		1982	0.84	0.16	—	—	0.95	0.05	—	—	0.91	0.09	—	—
<i>Ada</i>		1976	0.04	0.88	0.04	0.04	0.02	0.92	0.02	0.05	0	0.89	0.09	0.02
		1977	0.13	0.80	0.02	0.05	0.05	0.90	0	0.05	0.02	0.94	0.02	0.02
		1980	0.08	0.84	0.01	0.06	0.03	0.88	0.02	0.07	0.04	0.94	0	0.02
		1981	0.05	0.86	0.01	0.08	0.03	0.87	0.04	0.07	0.01	0.95	0.03	0.01
		1982	0.04	0.84	0.03	0.08	0.06	0.84	0.04	0.06	0	1.0	0	0

TABLE 5.  $F$ -statistics ( $F_{IS}$ ,  $F_{ST}$ ), tests of significance for  $F_{ST}$ , and estimates of the number of immigrants per generation ( $Nm$ ), for adult populations from three fields, based on five loci. Levels of significance are given in Table 4.

Year	$F_{IS}$	$F_{ST}$	$Nm$
1982	0.128	0.014 ns	18
1981	0.071	0.023**	11
1980	0.054	0.024*	10
1977	0.008	0.030 ns	8
1976	-0.170	0.020 ns	12

TABLE 6. A comparison of estimates of the number of immigrants per generation ( $Nm$ ) between local populations of *Thomomys bottae* pocket gophers on Hastings Reservation and between populations sampled from the species range (Patton and Yang, 1977). Methods are Wright's (1965)  $F_{ST}$ , Slatkin's (1981) conditional allele frequencies,  $\hat{p}(i)$ , Slatkin's (1985b) private polymorphism,  $\hat{p}(l)$ , and from trapping records in control and experimental fields.

Method	Estimates of $Nm$ between populations	
	Local	Species range
1. $F_{ST}$	8-18 <sup>1</sup>	0.37-0.63 <sup>2</sup>
2. $\hat{p}(i)$	$\geq 2.5$ <sup>3</sup>	0.25 <sup>3</sup>
3. $\hat{p}(l)$	n.a. <sup>4</sup>	0.86 <sup>2</sup>
4. Observed <sup>1</sup> —		
Control fields	1-6 <sup>1</sup>	n.a.
5. Observed <sup>1,3</sup> —		
Experimental fields	20-40	n.a.

<sup>1</sup> From this study; <sup>2</sup> from Patton and Yang (1977); <sup>3</sup> from Patton and Feder (1981); <sup>4</sup> n.a. = not available.