

Table S1. Taxonomic sampling of *Oligoryzomys* used in the present study.

Taxon	Locality	Locality legend in the map	Vouchers' Museum and (Field) Numbers	GenBank or (BOLD) Accession Number	Pseudogene	Reference
<i>O. delicatus</i>	French Guiana, Macouria, Bellefontaine	3	MHNG-1990.038 (M911_JAG)	MN015516		present paper
<i>O. delicatus</i>	French Guiana, Macouria, crique Brémont	4	MHNG-1990.050 (M908_JAG)	MN015519		present paper
<i>O. delicatus</i>	French Guiana, Macouria, crique Brémont	4	MHNG-1990.049 (M915_JAG)	MN015518		present paper
<i>O. delicatus</i>	French Guiana, Remire-Montjoly, Remire	5	MHNG-1979.040 (T6120)	MN015502		present paper
<i>O. delicatus</i>	French Guiana, Macouria, Paramana	6	MHNG-1990.022 (M902_JAG)	MN015517		present paper
<i>O. flavescens</i>	Brazil, São Paulo, Pedreira	47	MN53275 (CRB1405)	MF951064		da Cruz & Weksler, 2018
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Aratiba	53	MN63873 (CRB1932)	MN019568		present paper
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Aratiba	53	MN62161 (CRB1990)	MN019569		present paper
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7430 (JR467)	GU938892	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7428 (JR258)	GU938893	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7429 (JR259)	GU938894	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7426 (JR209)	GU938985	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7425 (JR202)	GU938986	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7427 (JR210)	GU938987	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Alegrete	62	UFPB7431 (JR332)	GU938988	*	Müller et al., 2013
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Imbé	64	(LF1065)	MN015486		present paper
<i>O. flavescens</i>	Brazil, Rio Grande do Sul, Imbé	64	(LF1016)	MN015454		present paper
<i>O. fulvescens</i>	Mexico, Yucatan, Laguna Becanchen	not plotted	ROM96523	JQ601044		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 11 Km S of Candelaria	not plotted	ROM-ASK2505	JF491724		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 11 Km S of Candelaria	not plotted	ROM-ASK233	JF491725		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 16 Km N of Champoton	not plotted	ROM96002	JF491719		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 3.7 Km Se of Chekubul	not plotted	ROM96401	JF491693		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 39 Km S of Candelaria	not plotted	ROM-ASK2511	JF491692		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 52 Km Sw of Champoton	not plotted	ROM95930	JF491694		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 52 Km Sw of Champoton	not plotted	ROM95929	JF491696		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 52 Km Sw of Champoton	not plotted	ROM95928	JF491698		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 52 Km Sw of Champoton	not plotted	ROM95932	JF491718		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 52 Km Sw of Champoton	not plotted	ROM95931	JF491721		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 9.5 Km S of Constitucion	not plotted	ROM-ASK2618	JF491695		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 9.5 Km S of Constitucion	not plotted	ROM-ASK2598	JF491705		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, 9.5 Km S of Constitucion	not plotted	ROM-ASK2619	JF491722		GenBank
<i>O. fulvescens</i>	Mexico, Campeche, La Valeta	not plotted	ROM95211	EU095456		Borisenko et al. 2008
<i>O. fulvescens</i>	Mexico, Campeche, La Valeta	not plotted	ROM95212	JF491701		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km N of Berriozabal	not plotted	ROM-ASK666	JF491689		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km N of Berriozabal	not plotted	ROM-ASK688	JF491714		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km N of Berriozabal	not plotted	ROM-ASK687	JF491715		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km Sw of Ixtapa	not plotted	ROM97572	JF491690		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km Sw of Ixtapa	not plotted	ROM97613	JF491707		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km Sw of Ixtapa	not plotted	ROM97612	JF491709		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km Sw of Ixtapa	not plotted	ROM97610	JF491711		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km Sw of Ixtapa	not plotted	ROM97609	JF491712		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 12 Km Sw of Ixtapa	not plotted	ROM97608	JF491713		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 6.6 Km S of Palenque By Road	not plotted	ROM-ASK78	JF491699		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 6.6 Km S of Palenque By Road	not plotted	ROM-ASK77	JF491700		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 9 Km S of Palenque By Road	not plotted	ROM-ASK60	JF491691		GenBank
<i>O. fulvescens</i>	Mexico, Chiapas, 9.5 Km S of Palenque By Road	not plotted	ROM-ASK58	JF491723		GenBank
<i>O. fulvescens</i>	Mexico, Tabasco, 27 Km S of El Triunfo, 14 Km E of El Triunfo	not plotted	ROM-ASK2526	JF491702		GenBank
<i>O. fulvescens</i>	Mexico, Tabasco, 27 Km S of El Triunfo, 14 Km E of El Triunfo	not plotted	ROM-ASK2522	JF491704		GenBank
<i>O. fulvescens</i>	Mexico, Tabasco, 3.8 Km Sw of Ruinas Acalan	not plotted	ROM-ASK162	JF491708		GenBank
<i>O. fulvescens</i>	Mexico, Tabasco, 5 Km N of Jonuta	not plotted	ROM96215	JF491697		GenBank
<i>O. fulvescens</i>	Mexico, Tamaulipas, 4 Km W of La Carbonera, 46.5 Km E of San Fernando	not plotted	ROM96127	JF491717		GenBank
<i>O. fulvescens</i>	Mexico, Tamaulipas, 4 Km W of La Carbonera, 46.5 Km E of San Fernando	not plotted	ROM96126	JF491720		GenBank
<i>O. fulvescens</i>	Mexico, Tamaulipas, 5 Km N of Soto La Marina	not plotted	ROM96111	JF491686		GenBank

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<i>O. fulvescens</i>	Mexico, Veracruz, 18 Km Nw of Teocelo	not plotted	ROM-YHM233	JF491716		GenBank
<i>O. fulvescens</i>	Mexico, Veracruz, 300 M Nw of Cascadas De Texolo, 1.5 Km Se of Xico	not plotted	ROM-YHM190	JF491710		GenBank
<i>O. fulvescens</i>	Mexico, Yucatan, 1.5 Km N of Labna	not plotted	ROM96482	JF491703		GenBank
<i>O. fulvescens</i>	Mexico, Yucatan, Laguna Becanchen	not plotted	ROM-FN30424	JF491685		GenBank
<i>O. fulvescens</i>	Mexico, Yucatan, Laguna Becanchen	not plotted	ROM-FN30423	JF491687		GenBank
<i>O. fulvescens</i>	Mexico, Yucatan, Laguna Becanchen	not plotted	ROM-FN30422	JF491688		GenBank
<i>O. fulvescens</i>	Mexico, Yucatan, Laguna Becanchen	not plotted	ROM-FN30461	JF491706		GenBank
<i>O. mottogrossae</i>	Brazil, Mato Grosso, São José do Xingú	16	(CRB2788)	MN019601		present paper
<i>O. mottogrossae</i>	Brazil, Mato Grosso, São José do Xingú	16	(CRB2793)	MN019602		present paper
<i>O. mottogrossae</i>	Brazil, Goiás, Teresina de Goiás, Fazenda Vão dos Bois	21	(CRB708)	MN019603		present paper
<i>O. mottogrossae</i>	Brazil, Goiás, Teresina de Goiás, Fazenda Vão dos Bois	21	(CRB733)	MN019604		present paper
<i>O. mottogrossae</i>	Brazil, Goiás, Teresina de Goiás, Fazenda Vão dos Bois	21	(CRB747)	MN019605		present paper
<i>O. mottogrossae</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantinzinho	23	MN36363	MN015497		present paper
<i>O. mottogrossae</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantinzinho	23	MN36746	MF951063		da Cruz & Weksler, 2018
<i>O. mottogrossae</i>	Brazil, Mato Grosso do Sul, Corumbá	30	(LBCE5718)	MF951056		da Cruz & Weksler, 2018
<i>O. mottogrossae</i>	Brazil, Mato Grosso do Sul, Corumbá	30	(LBCE5689)	MN019617		present paper
<i>O. mottogrossae</i>	Brazil, Mato Grosso do Sul, Corumbá	30	(LBCE5690)	MN019618		present paper
<i>O. mottogrossae</i>	Brazil, Mato Grosso do Sul, Corumbá	30	(LBCE5720)	MN019619		present paper
<i>O. mottogrossae</i>	Brazil, Mato Grosso do Sul, Cassilândia	31	(LBCE12111)	MN019606		present paper
<i>O. mottogrossae</i>	Brazil, Mato Grosso do Sul, Corumbá	30	(LBCE5719)	MF951057		da Cruz & Weksler, 2018
<i>O. messorius</i>	Venezuela, Amazonas, Pozon, 50 Km NE of Puerto Ayacucho	1	ROM10782	EU095455		Borisenko et al. 2008
<i>O. messorius</i>	Venezuela, Amazonas, Pozon, 50 Km Ne of Puerto Ayacucho	1	ROM107871	JF491684		GenBank
<i>O. messorius</i>	Guyana, Upper Takutu-Upper Essequibo, 5 Km Se of Surama	2	ROM103349	JF491726		GenBank
<i>O. messorius</i>	Guyana, Upper Takutu-Upper Essequibo, 5 Km Se of Surama	2	ROM103348	JF491727		GenBank
<i>O. messorius</i>	French Guiana, Saul, znieff Coudreau	7	(M829_JAG)	MN015520		present paper
<i>O. messorius</i>	Brazil, Roraima, Caracará	9	MN70475 (JAO2135)	MN015513		present paper
<i>O. messorius</i>	Brazil, Amapá, Porto Grande, Horto Matapi	11	IEPA2481 (AM48)	MF951058		da Cruz & Weksler, 2018
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76192 (FO05)	MN015482		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76194 (FO07)	MN015501		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76197 (FO10)	MN015449		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76200 (FO13)	MN015476		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76203 (FO16)	MN015473		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76205 (FO18)	MN015437		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76206 (FO19)	MN015504		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76207 (FO20)	MN015445		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76209 (FO22)	MN015463		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76210 (FO23)	MN015462		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76212 (FO25)	MN015484		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76213 (FO26)	MN015434		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76216 (FO29)	MN015515		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76217 (FO30)	MN015464		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76223 (FO36)	MN015477		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76224 (FO39)	MN015480		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76226 (FO43)	MN015429		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76227 (FO45)	MN015446		present paper
<i>O. microtis</i>	Brazil, Tocantins, São Sebastião	13	MN76229 (FO47)	MN015438		present paper
<i>O. microtis</i>	Brazil, Tocantins, Couto Magalhães	14	MN76925 (PQ23)	MN015457		present paper
<i>O. microtis</i>	Brazil, Tocantins, Couto Magalhães	14	MN76926 (PQ24)	MN015461		present paper
<i>O. microtis</i>	Brazil, Amazonas, Manacapuru	10	MN84349 (CRB3004)	MF951059		da Cruz & Weksler, 2018
<i>O. microtis</i>	Brazil, Amazonas, Manacapuru	10	MN84349 (CRB3004)	MN032106	*	present paper
<i>O. moojeni</i>	Brazil, Tocantins, Lajeado	15	MN76752 (LJ34)	MN015491		present paper
<i>O. moojeni</i>	Brazil, Tocantins, Lajeado	15	MN76753 (LJ35)	MN015456		present paper
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantinzinho	23	MN36411	MN015471		present paper
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantinzinho	23	MN36413	MN015467		present paper

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<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36414	MN015508	present paper
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36357	MF951062	da Cruz & Weksler, 2018
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36361	MN015478	present paper
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36367	MN015466	present paper
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36345	MN015506	present paper
<i>O. moojeni</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36356	MN015442	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50287 (CRB1012)	MF951070	da Cruz & Weksler, 2018
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50314 (CRB1018)	MF951068	da Cruz & Weksler, 2018
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50287 (CRB1022)	MN015583	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50318 (CRB1054)	MN031012	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50316 (CRB1055)	MN019570	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50319 (CRB1056)	MN019571	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50320 (CRB1057)	MF951071	da Cruz & Weksler, 2018
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50308 (CRB902)	MN019572	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50378 (CRB937)	MN019573	present paper
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50309 (CRB948)	MF951069	da Cruz & Weksler, 2018
<i>O. moojeni</i>	Brazil, Goiás, Cavalcante, Parque Nacional da Chapada dos Veadeiros	25	MN50311 (CRB979)	MN019574	present paper
<i>O. moojeni</i>	Brazil, Goiás, Uruaçu	28	MN37250	MN015469	present paper
<i>O. nigripes</i>	Brazil, Goiás, Colinas do Sul, Rio Tocantizinho	23	MN36362	MN015458	present paper
<i>O. nigripes</i>	Brazil, Goiás, Caldas Novas	29	(OT5068)	MN015475	present paper
<i>O. nigripes</i>	Brazil, Espírito Santo, Santa Teresa	37	MN74932 (SVS163)	MN015595	present paper
<i>O. nigripes</i>	Brazil, Espírito Santo, Santa Teresa	37	(SVS168)	MN019624	present paper
<i>O. nigripes</i>	Brazil, Espírito Santo, Santa Teresa	37	(SVS191)	MN019625	present paper
<i>O. nigripes</i>	Brazil, Espírito Santo, Santa Teresa	37	(SVS193)	MN019626	present paper
<i>O. nigripes</i>	Brazil, Espírito Santo, Santa Teresa	37	MN78381 (SVS221)	MN019594	present paper
<i>O. nigripes</i>	Brazil, Espírito Santo, Santa Teresa	37	(SVS228)	MN019627	present paper
<i>O. nigripes</i>	Brazil, Minas Gerais, Itatiaiuçu	38	MN80447 (MW311)	MN015431	present paper
<i>O. nigripes</i>	Brazil, Minas Gerais, Itatiaiuçu	38	MN80442 (MW306)	MN015453	present paper
<i>O. nigripes</i>	Brazil, Minas Gerais, Pouso Alto	39	MN78761 (JFV0078)	KF815406	Vilela et al. 2014
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Nova Friburgo	40	MN81644 (CRB1454)	MN015585	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Nova Friburgo	40	(LBCE1827)	MN019613	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Nova Friburgo	40	(LBCE1828)	MN019614	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Nova Friburgo	40	(LBCE1845)	MN019615	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Nova Friburgo	40	(LBCE1848)	MN019616	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sapucaia	41	MN60622 (LBCE1459)	MN019585	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sapucaia	41	MN60623 (LBCE1460)	MN019586	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sapucaia	41	MN60629 (LBCE1466)	MN019587	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sapucaia	41	MN60633 (LBCE1470)	MN019588	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1356)	MN019607	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1357)	MN019608	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1409)	MN015587	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1456)	MN019609	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	MN60637 (LBCE1474)	MN015588	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1658)	MN019610	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1660)	MN019611	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1661)	MN019612	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1849)	MN015589	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Sumidouro	42	(LBCE1850)	MN015590	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Cachoeiras de Macacú	43	(HGB-REGUA014)	MN015450	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Teresópolis	44	MN67472 (FS10-88)	MN015485	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Teresópolis	44	MN76063 (EDH238)	MN015494	present paper
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Parque Nacional da Serra dos Orgaos	45	MN71983 (LBCE6468)	MF951065	da Cruz & Weksler, 2018
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Parque Nacional da Serra dos Orgaos	45	MN71984 (LBCE6469)	MF951073	da Cruz & Weksler, 2018
<i>O. nigripes</i>	Brazil, Rio de Janeiro, Parque Nacional da Serra dos Orgaos	45	MN71985 (LBCE6470)	MF951066	da Cruz & Weksler, 2018

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<i>O. nigripes</i>	Brazil, Rio de Janeiro, Pinheiral	46	MN69828 (CEG079)	MN015441		present paper
<i>O. nigripes</i>	Brazil, São Paulo, Pedreira	47	MN66148 (CRB1247)	MN019575		present paper
<i>O. nigripes</i>	Brazil, São Paulo, Pedreira	47	MN66154 (CRB1407)	MN019576		present paper
<i>O. nigripes</i>	Brazil, São Paulo, Pedreira	47	MN62669 (CRB1408)	MN015584		present paper
<i>O. nigripes</i>	Brazil, São Paulo, Pedreira	47	MN66155 (CRB1414)	MN019577		present paper
<i>O. nigripes</i>	Brazil, São Paulo, Pedreira	47	MN66222 (CRB1422)	MF951067		da Cruz & Weksler, 2018
<i>O. nigripes</i>	Brazil, São Paulo, Pedreira	47	MN66157 (CRB1425)	MN019578		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Usina Hidrelétrica Quebra-Queixo	48	FURB6884	GU938971	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Santa Catarina, Parque Nacional da Serra do Itajaí	49	FURB9600	GU938969	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN77838 (LBCE9603)	MN015592		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN77842 (LBCE9693)	MN015593		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN77852 (LBCE9900)	MN015594		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN69922 (LBCE6922)	MN015591		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN69919 (LBCE6902)	MN019589		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN69921 (LBCE6914)	MN019590		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN69932 (LBCE8057)	MN019591		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN69934 (LBCE8089)	MN019592		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Jaborá	50	MN69935 (LBCE8092)	MN019593		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Ita	51	MN62122 (CRB1927)	MN019580		present paper
<i>O. nigripes</i>	Brazil, Santa Catarina, Ita	51	MN62158 (CRB1984)	MN019581		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Nonoi	52	MN83064 (ARB708)	MN015447		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Aratiba	53	MN62108 (CRB1909)	MN019579		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Aratiba	53	(CRB1973)	MN015586		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Aratiba	53	MN62159 (CRB1985)	MN019582		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Aratiba	53	(CRB1986)	MN019600		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Aratiba	53	MN62162 (CRB1995)	MN019583		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Aratiba	53	MN62165 (CRB1999)	MN019584		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Entre Rios do Sul	54	MN83057 (ARB683)	MN015496		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Erechim	55	UFPB7434 (JR409)	GU938975	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Santa Catarina, Florianópolis	56	(LF2062)	MN015499		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Ronda Alta	57	UFPB7432 (JR337)	GU938976	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Floresta Nacional de Passo Fundo	58	UFPB7446 (DG006)	GU938876	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Floresta Nacional de Passo Fundo	58	UFPB7443 (DG000)	GU938877	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Floresta Nacional de Passo Fundo	58	UFPB7445 (DG005)	GU938878	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Floresta Nacional de Passo Fundo	58	UFPB7444 (DG001)	GU938886	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Floresta Nacional de Passo Fundo	58	UFPB7433 (JR339)	GU938979	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Cambara do Sul	59	(LMT298)	MN019620		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Cambara do Sul	59	(LMT302)	MN019621		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Cambara do Sul	59	(LMT303)	MN019622		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Cambara do Sul	59	(LMT311)	MN019623		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7442 (OLN31)	GU938970	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7585 (OPN61)	GU938972	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7584 (OPN59)	GU938973	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7583 (OPN58)	GU938974	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7579 (ON1)	GU938978	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7580 (OPN52)	GU938980	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7581 (OPN55)	GU938981	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7586 (OPN64)	GU938982	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7587 (OPN87)	GU938983	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, São Francisco de Paula	60	UFPB7582 (OPN57)	GU938984	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7441 (JR518)	GU938887	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7436 (JR425)	GU938888	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7437 (JR426)	GU938889	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7438 (JR457)	GU938890	*	Müller et al., 2013

Table S1. Taxonomic sampling of *Oligoryzomys* used in the present study.

<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7439 (JR458)	GU938898	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7440 (JR459)	GU938899	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Terra de Areia	61	UFPB7435 (JR363)	GU938977	*	Müller et al., 2013
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Osório	63	(LF1035)	MN015514		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Osório	63	(LF1074)	MN015440		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Osório	63	(LF989)	MN015493		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Osório	63	MN37616 (LF976)	MN015483		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Mostardas	65	MN37633 (LF2095)	MN015432		present paper
<i>O. nigripes</i>	Brazil, Rio Grande do Sul, Estacao Ecologica do Taim	66	MCNU4154 (TAIM29)	(BRMAM557-15)		BOLD
<i>O. rupestris</i>	Brazil, Goiás, Alto Paraíso	24	MN50322 (CRB1079)	MF951072		da Cruz & Weksler, 2018
<i>O. rupestris</i>	Brazil, Goiás, Alto Paraíso	24	MN50325 (CRB1109)	MN019595		present paper
<i>O. rupestris</i>	Brazil, Bahia, Itacê	36	(LG0214)	MN015503		present paper
<i>Oligoryzomys</i> sp. n.	Brazil, Roraima, Pacaraima	8	MPEG34779	MN015439		present paper
<i>Oligoryzomys</i> sp. n.	Brazil, Roraima, Pacaraima	8	MPEG34802	MN015468		present paper
<i>O. stramineus</i>	Brazil, Goiás, Teresina de Goiás, Fazenda Vão dos Bois	21	MN34439 (CRB607)	MN019596		present paper
<i>O. d. spodiurus</i>	Ecuador, Cotopaxi, Otonga	67	QCAZ8678	MF806174		Pinto et al. 2018
<i>O. stramineus</i>	Brazil, Goiás, Teresina de Goiás, Fazenda Vão dos Bois	21	MN46409 (CRB677)	MN019597		present paper
<i>O. d. spodiurus</i>	Ecuador, Cotopaxi, Otonga	67	QCAZ8681	MF806173		Pinto et al. 2018
<i>O. stramineus</i>	Brazil, Goiás, Teresina de Goiás, Fazenda Vão dos Bois	21	(CRB3054)	MN015444		present paper
<i>O. stramineus</i>	Brazil, Goiás, São Domingos	22	UNB2640 (ARB429)	MN015460		present paper
<i>O. stramineus</i>	Brazil, Goiás, São Domingos	22	UNB2641 (ARB430)	MN015448		present paper
<i>O. stramineus</i>	Brazil, Goiás, São Domingos	22	UNB2642 (ARB435)	MN015495		present paper
<i>O. stramineus</i>	Brazil, Goiás, Flores de Goiás	26	(AL2955)	MN015443		present paper
<i>O. stramineus</i>	Brazil, Goiás, Flores de Goiás	26	(AL2956)	MN015498		present paper
<i>O. stramineus</i>	Brazil, Goiás, Alvorada do Norte	27	UNB2637 (ARB397)	MN015451		present paper
<i>O. stramineus</i>	Brazil, Goiás, Alvorada do Norte	27	UNB2638 (ARB411)	MN015507		present paper
<i>O. stramineus</i>	Brazil, Goiás, Alvorada do Norte	27	UNB2648 (ARB575)	MN015428		present paper
<i>O. stramineus</i>	Brazil, Goiás, Alvorada do Norte	27	UNB2649 (ARB600)	MN015436		present paper
<i>O. stramineus</i>	Brazil, Goiás, Alvorada do Norte	27	UNB2650 (ARB601)	MN015488		present paper
<i>O. stramineus</i>	Brazil, Sergipe, Canindé de São Francisco	32	UFPB9767 (ARB791)	MN015435		present paper
<i>O. stramineus</i>	Brazil, Sergipe, Canindé de São Francisco	32	UFPB9776 (ARB801)	MN015487		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9766 (ARB790)	MN015500		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9768 (ARB792)	MN015512		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9769 (ARB793)	MN015505		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9771 (ARB796)	MN015430		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9773 (ARB798)	MN015470		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9775 (ARB800)	MN015489		present paper
<i>O. stramineus</i>	Brazil, Bahia, Paulo Afonso	33	UFPB9793 (ARB823)	MN015455		present paper
<i>O. stramineus</i>	Brazil, Bahia, Palmeiras	34	MN84348 (MW303)	MN015510		present paper
<i>O. stramineus</i>	Brazil, Bahia, Lençóis	35	MZ33820	MN015509		present paper
<i>O. utaritensis</i>	Brazil, Pará, Altamira, Castelo dos Sonhos	12	MN75612 (SVS288)	MF951075		da Cruz & Weksler, 2018
<i>O. utaritensis</i>	Brazil, Mato Grosso, Bom Jesus do Araguaia	17	(ARB749)	MN015472		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Ribeirão Cascalheira	18	(ARB752)	MN015465		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Ribeirão Cascalheira	18	(ARB761)	MN015511		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Ribeirão Cascalheira	18	(ARB762)	MN015459		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Ribeirão Cascalheira	18	(ARB763)	MN015490		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Sapezal, Fazenda Begolim	19	MN75595 (LBCE12174)	MN019598		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Sapezal, Fazenda Begolim	19	MN75598 (LBCE12186)	MF951074		da Cruz & Weksler, 2018
<i>O. utaritensis</i>	Brazil, Mato Grosso, Sapezal, Fazenda Begolim	19	MN75599 (LBCE12225)	MN019599		present paper
<i>O. utaritensis</i>	Brazil, Mato Grosso, Campo Novo dos Parecis	20	MN75616 (SVS299)	MF951076		da Cruz & Weksler, 2018
<i>O. vegetus</i>	Costa Rica, Cartago, Volcan Irazu	not plotted	ROM113156	EU095457		Borisenko et al. 2008
<i>O. vegetus</i>	Nicaragua, Rivas	not plotted	ROM112192	JF491683		GenBank