

Electronic Supporting Information

Urban colonization of invasive species on islands: *Mus musculus* and *Rattus rattus* genetics of establishment on Cozumel island

Gabriela Borja-Martínez¹, Ella Vázquez-Domínguez^{1*}

¹ Departamento de Ecología de la Biodiversidad, Instituto de Ecología, Universidad Nacional Autónoma de México, Coyoacán, Ciudad de México, 04510, México

* Corresponding author: evazquez@ecologia.unam.mx

Tables S1 – S5.

Figures S1 and S2.

Table S1. Data for black rat (*Rattus rattus*) and house mouse (*Mus musculus*) individuals sampled on Cozumel Island, México used in this study. ID per individual, neighborhood sampled, sampling locality coordinates (X, Y), species, sex (F=female, M=male, ?=unknown and/or lacking other information) and reproductive status (J: juvenile, A: adult, ST: scroted testicles, UT: non-scroted testicles, CV: closed vagina, OV: open vagina, BP: mammary glands present, BA: mammary glands absent) are included. Morphological measurements include weight (in grams) and length of the body, tail (in cm), and of foot and left ear (in mm).

ID	Coordinates			Species	Sex	Reproductive status	Morphological measurements				
	Neighborhood	X	Y				Weight (g)	Body length (cm)	Tail length (cm)	Food length (mm)	Ear length (mm)
1	Flores Magón	20°29.855	86°56.630	<i>Rattus rattus</i>	?	-	-	-	-	-	-
2	Miraflores	20°30.706	86°57.040	<i>Mus musculus</i>	M	A, ST	18.5	8.1	8.8	16.22	11.3
3	Landfill (warehouse)	20°22.128	86°54.261	<i>Rattus rattus</i>	M	J, UT	25	8.9	12.7	28.59	15.15
4	Landfill (warehouse)	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	17	7.765	8.84	15.81	13.9
5	Landfill (warehouse)	20°22.128	86°54.261	<i>Rattus rattus</i>	M	J, UT	23	9.5	12.5	28.69	14.99
6	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	F	J, OV, BA	14	6.823	7.93	16.56	12.56
7	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	16	7.746	7.519	16.44	12.56
8	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	M	A, ST	171	15.6	19.9	33.53	21.97
9	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	F	A, OV, BA	111	15.7	22.1	32.29	24.4
10	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	11	7.89	7.61	17.33	12.9
11	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	M	A, ST	100	6.5	7	26	22.6
12	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	F	A, OV, BA	130	16	13.3	32.38	22.56
13	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	M	A, ST	16.5	18.97	8.4	15.87	11.81
14	Centro	20°30.409	86°56.867	<i>Rattus rattus</i>	M	J, UT	46.5	11.86	15.32	30.78	19.7
15	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	?	-	-	-	-	-	-
16	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	M	A, UT	16	7.552	8.182	16.11	12
17	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	F	A, CV, BA	16	7.476	7.675	17.25	13.63
18	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	F	J, OV, BA	9	6.272	6.481	16.01	11.5
19	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	M	A, ST	9.5	6.745	6.984	16.59	12.84
20	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	M	J, UT	30	10.345	14.25	26.6	19.49

21	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	M	A, ST	295	16	23.3	35.38	27.14
22	10 de abril	20°30.430	86°56.894	<i>Rattus rattus</i>	F	A, OV, BA	84	15.3	20.7	34.84	22.9
23	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	F	A, OV, BP	23	7.897	7.915	17.61	13.97
24	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	M	A, ST	31	9.958	13.6	28.26	20.31
25	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	F	A, CV, BA	27	9.094	13.833	28.77	19.54
26	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	J, UT	13	5.934	7.47	15.98	12.99
27	10 de abril	20°30.430	86°56.894	<i>Rattus rattus</i>	M	A, ST	132	18.8	16.5	31.76	23.36
28	Ampliación CTM	20°28.419	86°57.377	<i>Rattus rattus</i>	M	J, UT	22	9.608	12.6	26.72	18.24
29	Centro	20°30.624	86°56.721	<i>Rattus rattus</i>	M	A, ST	132	18.7	20.9	33.99	25
30	Centro	20°30.749	86°56.511	<i>Rattus rattus</i>	F	A, OV, BP	150	18.6	20.8	32.72	22.1
31	Centro	20°30.546	86°56.933	<i>Mus musculus</i>	?	A	12.5	6.984	8.14	16.29	12.9
32	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	?	-	-	-	-	-	-
33	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	F	A, CV, BA	59.5	14.5	17.6	29.62	21.94
34	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	F	A, OV, BA	51	13.26	16	29.51	22.67
35	Centro	20°30.546	86°56.933	<i>Mus musculus</i>	M	A, ST	14	7.309	7.893	16.4	13.04
36	Centro	20°30.624	86°56.721	<i>Rattus rattus</i>	?	-	-	-	-	-	-
37	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	?	-	-	-	-	-	-
38	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	F	J, OV, BA	8	6.057	6.86	16.66	11.29
39	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, UT	14	6.415	7.793	17.1	11.78
40	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	M	A, ST	125	17	21.3	34.29	25.17
41	Miraflores	20°30.706	86°57.040	<i>Rattus rattus</i>	F	A, OV, BA	55	12.14	17.1	28.98	21.85
42	Centro	20°30.546	86°56.933	<i>Mus musculus</i>	?	-	12.5	0.751	7.939	16.4	13.66
43	Centro	20°30.546	86°56.933	<i>Mus musculus</i>	M	A, ST	-	-	-	15.32	11.46
44	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	M	A, UT	16	7.316	8.343	17	13.79
45	10 de abril	20°30.433	86°56.861	<i>Rattus rattus</i>	?	-	-	-	-	-	-
46	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	10	6.295	7.654	17.55	10.92
47	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	F	A, OV, BA	14	7.13	8.057	15.9	12.31
48	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	-	-	-	-	-	-
49	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	10.5	5.988	6.738	15.92	11.75

50	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, UT	8	5.695	6.936	16.68	10.7
51	Landfill	20°22.128	86°54.261	<i>Rattus rattus</i>	F	A, OV, BP	167	17.7	21.7	35.18	25.49
52	10 de abril	20°30.415	86°56.863	<i>Mus musculus</i>	M	A, UT	11.5	7.078	7.504	16.03	11.51
53	Centro	20°30.546	86°56.933	<i>Rattus rattus</i>	M	A, ST	-	14.9	13.2	28.74	21.4
54	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	13	6.303	7.284	16.2	12.28
55	Landfill)	20°22.128	86°54.261	<i>Mus musculus</i>	?	-	-	-	-	-	-
56	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	F	J, OV, BA	10.5	6.622	5.853	15.37	12.07
57	Landfill	20°22.128	86°54.261	<i>Mus musculus</i>	M	A, ST	12	6.534	7.444	17.38	12.22
58	San Gervasio	20°29.595	86°56.072	<i>Rattus rattus</i>	M	A, ST	158	18.6	21.9	32.7	24.52
59	Colonos Cuzamil	20°29.806	86°57.457	<i>Rattus rattus</i>	M	A, ST	43	10.7	17	27.93	20.22
60	San Miguel	20°30.175	86°56.224	<i>Rattus rattus</i>	?	J	-	-	-	24.7	18.99
61	Colonos Cuzamil	20°29.806	86°57.457	<i>Rattus rattus</i>	M	A, ST	124	17.6	22.8	30.92	21.18
62	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	12	7.281	8.1	17.7	13.39
63	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	14.5	7.222	8.488	17.55	13.21
64	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	F	A, OV, BP	15	7.204	7.768	16.32	13.44
65	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	F	A, OV, BA	9	6.357	7.13	15.4	11.75
66	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	F	A, OV, BA	14	6.802	7.852	16.69	12.71
67	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	?	-	-	-	-	-	-
68	Independencia	20°29.938	86°57.457	<i>Rattus rattus</i>	F	A, OV, BA	79	15.5	21.4	31.58	23.08
69	Centro	20°30.749	86°56.511	<i>Rattus rattus</i>	F	A, CV, BA	40	10.38	15.5	29.09	20.54
70	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	M	A, ST	11	6.894	6.913	17.01	12.88
71	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	M	A, ST	7.5	6.036	6.614	15.66	12.06
72	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	M	A, ST	11	6.394	7.128	16.65	12.45
73	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	F	A, OV, BA	8	6.129	7.382	16.82	11.27
74	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	13.5	7.472	7.628	17.24	13.71
75	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	F	A, CV, BP	14	7.247	8.68	17.11	13.44
76	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	F	A, OV, BP	13.5	7.783	8.48	16.06	14.03
77	Colonos Cuzamil	20°29.806	86°57.457	<i>Rattus rattus</i>	F	A, OV, BA	37	10.7	15.6	28.06	19.8
78	Colonos Cuzamil	20°29.806	86°57.457	<i>Rattus rattus</i>	M	A, UT	33.5	11	14.9	28.35	20

79	Centro	20°30.749	86°56.511	<i>Rattus rattus</i>	M	J, UT	28	10.5	13.9	27.73	18.98
80	Centro	20°30.749	86°56.511	<i>Rattus rattus</i>	M	A, ST	107	17.2	20.6	31.39	23.05
81	San Gervasio	20°29.595	86°56.072	<i>Rattus rattus</i>	M	A, ST	130	18.2	22.4	33.99	22.27
82	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	F	A, CV, BP	12	7.406	5.252	15.82	13.38
83	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	M	A, ST	12	7.003	7.41	17.17	12.34
84	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	13	7.419	6.532	16.43	13.63
85	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	10.5	6.576	6.916	16.66	18.54
86	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, UT	12.5	6.258	6.784	15.72	11.59
87	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	J, UT	7	6.121	6.628	15.91	11.18
88	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	F	A, CV, BP	15	8.027	8.658	17.51	14.71
89	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	13	6.965	8.047	16.38	13.64
90	San miguel I	20°29.617	86°57.226	<i>Mus musculus</i>	M	A, ST	15	7.204	8.023	16.28	13.95
91	Colonos Cuzamil	20°29.806	86°57.457	<i>Rattus rattus</i>	M	A, ST	33	10.9	14.31	27.76	18.82
92	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, ST	9.5	6.595	7.188	16.56	13
93	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, UT	7	6.291	6.631	15.68	11.52
94	San Miguel	20°30.175	86°56.224	<i>Mus musculus</i>	M	A, UT	7.5	6.067	7.496	15.8	11.08
95	Emiliano Zapata	20°30.165	86°55.956	<i>Mus musculus</i>	F	A, CV, BP	12	7.311	7.944	16.1	13.2
96	Emiliano Zapata	20°30.165	86°55.956	<i>Mus musculus</i>	F	A, OV, BP	14	6.77	7.584	16.33	13.36
97	Emiliano Zapata	20°30.165	86°55.956	<i>Mus musculus</i>	M	A, ST	12.5	7.107	7.806	15.13	13.03
98	San Gervasio	20°29.638	86°55.842	<i>Rattus rattus</i>	M	A, ST	91	16.7	20.5	34.26	22.93
99	Centro	20°30.749	86°56.511	<i>Rattus rattus</i>	F	A, OV, BA	87	17	22.3	32.66	23.04
100	Emiliano Zapata	20°30.165	86°55.956	<i>Mus musculus</i>	M	A, ST	13	7.529	7.953	16.71	12.22
101	Isla de la pasión	20°32.672	86°52.862	<i>Oryzomys couesi</i>	F	A, OV, BA	92	11.1	14.9	28.28	12.67
102	Town El Cedral	20°22.169	86°59.500	<i>Rattus rattus</i>	F	A, CV, BA	26	9.615	11.862	25.52	18.48
103	Town El Cedral	20°22.169	86°59.500	<i>Rattus rattus</i>	F	A, OV, BP	93.5	16.8	22.8	30.37	22.6
104	Town El Cedral	20°22.133	86°59.556	<i>Rattus rattus</i>	F	A, OV, BA	32	10.793	14.507	28.72	19.2
105	Town El Cedral	20°22.169	86°59.500	<i>Rattus rattus</i>	M	J, UT	28	9.863	12.448	24.48	18.98
106	Town El Cedral	20°22.169	86°59.500	<i>Rattus rattus</i>	M	J, UT	39	11	13.7	28.21	20.53

107	Town El Cedral	20°22.169	86°59.500	<i>Rattus rattus</i>	M	J, UT	-	8.662	10.682	-	19.7
108	Km 11 Transversal	20°26.556	86°51.904	<i>Rattus rattus</i>	F	A, CV, BA	80	15.2	19.3	33.42	22.81

Table S2. Microsatellite loci used for the black rat (*Rattus rattus*) and the house mouse (*Mus musculus*). PCR conditions applied for amplification; fragment size indicated both as reported in the literature and that found for Cozumel individuals.

			Primers		PCR Conditions				Fragment size range	
Species	Locus	Motive	Forward	Reverse	Ta (°C)	MgCl ₂ (mM)	dNTPs (mM)	Primer (mM)	Reported	Coz
<i>Rattus rattus</i>	Rr14	(GT) ₁₅	/5HEX/ CTGGCTGGGACAGTGGAG	CGTCATCACTTCTCAGGACAG	60°	3.0	0.4	0.2	98-131	105-137
	Rr17	(CA) ₂₀	/56FAM/ CGTGTGGCATAGGTGAAGG	TGCAGGAACTGGTAGGACA	60°	2.5	0.4	0.2	209-216	200-218
	Rr21	(GT) ₂₃	/56FAM/ AGTCAGTGTGGAGCAGGCA	GAGAAATTCAAACCTCAACTGC	60°	3.5	0.4	0.2	207-236	218-232
	Rr22	(CA) ₁₄	/5HEX/ CCGTAAGTAGAAGCTGGTTGAG	CTGGTCCTTCTGAGGCTCTCT	60°	3.5	0.4	0.2	338-353	344-370
	Rr67	(GT) ₂₁	/56FAM/ CATCCTGTGACCTGAAGTG	ACATGTAAGGCAGAGGATGG	60°	2.5	0.4	0.2	173-189	176-186
	Rr68	(GT) ₁₂	GACTTCCTATCCAGACAGAG	/5HEX/ CTGAAGCTATAAAGTGAGATCTA	60°	5.0	0.4	0.2	99-137	97-101
	Rr107	(CT) ₂₉ (GT) ₇	/5HEX/ CTGACAAAGGCAGCCAGTG	CATCTGGATGTCTGCAGGATG	60°	3.5	0.4	0.2	261-295	261-307
	Rr114	(CT) ₂₀ (GA) ₂₁	GCTGTGGCTAGAATCCAAGG	/56FAM/ ATGAGGCCTGTGGACGGTA	60°	3.0	0.4	0.2	335-374	344-362
	D16Rat81	(GT) ₂₄	/56FAM/ AAACAGAGCCTTAGCACAGTGGCTT	TATACATGCACATGTGGGCCCAAC	55°	3.5	0.2	0.2*	191	192-194
	D5Rat83	(GT) ₂₂	/5HEX/ ATCACACTTGGAACAGGGAGATGG	ACATTGCCATCCTGAAGACCAAAAC	64°	3.0	0.2	0.2	----	----
<i>Mus musculus</i>	D5Mit149	(GT) ₂₄	/56FAM/TCAGGAAGTGATCTTCCAA CG	ATCTGATGCCTCTGACCTTCA	60°	2.0	0.4	0.25	060-182	124-150
	D6Mit309	(GT) ₁₉	/5HEX/ TATGCTTTTTTCAAATCTGTTGC	CACTAGGAAACCCACCCTGA	60°	3.0	0.4	0.25	072-127	84-110
	D9Mit54	(AC) ₂₀	/5HEX/ TGGGGATACTATGCCTTCTACTG	CAGGTCAAGGCTACTTTTATTTTC	60°	4.0	0.4	0.25*	108-166	118-158
	D13Mit61	(GT) ₂₁	/56FAM/ TGCTCCAATACAACAAGGTCC	CCAGCCAAGGTGTGTTGAC	60°	3.0	0.4	0.25*	157-208	171-196
	D15Mit98	(AC) ₁₇	/56FAM/ AGCACATTCTCCCAACAACC	CAAAACAAGCACAAAACAATACA	60°	3.0	0.4	0.25	120-169	128-154

	EG22992	(GA) ₁₅	/5HEX/ TAGAGCGTGAAGAAGAGGGC	AAGACTGACCAACATTCACGG	60°	2.0	0.4	0.25	209-253	221-285
	PP4A02	-----	/56FAM/ TCCAGTCCCAGTTGCCAGACAC	AACCTGGTCTCAGAGGCTGTCG	60°	2.0	0.4	0.25	253-304	270-286
	PP7B08	-----	/5HEX/ ACTAGCAGAGCCACTTCGGGAG	TCCAGGATCGTCCAGCTCAGG	60°	2.0	0.4	0.25	170-298	196-248
	PP10A02	-----	/5HEX/ AGAAAGCAGCTTACAGTCCAG	TGGATTGGGATGAGCCTTGAAC	60°	2.0	0.4	0.25*	280-329	277-307
	PP10E08	-----	/56FAM/ AGGCTCCACCACGGAGCACCTC	GGAGGTTGAGTCCAGCCTAGTC	60°	2.0	0.4	0.25	343-413	355-397

* Reactions included a 2% of BSA

Table S3. Black rat (*Rattus rattus*) microsatellite genotypes file in genepop format.

Title line:""

R14

R17

R21

R22

R67

R68

R107

R114

D16Rat81

Pop

Pop1, 137137 200214 226232 346346 176184 099099 279283 346346 192192
Pop1, 113115 208212 226226 346346 176176 099099 261261 346360 192192
Pop1, 133133 208208 226230 346346 184184 099099 287289 346346 192192
Pop1, 133137 210212 218226 346346 176184 099099 287289 346346 192192
Pop1, 115115 212212 226230 346346 176184 097099 261283 346358 192192
Pop1, 133133 208212 226228 344346 176176 097099 283289 346346 192192
Pop1, 137137 218218 230232 344346 176176 097099 279289 346346 192192
Pop1, 133133 210210 226226 344346 184184 099099 283283 346360 192192
Pop1, 131131 208214 230230 346346 176184 097097 285301 346358 192192
Pop1, 133133 208214 224228 346346 176184 099099 279281 346356 192192
Pop1, 131135 214214 226226 344346 176186 099099 281283 346356 192192
Pop1, 133133 208208 218226 346346 176184 097099 287289 346346 192192
Pop1, 133133 210212 218232 344346 176184 099099 287289 346346 192192
Pop1, 131131 212214 226226 346346 176176 097099 283289 346360 192192
Pop1, 133133 210214 218230 344344 176184 099099 283289 346346 192194
Pop1, 131133 214214 228232 246346 176184 099101 297297 346358 192194
Pop1, 117117 210212 226232 344348 176184 099099 283283 346362 192192
Pop1, 131131 214214 230232 346344 184184 101101 283283 356356 192192
Pop1, 135135 214214 226232 346346 176176 099099 279287 346346 192192
Pop1, 115131 200212 224224 346346 184184 099099 277279 344360 192194
Pop1, 133133 200214 230232 346346 176176 099099 281283 346346 192194
Pop1, 133137 200214 228232 346346 176186 099099 273281 356356 192194
Pop1, 137137 212214 230232 344344 176184 097099 281289 346362 192194
Pop1, 133133 214214 228232 346346 186186 099099 283307 346356 192192
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Pop1, 115133 212214 230230 346346 176176 099099 279293 346346 192192
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Pop1, 105131 208214 224232 346346 176184 099099 281281 346358 192192

Pop

pop2, 115115 212218 226230 346346 176176 099099 279287 346346 192194
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pop2, 127133 212214 226230 344346 176176 099099 279281 346346 192192
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pop2, 127131 214218 228230 346346 176176 099099 279283 346358 192194

Pop

pop3, 109109 200218 228232 350350 176176 099099 261289 356356 192192
pop3, 109109 200218 230232 346346 176176 099099 261289 356356 192192
pop3, 109109 202202 226232 346346 176184 097097 261261 358358 192194
pop3, 109109 200218 230232 350350 176176 099099 261261 358358 192192
pop3, 109109 200200 228232 346346 176176 099099 261289 358358 192192

Table S4. House mice (*Mus musculus*) microsatellite genotypes file in genepop format.

Title line:""

D5Mit149

D6Mit309

D9Mit54

D13Mit61

D15Mit98

EG22992

PP4A02

PP7B08

PP10A02

PP10E8

Pop

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Pop1, 140150 092092 142154 173173 146146 233235 274280 220220 307307 381385
Pop1, 140150 092092 154154 179179 148148 233235 280284 220220 289307 355379
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Pop1, 140150 106110 120142 173179 140140 231233 274274 196214 303307 381381
Pop1, 140140 108110 120120 179179 140140 235235 274274 220244 289303 381383
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Pop1, 124140 092100 120154 179193 146152 233255 274286 198202 303305 373381
Pop1, 140148 100100 120154 193193 148148 233233 274280 208208 307307 371371
Pop1, 144144 100100 140154 173175 138138 233235 274286 202208 289303 355373
Pop1, 124124 092100 140154 173179 142146 235235 274286 198198 303303 355355
Pop1, 140140 092100 154154 173179 142148 235235 286286 198198 287303 355373
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Pop1, 124138 100100 120154 173179 142148 233233 276286 198208 307307 371371
Pop1, 124124 100100 152154 173179 142146 233235 286286 198198 287307 377389
Pop1, 140140 092100 142154 171193 148152 235235 274274 198220 287307 373373

Pop

Pop2, 136148 092100 142142 171175 130136 233237 270278 196206 289307 355373

Pop2, 138140 094100 120120 171193 148148 235237 274286 214214 289307 355357
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Pop2, 138140 084094 120120 171179 142142 237237 274286 216216 289307 357373
Pop2, 140140 108108 120120 173179 142148 233235 276286 216220 289289 355373
Pop2, 150150 100102 120142 175175 140146 237237 276286 196208 287297 357373
Pop2, 150150 092100 120142 171175 128134 233237 274286 196196 289307 357373
Pop2, 136140 100102 120120 171171 140148 237237 274274 208208 289289 357373
Pop2, 136138 100100 120142 171175 146146 233237 274286 208208 277293 357373
Pop2, 150150 092092 120142 179193 142146 235237 276276 208208 289289 371371
Pop2, 136140 094100 120140 171173 142148 235235 276286 208208 289307 373373
Pop2, 140142 092100 120142 175193 130136 237237 276286 210210 291307 357373
Pop2, 138140 092094 120120 171193 140148 235237 276286 208208 289289 357373
Pop2, 138140 092100 120142 171179 140142 237237 276286 210216 307307 357373
Pop2, 136150 100100 142152 173175 148148 221233 276276 208208 307307 373373
Pop2, 140150 100106 142142 171173 140148 221233 276286 216216 289307 357373
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Pop2, 136138 092094 120142 173179 140148 237237 276276 216216 289307 357373
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Pop2, 138150 092100 152154 191193 148148 233235 274274 220220 289289 355371
Pop2, 138150 100100 152154 191193 140148 233233 274274 200200 287307 355357

Pop

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Pop3, 148150 094100 142142 179179 142146 233233 276276 196208 289289 355355
Pop3, 150150 094100 120142 179193 146146 233233 276276 196196 289289 355371

Table S5. Ancestral bottleneck estimated per genetic cluster for the black rat (*Rattus rattus*) and the house mouse (*Mus musculus*), under different mutational models: IAM (infinite alleles), SMM (stepwise mutations), two-phase model with 10% IAM and 90% SMM, and two-phase model considering 30% IAM and 70% SMM.

	Population	IAM	SMM	TPM (10-90)	TPM (30-70)
<i>Rattus rattus</i>	Coz1	0.10156	0.97559	0.91797	0.71484
	Coz2	0.32617	0.87500	0.78711	0.63281
	Coz3	0.12500	0.52734	0.47266	0.32031
<i>Mus musculus</i>	SanMi1	0.10156	0.71484	0.93457	0.97559
	SanMi2	0.32617	0.63281	0.65234	0.87500
	SanMi3	0.12500	0.32031	0.72168	0.52734

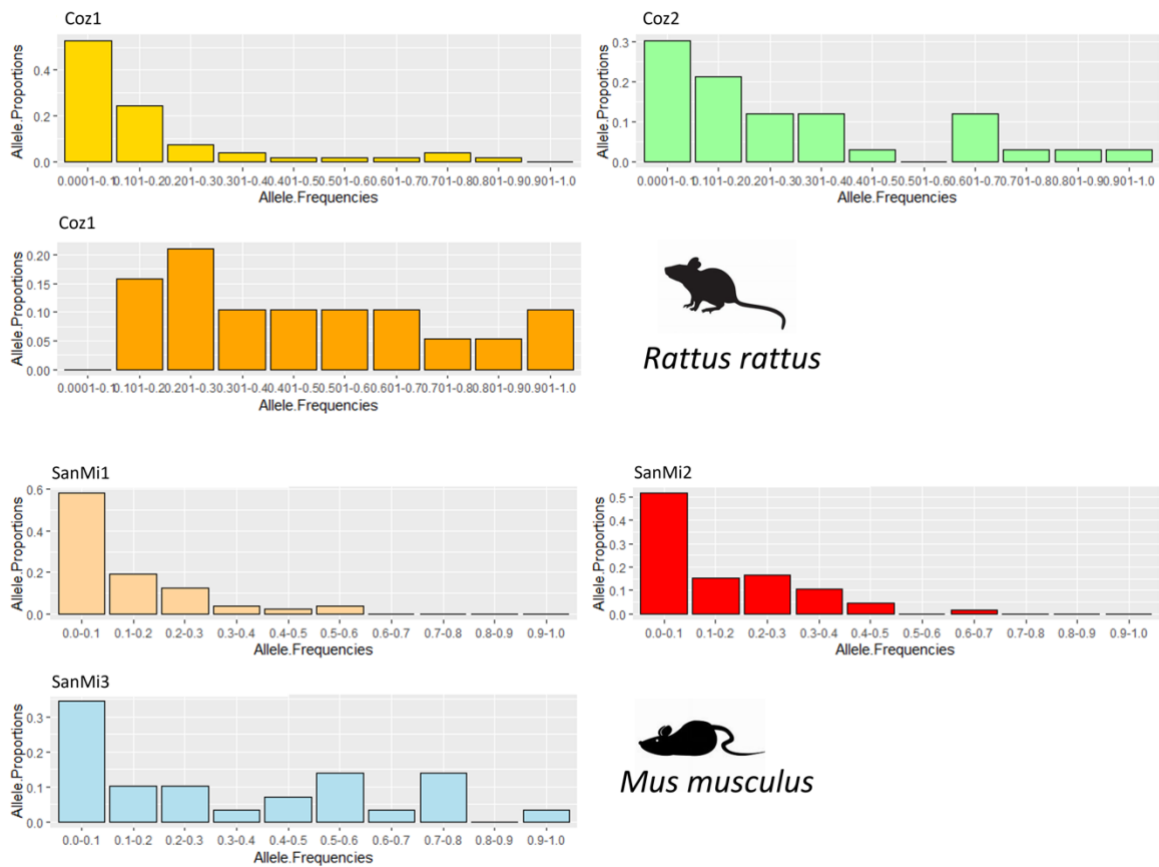


Figure SI. Distribution of allele ratio across 10 classes of allele frequencies to detect contemporary bottlenecks following Luicart et al. (1998). The three genetic clusters obtained for the house mouse *Mus musculus* (SanMi1, SanMi2, SanMi3) and for the black rat *Rattus rattus* (Coz1, Coz2, Coz3) are plotted.

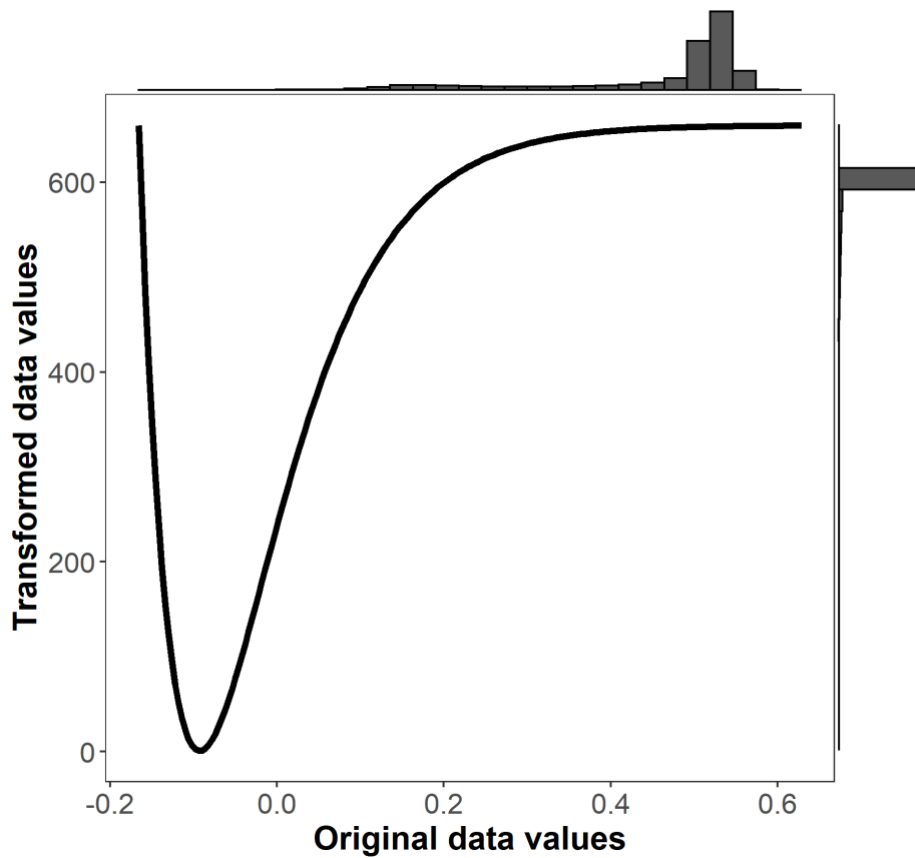


Figure S2. Single surface optimization response curve for the house mice (*Mus musculus*) within the city of San Miguel Cozumel for the normalized vegetation index (NDVI) variable.

References

Luikart G, Cornuet JM (1998) Empirical evaluation of a test for identifying recently bottleneck populations from allele frequency data. *Conserv Biol* 12(1):228-237