

Supplementary material
Conservation Genetics

Population structure of endemic Atlantic Forest spiny rats *Trinomys dimidiatus* and *Trinomys iheringi* (Echimyidae)

Marcelo de Assis Passos Oliveira^{1,2}, Anderson Vilasboa³, Marcione Brito de Oliveira⁴ and Cibele Rodrigues Bonvicino⁴

¹. Laboratório de Microbiologia, Departamento de Biologia Marinha, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, RJ, Brazil.

². Programa de Pós-Graduação em Genética, Instituto de Biologia, Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brasil.

³. Laboratório de Genética Pesqueira e da Conservação, Departamento de Genética, Instituto de Biologia Roberto Alcântara Gomes, Universidade do Estado do Rio de Janeiro, Rio de Janeiro, RJ, Brazil.

⁴. Laboratório de Biologia e Parasitologia de Mamíferos Silvestres Reservatórios, Pavilhão Lauro Travassos, Instituto Oswaldo Cruz, Fundação Oswaldo Cruz, Av. Brasil, 4365, Manguinhos, 21040-360, ou 900, Rio de Janeiro, RJ, Brazil.

Corresponding author: Cibele Rodrigues Bonvicino

Marcelo de Assis Passos Oliveira

e-mail address: cibele.bonvicino@gmail.com

deassis.mpo@gmail.com

Table S1: List of Brazilian analyzed species with mt-Cytb with haplotype (H), field or museum number, GenBank number, locality (Brazilian state, municipality and/or locality), References: 1: Lara et al. 1996; 2: Patterson and Velazco 2008; 3: Vilela et al. 2009; 4: Fabre et al. 2016; 5: Nacif et al. 2022; PS: present study.

Species	H	Field or museum number	GenBank number	Locality	Source
<i>T. dimidiatus</i>	H1	BOCA143, BOCA225, BOCA283, BOCA465, BOCA517, BOCA554, BOCA576, BOCA684, BOCA692, BOCA702, BOCA868, BOCA876, BOCA882, BOCA1069, BOCA1178, BOCA1190, BOCA1207, BOCA1211 MAM 10	PQ073027, PQ073029-073040, PQ073022-073026 U35169	RJ, Serra da Bocaina RJ, Angra dos Reis	PS 1
<i>T. dimidiatus</i>	H2	TTR1234/1238	PQ072905	RJ, Guapimirim	PS
<i>T. dimidiatus</i>	H3	MN48011/LG102	OP277690	RJ, Guapimirim	5
<i>T. dimidiatus</i>	H4	BOCA94	PQ073041	RJ, Serra da Bocaina	PS
<i>T. dimidiatus</i>	H4	MN42798/LG103	OP277691	RJ, Guapimirim	5
<i>T. dimidiatus</i>	H4	TTR0147/0148, TTR932/933, TTR935/936, TTR937/938, TTR959/963, TTR1133/1134, TTR1399/1400, TTR2301/2302, TTR2908/2911, TTR4158/4159, TTR4481/4482, TTR5367/5368, TTR9852/9883	PQ072910, PQ072929-072931, PQ072911, PQ072927, PQ072912-072913, PQ072928, PQ072918, PQ072921, PQ072926	RJ, Guapimirim	PS
<i>T. dimidiatus</i>	H4	MN75823, MN75822, MN75820, MN75819, MN75818, MN75817, MN75816, MN75815, MN75813, MN75812, MN75809, LBCE7123, LBCE7120, LBCE7119, LBCE7118, LBCE7117, LBCE7107, LBCE7096, FS1035, FS1022, MN75832	OP277654-277655, OP277657-277665, OP277668, OP277722-277729, OP277785-277786, OP277800	RJ, Teresópolis	5

Species	H	Field or museum number	GenBank number	Locality	Source
<i>T. dimidiatus</i>	H4	LBCE7109, RF216, RF265, RF297, RF315, RF342, RF351, RF454, RF458, RF58, RF645, RF685, RF728, RF730, RF742, RF748, RF798, RF823, RF837, RF884, RF910, RF989, RF1033, RF1052, RF1062, RF1069, RF1073, RF1085, RF1090, RF1119.	PQ072932, PQ072957, PQ072960-072962, PQ072964, PQ072966, PQ072971-072972, PQ072980, PQ072985, PQ072988-072992, PQ072999, PQ073001- 073002, PQ073006-073007, PQ073009, PQ072935-07936, PQ072938-072943	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H5	ORG160, TTR3059/3065, TTR3109/3111, TTR4094/4095, TTR4110/4111, TTR4727/4728, TTR5339/5342, TTR5368/5301, TTR8806/8817, TTR928/929.	PQ072909, PQ072914-072917, PQ072919-072920, PQ072922-072924	RJ, Guapimirim	PS
<i>T. dimidiatus</i>	H5	RF144	PQ072948	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H6	MN75830, MN75831	OP277802- 277801	RJ, Teresópolis	5
<i>T. dimidiatus</i>	H6	RF996	PQ073010	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H7	MN75810, MN75811, MN75812, LBCE7124, MN75824	OP277667, OP277666, OP277665, OP277721, OP277653	RJ, Teresópolis	5
<i>T. dimidiatus</i>	H7	RF50	PQ072974	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H8	LBCE7092, LBCE7108	OP277731, OP277727	RJ, Teresópolis	5
<i>T. dimidiatus</i>	H8	RF07, RF15, RF21, RF44, RF56, RF57, RF59, RF61, RF85, RF93, RF101, RF106, RF137, RF185, RF187, RF193, RF199, RF207, RF213, RF224, RF240, RF348, RF373, RF420, RF493, RF539, RF551, RF569, RF615, RF644, RF675, RF682, RF752, RF754, RF774, RF775, RF795, RF822, RF856, RF875, RF1148, RF1156	PQ072933, PQ072949, PQ072955, PQ072970, PQ072977, PQ072979, PQ072981-072982, PQ073003, PQ073008, PQ072934, PQ072937, PQ072947, PQ072950-072954, PQ072956, PQ072958-072959, PQ072965, PQ072968-07269, PQ072973, PQ072975-072976, PQ072978, PQ072983-072984, PQ072986-072987, PQ072993, PQ072994-072996, PQ072998, PQ073000, PQ073004-073005, PQ072945-072946	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H9	RF1124	PQ072944	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H10	RF330	PQ072963	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H11	RF352	PQ072967	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H12	RF784	PQ072997	RJ, Teresópolis	PS
<i>T. dimidiatus</i>	H13	PCHB18, PCHB218	PQ073011-073012	RJ, Rio Claro	PS
<i>T. dimidiatus</i>	H14	PCHB21	OP277646	RJ, Rio Claro	5

Species	H	Field or museum number	GenBank number	Locality	Source
<i>T. dimidiatus</i>	H14	PCHB56, PCHB90, PCHB230	PQ073015-073016, PQ073013	RJ, Rio Claro	PS
<i>T. dimidiatus</i>	H15	PCHB319	PQ073014	RJ, Rio Claro	PS
<i>T. dimidiatus</i>	H16	LBCE19085	OP277775	RJ, Rio Claro	5
<i>T. dimidiatus</i>	H17	LBCE19100, LBCE19109	OP277774, OP277772	RJ, Rio Claro	5
<i>T. dimidiatus</i>	H18	LBCE19107, LBCE19157	OP277773, OP277768	RJ, Petrópolis	5
<i>T. dimidiatus</i>	H18	LBCE19102	PQ073017	RJ, Petrópolis	PS
<i>T. dimidiatus</i>	H19	LBCE19129	OP277771	RJ, Petrópolis	5
<i>T. dimidiatus</i>	H19	LBCE19428	PQ073018	RJ, Petrópolis	PS
<i>T. dimidiatus</i>	H20	LBCE19138	OP277770	RJ, Petrópolis	5
<i>T. dimidiatus</i>	H21	LBCE19150	OP277769	RJ, Petrópolis	5
<i>T. dimidiatus</i>	H22	LBCE19158	OP277767	RJ, Petrópolis	5
<i>T. dimidiatus</i>	H23	LBCE19455	PQ073019	RJ, Petrópolis	PS
<i>T. dimidiatus</i>	H24	LBCE19503	PQ073020	RJ, Petrópolis	PS
<i>T. dimidiatus</i>	H25	JDM 3	U35170	RJ, Petrópolis	1
<i>T. dimidiatus</i>	H26	CRB1733	OP277791	RJ, Tijuca	5
<i>T. dimidiatus</i>	H27	CRB1748	OP277790	RJ, Tijuca	5
<i>T. dimidiatus</i>	H28	FS1151	OP277784	RJ, Cachoeira de Macacu	5
<i>T. dimidiatus</i>	H29	BOCA1061	PQ073021	RJ, Serra da Bocaina	PS
<i>T. dimidiatus</i>	H30	BOCA168	PQ073028	RJ, Serra da Bocaina	PS
<i>T. dimidiatus</i>	H31	LBCE18353, LBCE18360, LBCE18361, LBCE18362, LBCE18363	OP277739, OP277738, OP277737, OP277736, OP277735	RJ, Paraty	5
<i>T. dimidiatus</i>	H32	LBCE19061	OP277776	RJ, Paraty	PS
<i>T. dimidiatus</i>	H33	MN62295/LG158	OP277678	RJ, Trindade	5
<i>T. dimidiatus</i>	H34	MN62298/LG165, LG169	OP277676, OP277711	RJ, Trindade	5
<i>T. dimidiatus</i>	H35	MN62298/LG166	OP277675	RJ, Trindade	5
<i>T. dimidiatus</i>	H36	MN62294/LGP66	OP277679	RJ, Tarituba	5
<i>T. dimidiatus</i>	H37	MN69871/PSP20	OP277671	SP, Picinguaba	5
<i>T. dimidiatus</i>	H38	MN69878/PSP41	OP277669	SP, Picinguaba	5
<i>T. dimidiatus</i>	H39	MN 31413	U35168	RJ, Santa Maria Madalena	1
<i>T. dimidiatus</i>	H40	CRB4142	PQ073043	RJ, Nova Friburgo	PS
<i>T. dimidiatus</i>	H40	MN42797, MN42798	OP277693, OP277692	RJ, Nova Friburgo	5

Species	H	Field or museum number	GenBank number	Locality	Source
<i>T. dimidiatus</i>	H41	CRB4143	PQ073044	RJ, Nova Friburgo	PS
<i>T. dimidiatus</i>	H42	LG 3	U35167	RJ, Nova Friburgo	5
<i>T. dimidiatus</i>	H43	MN42796/LG01	OP277694	RJ, Nova Friburgo	5
<i>T. iheringi</i>	H44	ML14; ML104; ML105; ML107; ML185; ML194.	PQ073069, PQ073066-073068, PQ073072-073073	RJ, Ilha Grande, Vila do Abraão	PS
<i>T. iheringi</i>	H44	LBCE16100, LBCE16106, LBCE16110, MN62280, MN66188, MN62302, MN62287, MN62302	OP277766, OP277764, OP277763, OP277686, OP277672, OP277673, OP277683, OP277674	RJ, Ilha Grande, Vila do Abraão	5
<i>T. iheringi</i>	H44	LBCE16127, LBCE16130, LBCE16134, LBCE16137, LBCE16138	OP277760, OP277759, OP277756, OP277754, OP277796	RJ, Ilha Grande-Parnaioca	5
<i>T. iheringi</i>	H45	ML17, ML184	PQ073070-073071,	RJ, Ilha Grande, Vila do Abraão	PS
<i>T. iheringi</i>	H45	MN62284, LGP35, MN62286, MN62288, MN62278, MN62279, MN62267, LBCE16101, LBCE16121,	OP277685, OP381023, OP277684, OP277682, OP277688, OP277687, OP277780, OP277765, OP277762	RJ, Ilha Grande, Vila Dois Rios	5
<i>T. iheringi</i>	H45	MK8, MK9, MK16, MK20, MK24, MK47, MK85, ML12, ML24, ML55, ML250, LGP08	PQ073053, PQ073055, PQ073049-073050, PQ073052, PQ073054, PQ073056, PQ073046, PQ073048, PQ073047, PQ073045	RJ, Ilha Grande, Vila Dois Rios	PS
<i>T. iheringi</i>	H45	LBCE16165	OP277752	RJ, Ilha Grande-Aventureiro	5
<i>T. iheringi</i>	H45	LBCE16179, LBCE16189	PQ073060, PQ073063	RJ, Ilha Grande-Enseada do Bananal	PS
<i>T. iheringi</i>	H46	LBCE16177	PQ073058	RJ, Ilha Grande-Enseada do Bananal	PS
<i>T. iheringi</i>	H47	LBCE16170, LBCE16172	OP277751, OP277749	RJ, Ilha Grande-Aventureiro	5
<i>T. iheringi</i>	H47	LBCE16178, LBCE16180, LBCE16185	PQ073059, PQ073061-07062	RJ, Ilha Grande-Enseada do Bananal	PS
<i>T. iheringi</i>	H47	LBCE16131	OP277758	RJ, Ilha Grande-Parnaioca	5
<i>T. iheringi</i>	H48	LBCE16190	PQ073064	RJ, Ilha Grande-Enseada do Bananal	PS
<i>T. iheringi</i>	H49	LBCE16122, MN62290	OP277761, OP277680	RJ, Ilha Grande-Dois Rios	5
<i>T. iheringi</i>	H49	LBCE16192	PQ073065	RJ, Ilha Grande-Enseada do Bananal	PS
<i>T. iheringi</i>	H50	UFES: ROD-156	KU892762	SP, Carlos Botelho	4
<i>T. iheringi</i>	H50	EDH278, EDH294, EDH300	OP277789, OP277788, OP277787	SP, Carlos Botelho	5
<i>T. iheringi</i>	H51	MN62266, MN62289	OP277781, OP277681	RJ, Ilha Grande-Vila Dois Rios	5
<i>T. iheringi</i>	H52	LBCE16133	OP277757	RJ, Ilha Grande-Parnaioca	5
<i>T. iheringi</i>	H53	LBCE16136	OP277755	RJ, Ilha Grande-Parnaioca	5
<i>T. iheringi</i>	H53	LBCE16158	OP277753	RJ, Ilha Grande-Aventureiro	5

Species	H	Field or museum number	GenBank number	Locality	Source
<i>T. iheringi</i>	H54	LBCE16171, LBCE16175	OP277750, OP277748	RJ, Ilha Grande-Aventureiro	5
<i>T. iheringi</i>	H55	CIT1616	EU544664	SP, Boracéia	3
<i>T. iheringi</i>	H56	MAMME 55	U35171	SP, Ilha de São Sebastião	1
<i>T. iheringi</i>	H57	APC2500, APC2501	PQ073074-073075,	SP, Cunha-Indáia	PS
<i>T. iheringi</i>	H58	FMNH14166,	EU313255	SP, Ilha do Cardoso	2
<i>T. iheringi</i>	H59	FMNH141667	EU313254	SP, Ilha do Cardoso	2
<i>T. iheringi</i>	H60	APC2547	PQ073076	SP, Ilha de São Sebastião	PS

Table S2: Values of genetic diversity index of *T. dimidiatus* and *T. iheringi*, discriminating the locality, number of specimens (N), number of polymorphic sites (S), number of observed haplotypes (K), haplotypic diversity (HD), nucleotide diversity (π) and standard deviation (sd).

Specie	Localities	N	S	K	HD (sd)	π (sd)
<i>T. dimidiatus</i>	RJ, Guapimirim	26	9	4	0.582 (0.059)	0.00296 (0.00027)
<i>T. dimidiatus</i>	RJ, Nova Friburgo	6	13	4	0.800 (0.172)	0.00381 (0.00133)
<i>T. dimidiatus</i>	RJ, Serra da Bocaina	20	1	2	0.395 (0.101)	0.00049 (0.00013)
<i>T. dimidiatus</i>	RJ, Paraty	6	13	2	0.333 (0.215)	0.00380 (0.00245)
<i>T. dimidiatus</i>	RJ, Rio Claro	11	10	4	0.810 (0.130)	0.00356 (0.00117)
<i>T. dimidiatus</i>	RJ, Tijuca	2	1	2	1.000 (0.500)	0.00088 (0.00044)
<i>T. dimidiatus</i>	RJ, Teresópolis	110	19	13	0.679 (0.029)	0.00209 (0.00017)
<i>T. dimidiatus</i>	RJ, Trindade	4	29	4	1.000 (0.500)	0.01288 (0.00628)
<i>T. dimidiatus</i>	SP, Picinguaba	2	31	2	1.000 (0.500)	0.02719 (0.01360)
<i>T. dimidiatus</i>	Total	202	100	43	0.831 (0.019)	0.00870 (0.00075)
<i>T. iheringi</i>	RJ, Ilha Grande-Vila do Abraão	8	4	3	0.607 (0.164)	0.00196 (0.00064)
<i>T. iheringi</i>	RJ, Ilha Grande-Aventureiro	6	6	4	0.867 (0.129)	0.00211 (0.00056)
<i>T. iheringi</i>	RJ Ilha Grande-Vila Dois Rios	34	7	6	0.658 (0.068)	0.00207 (0.00028)
<i>T. iheringi</i>	RJ, Ilha Grande-Enseada do Bananal	8	7	5	0.857 (0.108)	0.00229 (0.0008)
<i>T. iheringi</i>	RJ, Ilha Grande-Parnaioca	8	5	4	0.643 (0.184)	0.00162 (0.00043)
<i>T. iheringi</i>	SP, Carlos Botelho	4	0	1	0.000 (0.000)	0.00000 (0.00000)
<i>T. iheringi</i>	SP, Ilha do Cardoso	2	4	2	1.000 (0.500)	0.00501 (0.00251)
<i>T. iheringi</i>	SP, Cunha - Indáia	2	0	1	1.000 (0.000)	0.00000 (0.00000)
<i>T. iheringi</i>	SP, Ilha de São Sebastião	2	13	2	0.250 (0.500)	0.01142 (0.00571)
<i>T. iheringi</i>	Total	75	44	17	0.813 (0.031)	0.01068 (0.00191)

Table S3: List of *Trinomys* samples and species used as outgroups in divergence time estimation containing species name, GenBank accession number and references.

Specie	GenBank	Reference
<i>T. albispinus</i>	KU892761	Fabre et al. 2016
<i>T. albispinus</i>	OP277798	Nacif et al. 2023
<i>T. setosus</i>	U34856	Lara et al. 1996
<i>T. setosus</i>	AF422923, AF422924	Leite and Patton 2002
<i>T. setosus</i>	KF562095	Tavares et al. 2015
<i>T. setosus</i>	KU892764	Fabre et al. 2016
<i>T. setosus</i>	OP277747, OP277746, OP277744	Nacif et al. 2023
<i>T. paratus</i>	KF562094	Tavares et al. 2015
<i>T. paratus</i>	KY553152, KY553151	Lazar et al. 2017
<i>T. eliasi</i>	U35166	Lara et al. 1996
<i>T. eliasi</i>	KF562079, KF562083, KF562084, KJ707244, KJ707246, KF562089, KF562089	Tavares et al. 2015
<i>T. eliasi</i>	OP277742, OP277734, OP277733, OP277732, OP277633, OP277645	Nacif et al. 2023
<i>T. yonenagae</i>	U35172	Lara et al. 1996
<i>T. yonenagae</i>	KU892765	Galewski et al. 2005
<i>T. mirapitanga</i>	U35173	Lara et al. 1996
<i>T. mirapitanga</i>	OP277689	Nacif et al. 2023
<i>T. moojeni</i>	KX650080	Araújo et al. 2016
<i>T. moojeni</i>	KF562097	Tavares et al. 2010
<i>T. gratiosus</i>	KJ707248,	Tavares et al. 2010
<i>T. gratiosus</i>	OP277648, OP277652, OP277656, OP277799, OP277782-83, OP277720, OP277715-16	Nacif et al. 2023
<i>E. spinosus</i>	EU544667	Vilela et al. 2009
<i>C. laticeps</i>	AF422918	Leite and Patton 2002
<i>P. cuvieri</i>	AJ251403	Stainer et al. 2000
<i>T. apereoides</i>	EU544668	Vilela et al. 2009
<i>O. bridgesi</i>	KJ742651	Upham et al. 2013
<i>C. leucodon</i>	HM544131	Tomasco and Lessa 2011
<i>M. coypus</i>	EU544663	Vilela et al. 2009
<i>I. sinnamariensis</i>	KU892785	Fabre et al. 2016
<i>M. hispidus</i>	KF590696	Upham et al. 2013

Table S4: Pairwise Φ ST values of *T. iheringi* between all localities. Significant p values are represented by asterisks, *: $p < 0.05$ and **: $p < 0.005$.

	1	2	3	4	5	6	7	8	9
1- RJ, Guapimirim									
2- RJ, Teresópolis	0.236**								
3- RJ, Rio Claro	0.766**	0.835**							
4- RJ, Petrópolis	0.641**	0.759**	0.189**						
5- RJ, Tijuca	0.770**	0.840**	0.306	0.038					
6- RJ, Serra da Bocaina	0.823**	0.858**	0.686**	0.577**	0.753*				
7- RJ, Paraty	0.802**	0.865**	0.578**	0.438**	0.601	0.514**			
8- RJ, Trindade	0.739**	0.846**	0.365**	0.369**	0.212	0.427**	0.201*		
9- SP, Picinguaba	0.763**	0.862**	0.433*	0.412*	0.111	0.665*	0.393	-0.193	
10- RJ, Nova Friburgo	0.931**	0.953**	0.921**	0.869**	0.924*	0.948**	0.916**	0.839**	0.82*

Table S5: Molecular Analysis of Variance (AMOVA) for *T. dimidiatus*. SO=Serra dos Órgãos, NSM=North of Serra do Mar, SCSM1= Central-South of Serra do Mar 1

	Variance components	Percentage of variance	Φ Statistics	p
i) Panmixia				
Among populations	6.04	81.07		
Within populations	1.41	18.93	$\Phi_{ST} = 0.81$	10^{-5}
ii) k=2: SO + SCSM1 vs. NSM				
Among groups	18.40	76.76	$\Phi_{CT} = 0.77$	10^{-5}
Among populations/within groups	4.16	17.36	$\Phi_{SC} = 0.75$	10^{-5}
Within populations	1.41	5.89	$\Phi_{ST} = 0.94$	10^{-5}
iii.a) k=3: SO vs. SCSM1 vs. NSM				
Among groups	6.60	69.49	$\Phi_{CT} = 0.69$	0.06
Among populations/within groups	1.49	15.68	$\Phi_{SC} = 0.51$	10^{-5}
Within populations	1.41	14.83	$\Phi_{ST} = 0.85$	10^{-5}
iii.b k=3: SO+ Petrópolis vs. SCSM1 vs. NSM				
Among groups	6.60	65.00	$\Phi_{CT} = 0.65$	0.02
Among populations/within groups	2.15	21.12	$\Phi_{SC} = 0.60$	10^{-5}
Within populations	1.41	13.89	$\Phi_{ST} = 0.86$	10^{-5}
iv) k=1 (NSM excluded)				
Among groups	4.08	74.58		
Within populations	1.39	25.42	$\Phi_{ST} = 0.75$	10^{-5}
v) k=2: SCSM1 vs. SO (NSM excluded)				
Among groups	4.22	61.00	$\Phi_{CT} = 0.61$	0.02
Among populations/within groups	1.32	19.05	$\Phi_{SC} = 0.49$	10^{-5}
Within populations	1.39	20.05	$\Phi_{ST} = 0.80$	10^{-5}

Table S6: Pairwise Φ_{ST} values of *T. iheringi* between all localities. Significant p values are represented by asterisks, *: $p < 0.05$ and **: $p < 0.005$.

	1	2	3	4	5	6	7	8	9
1- RJ, Ilha Grande, Vila do Abraão									
2- RJ, Ilha Grande, Enseada do Bananal	0.30612*								
3- SP, Carlos Botelho	0.97224**	0.94893**							
4- RJ, Ilha Grande, Vila Dois Rios	0.29494*	0.08508	0.95907**						
5- RJ, Ilha Grande, Parnaioca	0.08571	0.33835**	0.96531**	0.46039**					
6- RJ, Ilha Grande, Aventureiro	0.43722**	0.1891	0.96254**	0.47919**	0.24086*				
7- SP, Boracéia	0.95886	0.92396	1	0.95331	0.94848	0.93778			
8- SP, Ilha de São Sebastião	0.9339*	0.90452**	0.61905	0.94797**	0.92447*	0.90725*	-0.14286		
9- SP, Cunha-Indáia	0.96307*	0.93212**	1	0.95372**	0.95379*	0.94684*	1	0.33333	
10- SP, Ilha do Cardoso	0.94725*	0.91661**	0.72414	0.95008**	0.93745*	0.92519*	0.2	0.14286	0.66667

Table S7: Molecular Analysis of Variance (AMOVA) for *T. iheringi*. SP= São Paulo State, IG= Ilha Grande, WIG= West of Ilha Grande, EIG= East of Ilha Grande.

	Variance components	Percentage of variance	Φ Statistics	p
i) Panmixia				
Among populations	6.04	86.62		
Within populations	1.41	13.38	$\Phi_{ST} = 0.87$	10^{-5}
ii) k=2: RJ/SP				
Among groups	14.15	90.95	$\Phi_{CT} = 0.91$	10^{-5}
Among populations/within groups	0.59	3.77	$\Phi_{SC} = 0.42$	10^{-5}
Within populations	0.82	5.28	$\Phi_{ST} = 0.94$	10^{-5}
iii) k=3: WIG/EIG/SP				
Among groups	6.07	80.77	$\Phi_{CT} = 0.81$	10^{-5}
Among populations/within groups	0.62	8.31	$\Phi_{SC} = 0.43$	10^{-5}
Within populations	0.82	10.93	$\Phi_{ST} = 0.89$	10^{-5}
iv) k=2: WIG/WIG (SP samples excluded)				
Among groups	0.08	6.6	$\Phi_{CT} = 0.06$	0.40
Among populations/within groups	0.34	28.21	$\Phi_{SC} = 0.34$	10^{-5}
Within populations	0.79	65.2	$\Phi_{ST} = 0.35$	10^{-5}

Table S8: Results of neutrality tests for *Trinomys dimidiatus* and *T. iheringi* populations. SO= Serra dos Órgãos, SCSM1 = South Center of Serra do Mar 1, NSM = North of Serra do Mar, IG = Ilha Grande, SP= São Paulo.

	<i>Trinomys dimidiatus</i>			<i>Trinomys iheringi</i>	
Statistics	SO	SCSM1	NSM	IG	SP
Sample size	136	59	7	64	11
Tajima's D	-1.35218	-1.58648	-1.64323	-0.22508	-1.22421
Tajima's D p-value	0.0673	0.0349	0.0101	0.4692	0.1134
FS	0.19406	-6.19054	1.70598	-1.21384	-0.62307
FS p-value	0.5894	0.0485	0.7761	0.3257	0.3413

Table S9: Percent contribution of environmental variables to the potential distribution of *Trinomys dimidiatus* and *T. iheringi* SDM for Present, Last Inter-glacial (LIG, ~ 120,000 – 140,000 years) and Last Maximum Glacial (LGM, ~22 kya), tested by Jackknife test.

Variable	Percent contribution for Present	
	<i>T. dimidiatus</i>	<i>T. iheringi</i>
BIO1	2.8	-
BIO3	46.6	47.7
BIO4	38.4	-
BIO7	-	2
BIO9	-	2.3
BIO13	6.2	41.5
BIO15	-	6.4
BIO19	6.1	-