

Online Supplementary data – Phylogeography of two Malagasy gecko species

Supplementary Table S1. Sample voucher numbers with location (GPS coordinates) and respective GenBank accession numbers to genetic data generated in this study.

Collection	Location (GPS)	Location (GPS)	16S Accession No.	ND4 Accession No.	PDC Accession No.	CMOS Accession No.	RAG1 Accession No.
<i>Paroedura gracilis</i>							
ZCMV 862	-14.4377	49.7755	–	MK941147	–	MK933448	MK933420
ZCMV 2041	-14.4377	49.7755	–	MK941148	MK933351	MK933449	MK933421
ZCMV 2074	-14.4350	49.7605	–	MK941149	MK933352	MK933450	MK933422
ZCMV 2175	-15.4960	49.7680	MK933287	MK941155	MK933353	MK933451	MK933423
ZCMV 2176	-15.4958	49.7680	MK933288	MK941156	MK933354	MK933452	MK933424
ZCMV 11232	-15.4229	49.1200	–	MK941150	MK933355	MK933453	–
FGZC 2795	-14.453	49.783	MK933292	MK941151	MK933356	MK933454	MK933425
DRV 5912	-15.4370	49.1186	–	MK941152	MK933357	MK933455	MK933426
DRV 5913	-15.4370	49.1186	–	MK941154	MK933358	MK933456	MK933427
DRV 5914	-15.4370	49.1186	MK933289	MK941153	MK933359	MK933457	MK933428
FGMV-2002/3026	-18.4833	48.3999	–	–	–	–	MK933429
FGMV-2002/3038	-12.531	49.171	–	–	–	–	–
PSG 12	-15.2430	49.6205	–	MK941157	MK933360	MK933458	MK933430
PSG 57	-16.4521	49.8017	–	MK941158	MK933361	MK933459	MK933431
PSG 412	-18.8106	48.9803	MK933290	MK941159	MK933362	MK933460	MK933432
PSG 1105	-16.6848	49.7237	MK933291	MK941161	MK933363	MK933461	MK933433
FGZC 4293	-15.2862	49.6271	–	–	MK933364	–	MK933434
MPFC 138	-18.921	48.517	–	–	MK933365	MK933462	MK933435
PSG 2214	-15.2862	49.6271	–	–	MK933366	MK933463	–
PSG 2228	-15.2862	49.6271	–	–	MK933367	MK933464	MK933436
PSG 2278	-15.2862	49.6271	–	–	–	MK933465	MK933437
PSG 2169	-19.2188	48.2322	–	–	MK933368	MK933466	–
FGZC 1428	-12.5208	49.1725	–	MK941162	–	MK933467	MK933438
FGZC 1469	-12.5186	49.1736	–	MK941164	–	MK933468	MK933439
FGZC 4980	-18.9172	48.4930	–	MK941160	MK933369	–	MK933440
ZCMV 15086	-14.4463	49.7852	MK933293	–	–	–	MK933441
MSTIS 155	-12.5910	49.1336	MK933296	–	MK933370	–	MK933442
MSTIS 905	-12.5910	49.1336	MK933294	–	MK933371	–	MK933443
MSTIS 929	-12.5855	49.1346	MK933297	–	MK933372	–	MK933444
MSTIS 968	-12.5832	49.1271	MK933298	–	MK933373	–	MK933445
MSZC 406	-12.5271	49.1721	MK933300	–	–	–	MK933446
MSZC 456	-12.5279	49.1711	MK933301	MK941163	MK933374	–	MK933447
FAZC 3144	–	–	GU129001.1	–	–	–	–
MSRN: R2439	–	–	GU129012.1	–	–	–	–
<i>Paroedura masobe</i>	–	–	GU129003.1	EF536217.1	–	–	–
<i>Paroedura oviceps</i>	–	–	GU129009.1	EF536234.1	–	–	–
<i>Paroedura bastardi</i>	–	–	GU129005.1	–	–	–	–
<i>Phelsuma guttata</i>							
ZCMV 7186	-16.6667	49.5833	MK933302	MK940329	MK933375	–	–
ZCMV 7187	-16.6667	49.5833	MK933303	MK940330	MK933376	–	–
ZCMV 7196	-16.6667	49.5833	MK933304	–	MK933377	–	–
ZCMV 7214	-16.6667	49.5833	MK933305	MK940331	MK93337	–	–
ZCMV 2171	-15.4957	49.7680	MK933306	MK940332	MK933379	–	–
ZCMV 2172	-15.4957	49.7680	MK933307	MK940333	MK933380	–	–
DRV 5682	-17.2977	48.7020	MK933308	MK940334	MK933382	–	–
DRV 5683	-17.2977	48.7020	MK933309	–	MK933383	–	–

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Collection	Location (GPS)	Location (GPS)	16S Accession No.	ND4 Accession No.	PDC Accession No.	CMOS Accession No.	RAG1 Accession No.
FGZC 2793	-14.4377	49.7705	MK933310	MK940335	MK933384	-	-
FGZC 2794	-14.4377	49.7705	MK933311	MK940336	-	-	-
2002-A 16	-15.4289	49.8040	MK933312	-	MK933385	-	-
PSG 119	-18.6058	49.2138	MK933313	MK940337	MK933386	-	-
PSG 122	-18.6059	49.2138	MK933314	MK940338	MK933387	-	-
PSG 138	-18.5926	44.2387	MK933315	MK940339	MK933388	-	-
PSG 144	-18.5926	44.2387	MK933316	MK940340	MK933389	-	-
PSG 209	-18.5897	49.2307	MK933317	MK940341	-	-	-
PSG 212	-18.5897	49.2307	MK933318	MK940342	MK933390	-	-
PSG 226	-18.5897	49.2307	MK933319	MK940343	MK933391	-	-
PSG 334	-18.8106	48.9803	MK933320	-	MK933392	-	-
PSG 335	-18.8106	48.9803	MK933321	MK940344	MK933393	-	-
PSG 357	-18.8106	48.9803	MK933322	MK940345	MK933394	-	-
PSG 365	-18.8106	48.9803	MK933323	MK940346	MK933395	-	-
PSG 366	-18.8106	48.9803	MK933324	MK940347	MK933396	-	-
PSG 367	-18.8106	48.9803	MK933325	-	MK933397	-	-
PSG 369	-18.8106	48.9803	MK933326	MK940348	MK933398	-	-
PSG 378	-18.8106	48.9803	MK933327	MK940349	-	-	-
PSG 484	-18.8106	48.9803	MK933328	MK940350	MK933399	-	-
PSG 785	-17.2887	49.4115	MK933329	MK940351	MK933400	-	-
PSG 887	-17.2887	49.4115	MK933330	MK940352	MK933401	-	-
PSG 899	-17.2887	49.4115	MK933331	MK940353	MK933402	-	-
PSG 958	-16.6745	49.7028	MK933332	MK940354	MK933403	-	-
PSG 959	-16.6745	49.7028	MK933333	MK940355	MK933404	-	-
PSG 966	-16.6745	49.7028	MK933334	MK940356	MK933405	-	-
PSG 971	-16.6745	49.7028	MK933335	MK940357	MK933406	-	-
PSG 1001	-16.6745	49.7028	MK933336	-	MK933407	-	-
PSG 1003	-16.6745	49.7028	MK933337	MK940358	MK933408	-	-
PSG 1018	-16.6745	49.7028	MK933338	MK940359	MK933409	-	-
PSG 1019	-16.6745	49.7028	MK933339	MK940360	MK933410	-	-
PSG 1020	-16.6745	49.7028	MK933340	MK940361	MK933411	-	-
PSG 1025	-16.6745	49.7028	MK933341	MK940362	MK933412	-	-
PSG 1076	-16.6745	49.7028	MK933342	MK940363	MK933413	-	-
PSG 1097	-16.6745	49.7028	MK933343	MK940364	MK933414	-	-
PSG 2386	-15.2899	49.6208	MK933344	MK940365	MK933415	-	-
PSG 2395	-15.2899	49.6203	MK933345	MK940366	MK933416	-	-
PSG 2396	-15.2899	49.6203	MK933346	MK940367	MK933417	-	-
PSG 2400	-15.2899	49.6203	MK933347	MK940368	MK933418	-	-
PSG 2208	-15.2899	49.6203	MK933348	-	MK933419	-	-
PSG 2229	-15.2899	49.6203	MK933349	MK940369	-	-	-
PSG 2230	-15.2899	49.6203	MK933350	-	-	-	-
<i>Phelsuma madagascariensis</i>	-	-	DQ270569.1	-	-	-	-

Supplementary Table S2. Pairwise genetic uncorrected p -distances between all individuals of both the species generated from mitochondrial markers 16S and ND4.

Sheet 1: pairwise genetic distances between individuals of *Ph. guttata* for the gene 16S;

Sheet 2: pairwise genetic distances between individuals of *Ph. guttata* for the gene ND4;

Sheet 3: pairwise genetic distances between individuals of *P. gracilis* for the gene 16S;

Sheet 4: pairwise genetic distances between individuals of *P. gracilis* for the gene ND4. Note: genetic distances are in their absolute form and are not converted into percentage (%).

Supplementary Table S2 is separately embedded as an Excel-file.

Supplementary Text S3. Additional information on alleles (haplotypes) identified from nuclear genes of *Ph. guttata* and *P. gracilis*.

Ph. guttata: We identified 6 haplotypes of the gene PDC, with a Haplotype Diversity (H_d) of 0.65, nucleotide diversity (π) of 0.0027 with an average number of nucleotide differences (k) of 0.90 (Fig. 1).

P. gracilis: RAG1 showed a nucleotide diversity (H_d) of 0.71 with 10 recognized haplotypes and a nucleotide diversity (π) of 0.00397 with an average number of nucleotide differences (k) of 1.672. CMOS, a slower evolving nuclear gene, revealed a nucleotide diversity H_d of 0.52, and four haplotypes were identified. We detected 4 haplotypes from 3 segregating sites with an average of 0.585 nucleotide differences (k) and a nucleotide diversity (π) of 0.00137 in gene CMOS. The gene PDC had 12 different segregating sites with a nucleotide diversity (π) of 0.00811 and an average number of nucleotide differences (k) of 2.23. H1, the most frequent haplotype with 17 copies seems to be widespread in the North East and Northern Central East of Madagascar (Fig. 2).

Supplementary Table S4. Numbers of photographed individuals of *Paroedura gracilis* and *Phelsuma guttata* per site, examined for analysis of colour and pattern variation.

Locality (north to south)	No. individuals photographed	
	<i>Paroedura gracilis</i>	<i>Phelsuma guttata</i>
Montagne d'Ambre	3	0
Marojejy	1	5
Masoala	1	1
Ambodivoahangy	2	0
Nosy Mangabe	2	4
Ambodiriana	1	2
Mananara-Nord	1	1
Sahafina	1	0
Vohibola	0	1
Vohimana	1	0
Anosibe An'ala	1	0
Total	14	14