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## **SUPPORTING INFORMATION**

### **Journal of Biogeography**

### **Exploring rain forest diversification using demographic model testing in the African Foam-nest Treefrog *Chiromantis rufescens***

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Voucher	Field series	Country	State/Province	Locality	Genbank Accession
MVZ 234853	DRB 411	Cameroon	Sud-Ouest Province	Nguti, site 6	MK789405
MVZ 234855	DRB 413	Cameroon	Sud-Ouest Province	Nguti, site 6	MK789394
CAS 249973	BJE 3090	Cameroon	Centre Region	pond on Trail near Matt's Villa, 04°36'41.58"N, 12°13'31.5"E	MK789416
CAS 249974	BJE 3091	Cameroon	Centre Region	pond on Trail near Matt's Villa, 04°36'41.58"N, 12°13'31.5"E	-
CAS 249975	BJE 3092	Cameroon	Centre Region	pond on Trail near Matt's Villa, 04°36'41.58"N, 12°13'31.5"E	MK789417
CAS 253327	DCB 288	Cameroon	Est Region	Doumzok, community forest pools, 2°38'40.20"N, 14°01'52.14"E	MK789334
CAS 253328	DCB 289	Cameroon	Est Region	Doumzok, community forest pools, 2°38'40.20"N, 14°01'52.14"E	MK789335
CAS 253329	DCB 290	Cameroon	Est Region	Doumzok, community forest pools, 2°38'40.20"N, 14°01'52.14"E	MK789336
CAS 253330	DCB 291	Cameroon	Est Region	Doumzok, community forest pools, 2°38'40.20"N, 14°01'52.14"E	MK789337
CAS 253331	DCB 292	Cameroon	Est Region	Doumzok, community forest pools, 2°38'40.20"N, 14°01'52.14"E	MK789338
CAS 254025	DMP 934	Cameroon	Littoral Region	Manjo Area, Manten, marsh and slow stream in banana plantation, 4°50'59.1"N, 9°46'18.5874"E	MK789390
CAS 254026	DMP 935	Cameroon	Littoral Region	Manjo Area, Manten, marsh and slow stream in banana plantation, 4°50'59.1"N, 9°46'18.5874"E	MK789391
CAS 254027	DMP 936	Cameroon	Littoral Region	Manjo Area, Manten, marsh and slow stream in banana plantation, 4°50'59.1"N, 9°46'18.5874"E	MK789392
CAS 254028	DMP 937	Cameroon	Littoral Region	Manjo Area, Manten, marsh and slow stream in banana plantation, 4°50'59.1"N, 9°46'18.5874"E	MK789393
NMP6V 73404	05_C101	Cameroon	South-West	Bakingili	MK789395
NMP6V 74567	09_048	Cameroon	Est	25 km SE of Lomié	MK789328
NMP6V 74558	09_065	Cameroon	Central	Ebogo	MK789339
not collected	09_072	Cameroon	Central	Ebogo	MK789346
NMP6V 74638	09_352	Cameroon	South-West	Bakingili	MK789406
NMP6V 74706/1	10_162	Cameroon	Est	Ngoum-Bandi (aka PK27), S border of Lobéké NP	MK789329
NMP6V 74706/2	10_163	Cameroon	Est	Ngoum-Bandi (aka PK27), S border of Lobéké NP	MK789340
NMP6V 74706/3	10_164	Cameroon	Est	Ngoum-Bandi (aka PK27), S border of Lobéké NP	MK789341
NMP6V 75672/1	CM_16_172	Cameroon	Sud	Bidjoka	MK789413
NMP6V 75672/2	CM_16_173	Cameroon	Sud	Bidjoka	MK789418
NMP6V 75672/3	CM_16_174	Cameroon	Sud	Bidjoka	MK789410
not collected	CM_16_200	Cameroon	Sud	Bidjoka	MK789409
not collected	CM_16_201	Cameroon	Sud	Bidjoka	MK789412
NMP6V 75673/1	CM_16_216	Cameroon	Sud	Mezessé	MK789342
NMP6V 75673/2	CM_16_217	Cameroon	Sud	Mezessé	MK789347
NMP6V 75674/1	CM_16_254	Cameroon	Sud	Onoyong	MK789348
NMP6V 75674/2	CM_16_255	Cameroon	Sud	Onoyong	MK789349
ZMB 82107	MH_0213	Cameroon	Littoral	Ebo Forest, Camp Njuma	MK789408
NMP6V 75675	CAR_039	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Sangha Lodge	-
NMP6V 75676	CAR_040	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Bai Hokou	-
NMP6V 75677/1	CAR_184	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Sangha Lodge	MK789374
NMP6V 75677/2	CAR_185	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Sangha Lodge	MK789326
NMP6V 75677/3	CAR_186	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Sangha Lodge	MK789327
NMP6V 75677/4	CAR_187	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Sangha Lodge	MK789330
NMP6V 75677/5	CAR_188	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha NP, Sangha Lodge	MK789331
ZMB 80674	DS_14	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha Forest Reserve, Bayanga	MK789332
ZMB 80675	DS_87	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha Forest Reserve, Bayanga	MK789333
ZMB 80676	DS_88	Central African Republic	Sangha-Mbaéré	Dzanga-Sangha Forest Reserve, Bayanga	MK789372
UTEP 21785	EBG 1833	DRC	North Kivu	Virunga National Park, Ndjuma River	MK789305
UTEP 21786	EBG 1834	DRC	North Kivu	Virunga National Park, Ndjuma River	MK789316
UTEP 21787	EBG 2570	DRC	Ituri	Nengombe	MK789311
UTEP 21788	EBG 2603	DRC	Ituri	Nengombe	MK789313
UTEP 21789	EBG 2623	DRC	Ituri	Babukeli	MK789306
UTEP 21790	ELI 3062	DRC	Bas-Uele	Pamea	MK789307
UTEP 21791	ELI 3076	DRC	Bas-Uele	Bombatia	MK789308
UTEP 21792	ELI 3130	DRC	Bas-Uele	Bongbeto	MK789309
UTEP 21793	ELI 3131	DRC	Bas-Uele	Bongbeto	MK789310
UTEP 21794	ELI 3336	DRC	Bas-Uele	Bas Uele, Bangale	MK789312
NMP6V 75678	CD_14_114	DRC	Ituri	Bango	MK789304
NMP6V 75679/1	CD_15_069	DRC	Mongala	Bosolo	MK789318
NMP6V 75679/2	CD_15_070	DRC	Mongala	Bosolo	MK789319
NMP6V 75679/3	CD_15_071	DRC	Mongala	Bosolo	MK789320
NMP6V 75679/4	CD_15_072	DRC	Mongala	Bosolo	MK789321
NMP6V 75679/5	CD_15_073	DRC	Mongala	Bosolo	MK789322
NMP6V 75679/6	CD_15_074	DRC	Mongala	Bosolo	MK789324
NMP6V 75679/7	CD_15_092	DRC	Mongala	Bosolo	-
NMP6V 75679/8	CD_15_093	DRC	Mongala	Bosolo	MK789323
NMP6V 75680	CD_15_187	DRC	Mongala	Matama	MK789325
NMP6V 75681/1	CD_15_295	DRC	Mongala	Bobila	MK789314
NMP6V 75681/2	CD_15_296	DRC	Mongala	Bobila	MK789317
NMP6V 75681/3	CD_15_297	DRC	Mongala	Bobila	MK789315
CAS 207600	RCD 13568	Equatorial Guinea	Bioko Norte Prov.	03°42'39.8"N, 08°39'59.9"E	MK789396
CAS 207601	RCD 13569	Equatorial Guinea	Bioko Norte Prov.	03°42'39.8"N, 08°39'59.9"E	MK789397
CAS 207602	RCD 13570	Equatorial Guinea	Bioko Norte Prov.	03°42'39.8"N, 08°39'59.9"E	MK789398
CAS 207603	RCD 13571	Equatorial Guinea	Bioko Norte Prov.	03°42'39.8"N, 08°39'59.9"E	MK789399
CAS 207604	RCD 13572	Equatorial Guinea	Bioko Norte Prov.	03°42'39.8"N, 08°39'59.9"E	MK789400
CAS 207605	RCD 13573	Equatorial Guinea	Bioko Norte Prov.	03°42'39.8"N, 08°39'59.9"E	MK789407
CAS 258009	GFMJ 1000	Gabon	Moyen-Ogooué Prov.	Mitone, 00°38'27.672"S, 10°13'03.576"E	MK789415

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Voucher	Field series	Country	State/Province	Locality	Genbank Accession
CAS 258060	GFMJ 1098	Gabon	Moyen-Ogooué Prov.	Carivenville, 00 11 05.352 S, 10 46 38.172 E	MK789373
CAS 258061	GFMJ 1099	Gabon	Moyen-Ogooué Prov.	Carivenville, 00 11 05.352 S, 10 46 38.172 E	MK789359
CAS 258062	GFMJ 1100	Gabon	Moyen-Ogooué Prov.	Carivenville, 00 11 05.352 S, 10 46 38.172 E	MK789360
CAS 258129	GFMJ 1233	Gabon	Moyen-Ogooué Prov.	Junkville, 00 02 56.976 S, 11 09 51.408 E	MK789343
CAS 258245	GFMJ 1432	Gabon	Haut-Ogooué Prov.	Mboa, 02 09 24.084 S, 13 38 04.38 E	MK789361
CAS 258323	GFMJ 1578	Gabon	Ogooué-Lolo Prov.	Madoukou, 00 52 05.916 S, 12 40 20.784 E	MK789362
CAS 258327	GFMJ 1586	Gabon	Ogooué-Lolo Prov.	Madoukou, 00 52 47.496 S, 12 39 17.604 E	MK789355
CAS 258328	GFMJ 1587	Gabon	Ogooué-Lolo Prov.	Madoukou, 00 52 47.496 S, 12 39 17.604 E	MK789363
NMP6V 75682/1	GA 046	Gabon	Ogooué-Ivindo	Sassamongo	MK789369
NMP6V 75682/2	GA 047	Gabon	Ogooué-Ivindo	Sassamongo	MK789365
NMP6V 75682/3	GA 048	Gabon	Ogooué-Ivindo	Sassamongo	MK789366
NMP6V 75682/4	GA 049	Gabon	Ogooué-Ivindo	Sassamongo	MK789370
NMP6V 75682/5	GA 050	Gabon	Ogooué-Ivindo	Sassamongo	MK789367
NMP6V 75682/6	GA 051	Gabon	Ogooué-Ivindo	Sassamongo	MK789344
NMP6V 75682/7	GA 052	Gabon	Ogooué-Ivindo	Sassamongo	MK789371
NMP6V 75683/1	GA 081	Gabon	Woleu-Ntem	Médouneu	MK789356
NMP6V 75683/2	GA 082	Gabon	Woleu-Ntem	Médouneu	MK789345
GBC-A 0467	GFMJ 1113	Gabon	Moyen-Ogooué Prov.	Carivenville, 0.17502 S, 10.78135 E	MK789364
GBC-A 0468	GFMJ 1227	Gabon	Moyen-Ogooué Prov.	Junkville, 0.05171 S, 11.16621 E	MK789350
NCSM 76843	BLS 13508	Gabon	Estuaire	Monts de Cristal National Park, Kingué	MK789414
NCSM 76844	BLS 13595	Gabon	Estuaire	Monts de Cristal National Park, Kingué	MK789411
NCSM 77611	BLS 14214	Gabon	Ogooué-Maritime	Iguéla	MK789353
OMNH 13734	GFMJ 1112	Gabon	Moyen-Ogooué	Carivenville, 0.17502 S, 10.78135 E	MK789368
UWBM 5635	ADL 3745	Ghana	Ashanti Region	Bobiri Forest Reserve	MK789377
UWBM 8949	ADL 4621	Ghana	Western Region	Ankasa NP, Nkwanta Camp	MK789378
UWBM 8950	ADL 4622	Ghana	Western Region	Ankasa NP, Nkwanta Camp	MK789379
UWBM 8951	ADL 4623	Ghana	Western Region	Ankasa NP, Nkwanta Camp	MK789380
UWBM 8952	ADL 4624	Ghana	Western Region	Ankasa NP, Nkwanta Camp	MK789381
UWBM 8953	ADL 4625	Ghana	Western Region	Ankasa NP, Nkwanta Camp	MK789382
UWBM 8954	ADL 4831	Ghana	Eastern Region	Atewa Range, East Akim, 4 km East of Doky by trail	MK789388
UWBM 8955	ADL 4832	Ghana	Eastern Region	Atewa Range, East Akim, 4 km East of Doky by trail	MK789383
UWBM 8956	ADL 4833	Ghana	Eastern Region	Atewa Range, East Akim, 4 km East of Doky by trail	MK789384
UWBM 8957	ADL 4834	Ghana	Eastern Region	Atewa Range, East Akim, 4 km East of Doky by trail	MK789385
UWBM 8958	ADL 4835	Ghana	Eastern Region	Atewa Range, East Akim, 4 km East of Doky by trail	MK789375
UWBM 8959	ADL 4836	Ghana	Eastern Region	Atewa Range, East Akim, 4 km East of Doky by trail	MK789386
ZMB 12161	ANK 110	Ghana	Western Region	Ankasa National Park	MK789389
not collected	ANK117	Ghana	Western Region	Ankasa National Park	MK789376
ZMB PEM A7932	CA_4	Ivory Coast	Moyen-Cavally	Forêt Classé de Cavally	MK789426
not collected	CJ_1106	Ivory Coast	Comoé	Bossematie	MK789387
not collected	T_01_11	Ivory Coast	Moyen-Cavally	Tal National Park	MK789424
not collected	T_01_2	Ivory Coast	Moyen-Cavally	Tal National Park	MK789419
not collected	T_01_27	Ivory Coast	Moyen-Cavally	Tal National Park	MK789425
Jean Lorougnon Guédé University	T_16_24	Ivory Coast	Moyen-Cavally	Tal National Park	MK789420
Jean Lorougnon Guédé University	T_16_25	Ivory Coast	Moyen-Cavally	Tal National Park	MK789421
Jean Lorougnon Guédé University	T_16_26	Ivory Coast	Moyen-Cavally	Tal National Park	MK789428
ZMB 88655	LI_128	Liberia	Grand Gedeh	Putu Range	MK789422
ZMB 88656	LI_129	Liberia	Grand Gedeh	Putu Range	MK789427
ZMB 88657	LI_130	Liberia	Grand Gedeh	Putu Range	MK789423
ZMB 80683	WOL_104	Liberia	Lofa	North Lorma National Forest	-
MVZ 253194	ADL 3119	Nigeria	Cross River	Erokut Park entry gate, Southern Portion, Oban Hills Sector, Cross River National Park	MK789401
MVZ 253195	ADL 3130	Nigeria	Cross River	Erokut Park entry gate, Southern Portion, Oban Hills Sector, Cross River National Park	MK789402
MVZ 253196	ADL 3131	Nigeria	Cross River	Erokut Park entry gate, Southern Portion, Oban Hills Sector, Cross River National Park	MK789403
MVZ 253197	ADL 3132	Nigeria	Cross River	Erokut Park entry gate, Southern Portion, Oban Hills Sector, Cross River National Park	MK789404
NMP6V 75684/1	CG_12_015	Republic of the Congo	Cuvette-Ouest	Ndzoukou	MK789357
NMP6V 75684/2	CG_12_016	Republic of the Congo	Cuvette-Ouest	Ndzoukou	MK789358
IRSEN	MBUR 03182	Republic of the Congo	Niari	3.3 km S of Mayoko Poste	MK789351
IRSEN	MBUR 03183	Republic of the Congo	Niari	3.3 km S of Mayoko Poste	-
IRSEN	MBUR 03858	Republic of the Congo	Niari	26 km SE of Tsinguidi	MK789352
ZMB 86857	MBUR 03976	Republic of the Congo	Niari	17 km E of Tsinguidi	MK789354

**TABLE S2** Summary of the ddRADseq data.

Sample	Population	Biosample Accession	Filtered reads	Total clusters	Coverage	Heterozygosity	Error	Consensus reads	Loci 50% missing	Loci 10% missing
CAM_09_048	LGC	SAMN11244981	1,879,991	87,334	21.5	0.01832	0.00362	19,450	3,746	1,033
CAM_09_065	LGC	SAMN11244982	4,406,733	148,936	29.6	0.01711	0.00306	49,333	6,418	1,060
CAM_09_072	LGC	SAMN11244983	5,272,322	172,371	30.6	0.01656	0.00290	59,775	6,372	1,048
CAM_10_162	LGC	SAMN11244985	2,367,875	82,871	28.6	0.01855	0.00298	23,896	4,326	1,046
CAM_10_163	LGC	SAMN11244986	2,500,982	89,907	27.8	0.01822	0.00297	24,961	4,578	1,049
CAM_10_164	LGC	SAMN11244987	2,660,375	90,910	29.3	0.01866	0.00289	24,253	4,409	1,050
CAM_CAS_249973	LGC	SAMN11244988	1,802,050	75,942	23.7	0.01986	0.00314	19,441	2,260	655
CAM_CAS_249975	LGC	SAMN11244989	4,840,831	141,363	34.2	0.01677	0.00291	50,536	6,459	1,059
CAM_CAS_253237	LGC	SAMN11244990	2,449,148	115,834	21.1	0.01783	0.00348	33,527	5,457	1,055
CAM_CAS_253328	LGC	SAMN11244991	2,514,980	106,805	23.5	0.01790	0.00330	32,350	5,494	1,057
CAM_CAS_253329	LGC	SAMN11244992	1,958,565	92,994	21.1	0.01780	0.00356	27,460	4,936	1,049
CAM_CAS_253330	LGC	SAMN11244993	2,799,729	114,219	24.5	0.01739	0.00330	36,269	5,676	1,054
CAM_CAS_253331	LGC	SAMN11244994	2,827,594	106,480	26.6	0.01734	0.00307	34,687	5,639	1,058
CAM_CM_16_172	LGC	SAMN11244999	4,678,691	115,640	40.5	0.01707	0.00245	40,816	6,083	1,060
CAM_CM_16_173	LGC	SAMN11245000	4,198,056	154,241	27.2	0.01819	0.00256	35,666	5,639	1,060
CAM_CM_16_174	LGC	SAMN11245001	3,275,622	81,052	40.4	0.01992	0.00226	22,181	3,819	1,003
CAM_CM_16_200	LGC	SAMN11245002	4,484,807	160,927	27.9	0.01755	0.00281	47,759	6,200	1,064
CAM_CM_16_201	LGC	SAMN11245003	5,496,368	130,478	42.1	0.01662	0.00240	46,524	6,258	1,054
CAM_CM_16_216	LGC	SAMN11245004	2,675,279	97,403	27.5	0.01844	0.00283	25,076	4,589	1,044
CAM_CM_16_217	LGC	SAMN11245005	3,214,174	95,350	33.7	0.01753	0.00265	28,973	5,105	1,052
CAM_CM_16_254	LGC	SAMN11245006	3,267,252	73,887	44.2	0.01857	0.00241	23,791	4,143	1,038
CAM_CM_16_255	LGC	SAMN11245007	2,984,703	91,498	32.6	0.01824	0.00270	27,585	4,886	1,055
CAR_CAR_184	LGC	SAMN11245011	511,520	36,143	14.2	0.01787	0.00671	10,035	1,870	652
CAR_CAR_185	LGC	SAMN11245012	3,369,369	100,133	33.6	0.01668	0.00299	37,240	5,406	1,048
CAR_CAR_186	LGC	SAMN11245013	8,093,716	151,713	53.3	0.01554	0.00218	60,962	6,427	1,056
CAR_CAR_187	LGC	SAMN11245014	8,494,704	181,431	46.8	0.01645	0.00239	67,114	6,454	1,066
CAR_CAR_188	LGC	SAMN11245015	1,848,898	91,730	20.2	0.01713	0.00388	26,257	4,856	1,043
CAR_DS_14	LGC	SAMN11245016	1,800,384	93,919	19.2	0.01706	0.00385	25,736	4,219	944
CAR_DS_87	LGC	SAMN11245017	5,675,027	165,639	34.3	0.01661	0.00265	51,100	6,058	1,047
CAR_DS_88	LGC	SAMN11245018	4,519,356	133,339	33.9	0.01694	0.00293	45,072	5,860	1,041
CON(CG)_12_015	LGC	SAMN11245019	3,791,466	102,343	37.0	0.01807	0.00271	31,031	5,162	1,053
CON(CG)_12_016	LGC	SAMN11245020	4,785,104	145,383	32.9	0.01794	0.00265	47,352	6,172	1,062
CON(MBUR)_03858	LGC	SAMN11245021	5,700,654	147,160	38.7	0.01732	0.00271	50,549	6,433	1,057
CON(MBUR)_03976	LGC	SAMN11245022	3,980,930	116,817	34.1	0.01775	0.00266	39,275	5,919	1,058
GAB(CAS)_258009	LGC	SAMN11245049	4,227,780	140,540	30.1	0.01711	0.00286	48,423	6,198	1,051
GAB(CAS)_258060	LGC	SAMN11245050	3,896,837	127,093	30.7	0.01730	0.00299	44,006	6,226	1,055
GAB(CAS)_258061	LGC	SAMN11245051	4,627,510	137,907	33.6	0.01698	0.00285	49,901	6,307	1,059
GAB(CAS)_258062	LGC	SAMN11245052	2,744,023	113,049	24.3	0.01757	0.00321	36,325	5,750	1,055
GAB(CAS)_258129	LGC	SAMN11245053	2,913,664	112,512	25.9	0.01730	0.00313	37,679	5,833	1,061
GAB(CAS)_258245	LGC	SAMN11245054	3,321,514	121,257	27.4	0.01760	0.00304	39,229	5,886	1,058
GAB(CAS)_258323	LGC	SAMN11245055	6,921,849	178,631	38.7	0.01691	0.00256	65,960	6,578	1,060
GAB(CAS)_258327	LGC	SAMN11245056	2,623,128	123,844	21.2	0.01803	0.00349	35,350	5,600	1,054
GAB(CAS)_258328	LGC	SAMN11245057	5,600,147	164,957	33.9	0.01735	0.00283	56,231	6,530	1,063
GAB(GA)_046	LGC	SAMN11245058	2,854,263	120,602	23.7	0.01804	0.00321	36,043	5,730	1,047
GAB(GA)_047	LGC	SAMN11245059	2,330,430	101,688	22.9	0.01863	0.00354	28,488	5,217	1,058
GAB(GA)_048	LGC	SAMN11245060	989,318	71,898	13.8	0.01784	0.00460	19,004	3,825	1,009
GAB(GA)_049	LGC	SAMN11245061	1,225,737	82,401	14.9	0.01787	0.00445	21,555	4,288	1,026
GAB(GA)_050	LGC	SAMN11245062	1,053,789	68,913	15.3	0.01770	0.00434	17,060	3,480	1,012
GAB(GA)_051	LGC	SAMN11245063	2,551,130	103,786	24.6	0.01708	0.00358	34,264	5,100	1,034
GAB(GA)_052	LGC	SAMN11245064	2,829,291	115,996	24.4	0.01781	0.00350	36,941	5,846	1,059
GAB(GA)_081	LGC	SAMN11245065	2,058,938	101,025	20.4	0.01797	0.00377	30,404	5,184	1,046
GAB(GA)_082	LGC	SAMN11245066	3,341,645	132,929	25.1	0.01768	0.00324	41,739	5,883	1,065
GAB(GFMJ)_1113	LGC	SAMN11245067	5,190,932	150,232	34.6	0.01729	0.00293	54,857	6,531	1,060
GAB(GFMJ)_1227	LGC	SAMN11245068	5,793,156	161,732	35.8	0.01730	0.00286	58,832	6,639	1,065
GAB(NCSM)_76843	LGC	SAMN11245069	1,016,038	70,522	14.4	0.01915	0.00495	19,498	3,828	1,002
GAB(NCSM)_76844	LGC	SAMN11245070	3,744,364	131,722	28.4	0.01798	0.00303	42,838	6,044	1,062
GAB(NCSM)_77611	LGC	SAMN11245071	1,458,862	85,077	17.1	0.01757	0.00426	24,019	4,475	1,009
GAB(OMNH)_13734	LGC	SAMN11245072	2,505,402	110,539	22.7	0.01851	0.00310	28,971	5,035	1,039
DRC_CD_14_114	CON	SAMN11245023	4,008,224	104,684	38.3	0.01599	0.00262	31,323	5,107	1,060
DRC_CD_15_069	CON	SAMN11245024	3,345,951	126,982	26.3	0.01634	0.00295	35,574	5,349	1,045
DRC_CD_15_070	CON	SAMN11245025	2,389,362	88,974	26.9	0.01747	0.00301	21,399	3,903	1,037
DRC_CD_15_071	CON	SAMN11245026	2,560,546	91,644	27.9	0.01662	0.00295	24,906	4,483	1,045
DRC_CD_15_072	CON	SAMN11245027	3,324,930	92,767	35.8	0.01670	0.00267	26,476	4,479	1,055
DRC_CD_15_073	CON	SAMN11245028	2,308,041	91,971	25.1	0.01667	0.00298	23,783	4,232	1,022
DRC_CD_15_074	CON	SAMN11245029	2,720,107	106,199	25.6	0.01682	0.00284	26,577	4,471	1,007
DRC_CD_15_093	CON	SAMN11245030	1,484,011	45,009	33.0	0.01683	0.00308	14,488	2,662	946
DRC_CD_15_187	CON	SAMN11245031	2,004,366	53,516	37.5	0.01688	0.00279	15,987	2,910	980
DRC_CD_15_295	CON	SAMN11245032	4,964,541	145,411	34.1	0.01451	0.00265	45,426	5,807	1,054
DRC_CD_15_296	CON	SAMN11245033	4,410,696	101,433	43.5	0.01400	0.00239	34,544	5,350	1,053
DRC_CD_15_297	CON	SAMN11245034	5,007,909	97,046	51.6	0.01364	0.00227	34,376	4,877	1,049
DRC_EBG_1833	CON	SAMN11245035	2,794,682	106,647	26.2	0.01614	0.00339	30,610	4,856	1,042
DRC_EBG_1834	CON	SAMN11245036	4,225,412	94,305	44.8	0.01553	0.00273	33,808	4,771	1,052

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Sample	Population	Biosample Accession	Filtered reads	Total clusters	Coverage	Heterozygosity	Error	Consensus reads	Loci 50% missing	Loci 10% missing
DRC_EBG_2570	CON	SAMN11245037	2,880,864	91,651	31.4	0.01594	0.00315	28,417	4,720	1,058
DRC_EBG_2603	CON	SAMN11245038	2,920,981	91,346	32.0	0.01604	0.00325	28,410	4,759	1,054
DRC_EBG_2623	CON	SAMN11245039	2,867,227	93,267	30.7	0.01633	0.00327	28,636	4,723	1,031
DRC_EU_3062	CON	SAMN11245040	1,403,543	65,655	21.4	0.01546	0.00391	18,519	3,342	954
DRC_EU_3076	CON	SAMN11245041	3,590,935	102,371	35.1	0.01590	0.00295	30,895	4,844	1,051
DRC_EU_3130	CON	SAMN11245042	3,237,705	98,612	32.8	0.01542	0.00308	32,142	5,087	1,059
DRC_EU_3131	CON	SAMN11245043	4,148,592	126,354	32.8	0.01476	0.00295	43,989	5,832	1,066
DRC_EU_3336	CON	SAMN11245044	3,826,535	123,492	31.0	0.01484	0.00301	41,567	5,559	1,060
CAM_05_C101	LG	SAMN11244980	1,391,797	116,192	12.0	0.02014	0.00407	16,902	3,157	1,003
CAM_09_352	LG	SAMN11244984	2,787,728	80,864	34.5	0.01759	0.00276	24,182	4,390	1,038
CAM_CAS_254025	LG	SAMN11244995	2,902,332	112,556	25.8	0.01666	0.00312	37,062	5,660	1,058
CAM_CAS_254026	LG	SAMN11244996	2,281,376	102,144	22.3	0.01742	0.00335	29,985	5,143	1,054
CAM_CAS_254027	LG	SAMN11244997	2,200,555	100,225	22.0	0.01773	0.00342	29,218	5,100	1,054
CAM_CAS_254028	LG	SAMN11244998	1,366,306	64,035	21.3	0.01784	0.00363	16,586	3,061	965
CAM_MH_0213	LG	SAMN11245008	3,340,813	150,472	22.2	0.01810	0.00336	38,834	5,292	1,023
CAM_MVZ_234853	LG	SAMN11245009	1,416,738	86,951	16.3	0.01750	0.00454	23,722	4,427	1,028
CAM_MVZ_234855	LG	SAMN11245010	1,511,591	91,609	16.5	0.01783	0.00442	24,979	4,632	1,042
EQG_CAS_207600	LG	SAMN11245045	2,959,618	87,419	33.9	0.01734	0.00280	27,322	2,948	737
EQG_CAS_207601	LG	SAMN11245046	1,699,593	71,196	23.9	0.01963	0.00296	17,961	2,178	696
EQG_CAS_207602	LG	SAMN11245047	2,055,686	74,006	27.8	0.01833	0.00299	20,168	2,380	687
EQG_CAS_207604	LG	SAMN11245048	2,068,421	82,097	25.2	0.01762	0.00316	22,867	2,568	700
NIG_MVZ_253194	LG	SAMN11245097	3,830,841	134,278	28.5	0.01679	0.00308	44,699	6,201	1,058
NIG_MVZ_253195	LG	SAMN11245098	3,472,058	124,488	27.9	0.01711	0.00309	40,245	5,973	1,055
NIG_MVZ_253196	LG	SAMN11245099	4,612,381	152,440	31.6	0.01675	0.00286	48,438	6,355	1,059
NIG_MVZ_253197	LG	SAMN11245100	3,582,631	136,549	26.2	0.01705	0.00326	43,198	6,048	1,054
GHA_ADL_3745	UGE	SAMN11245073	4,246,441	130,409	32.6	0.01544	0.00295	42,093	5,740	1,063
GHA_ADL_4621	UGE	SAMN11245074	5,823,953	161,709	36.0	0.01495	0.00279	53,454	6,080	1,067
GHA_ADL_4622	UGE	SAMN11245075	3,635,772	134,626	27.0	0.01490	0.00307	43,310	5,807	1,066
GHA_ADL_4623	UGE	SAMN11245076	2,090,331	108,446	19.3	0.01650	0.00401	26,823	4,624	1,058
GHA_ADL_4624	UGE	SAMN11245077	3,883,206	151,136	25.7	0.01554	0.00314	44,298	5,878	1,066
GHA_ADL_4625	UGE	SAMN11245078	3,502,502	125,444	27.9	0.01590	0.00329	40,403	5,708	1,062
GHA_ADL_4831	UGE	SAMN11245079	3,714,855	128,485	28.9	0.01565	0.00329	42,080	5,757	1,063
GHA_ADL_4832	UGE	SAMN11245080	2,610,844	106,492	24.5	0.01611	0.00362	32,395	5,087	1,065
GHA_ADL_4833	UGE	SAMN11245081	2,314,001	101,644	22.8	0.01623	0.00378	29,938	4,906	1,055
GHA_ADL_4834	UGE	SAMN11245082	2,813,483	115,147	24.4	0.01587	0.00346	34,247	5,182	1,060
GHA_ADL_4835	UGE	SAMN11245083	3,607,508	128,863	28.0	0.01609	0.00324	40,253	5,648	1,064
GHA_ADL_4836	UGE	SAMN11245084	2,909,892	128,354	22.7	0.01638	0.00343	34,837	5,373	1,066
GHA_ANK_110	UGE	SAMN11245085	2,516,384	103,733	24.3	0.01578	0.00332	31,020	5,034	1,059
GHA_ANK_117	UGE	SAMN11245086	3,048,769	113,480	26.9	0.01600	0.00321	32,044	5,137	1,063
IVC_CJ_1106	UGE	SAMN11245087	4,788,086	141,363	33.9	0.01517	0.00327	46,851	5,547	1,053
IVC_T_01_11	UGW	SAMN11245088	2,940,221	114,355	25.7	0.01652	0.00334	32,625	3,664	902
IVC_T_01_2	UGW	SAMN11245089	1,109,516	85,079	13.0	0.01739	0.00489	16,368	2,089	777
IVC_T_01_27	UGW	SAMN11245090	3,190,892	136,708	23.3	0.01642	0.00326	37,642	3,858	896
IVC_T_16_24	UGW	SAMN11245091	5,255,160	151,656	34.7	0.01556	0.00262	50,070	4,364	914
IVC_T_16_25	UGW	SAMN11245092	12,547,753	181,013	69.3	0.01492	0.00200	67,063	4,698	933
IVC_T_16_26	UGW	SAMN11245093	20,110,021	406,977	49.4	0.01658	0.00193	99,135	4,733	925
LIB_LI_128	UGW	SAMN11245094	8,592,810	167,645	51.3	0.01513	0.00231	62,501	4,522	919
LIB_LI_129	UGW	SAMN11245095	4,956,834	142,824	34.7	0.01528	0.00285	49,451	4,151	894
LIB_LI_130	UGW	SAMN11245096	3,015,057	127,115	23.7	0.01637	0.00336	34,474	3,424	847

**TABLE S3** Summary of the ddRADseq assemblies for the  $K = 5$  populations of *Chiromantis rufescens*.

Population	<i>n</i>	Loci	0% missing data		10 % missing data		
			SNPs	SNPs, no singletons	Loci	SNPs	SNPs, no singletons
LGC	58	429	1,457	677	3,198	11,594	5,303
CON	22	3,195	2,614	1,625	6,330	5,155	3,175
LG	17	1,446	1,670	1,025	3,123	3,670	2,188
UGE	15	7,246	5,275	2,305	11,343	8,373	3,611
UGW	9	6,360	4,349	1,619	11,378	7,788	2,871

**TABLE S4** Population structure inference results using Structure. The optimal model is highlighted in bold.

<b>K</b>	<b>Reps</b>	<b>Mean LnP(K)</b>	<b>Stdev LnP(K)</b>	<b>Ln'(K)</b>	<b> Ln''(K) </b>	<b>Δ K</b>
1	5	-182598.70	2.544	—	—	—
2	5	-156378.88	2995.02	26219.82	6662.02	2.22
3	5	-136821.08	2097.85	19557.80	4351.76	2.07
4	5	-121615.04	1885.27	15206.04	3237.78	1.72
<b>5</b>	<b>5</b>	<b>-109646.78</b>	<b>11.37</b>	<b>11968.26</b>	<b>11749.44</b>	<b>1033.79</b>
6	5	-109427.96	9797.89	218.82	13626.46	1.39
7	5	-122835.60	24337.56	-13407.64	13030.38	0.54
8	5	-123212.86	26356.06	-377.26	63567.64	2.41
9	5	-187157.76	110784.32	-63944.90	97645.98	0.88
10	5	-153456.68	79556.47	33701.08	—	—

**TABLE S5** Parameter estimates inferred using 2D demographic models for *Chiromantis rufescens* populations. Parameters are unscaled.

Populations (comparison type)	Projection	$N_{1A}$	$N_{2A}$	$N_{1B}$	$N_{2B}$	$m$	$m_{12}$	$m_{21}$	$T_1$	$T_2$	$T_3$
<b>Demographic model</b>											
<b>UGW, UGE (Geographic)</b>											
Secondary contact, symmetric migration, size change, three epoch	8, 20	1.03	0.26	3.27	3.39	0.32	–	–	7.63	0.04	0.65
<b>UGE, LG (Geographic &amp; phylogenetic)</b>											
Secondary contact, symmetric migration, size change, three epoch	20, 22	0.73	8.89	10.88	11.89	0.02	–	–	8.85	1.32	0.95
<b>LG, LGC (Geographic)</b>											
Asymmetric migration, size change	22, 48	0.45	2.83	2.68	19.55	–	0.09	0.03	0.96	1.52	–
<b>LGC, CON (Geographic)</b>											
Secondary contact, asymmetric migration, size change	48, 16	0.56	0.11	10.40	0.94	–	0.01	0.08	0.47	1.05	–
<b>LGC, UGE+LG (Phylogenetic)</b>											
Asymmetric migration, size change	48, 24	0.63	0.99	10.08	1.91	–	0.03	0.15	0.56	0.94	–
<b>CON, LGC+UGE+LG (Phylogenetic)</b>											
Secondary contact, asymmetric migration, size change, three epoch	16, 48	0.61	4.75	1.46	20.18	–	0.10	0.01	2.28	0.60	0.19
<b>UGW, CON+LGC+UGE+LG (Phylogenetic)</b>											
Asymmetric migration, size change	8, 48	0.02	1.03	0.71	8.12	–	0.05	0.01	2.26	0.64	–

$N_{1A}, N_{2A}$  = Population sizes after divergence

$N_{1B}, N_{2B}$  = Population sizes after instantaneous size change

$m$  = Symmetric migration rate (migrants per generation)

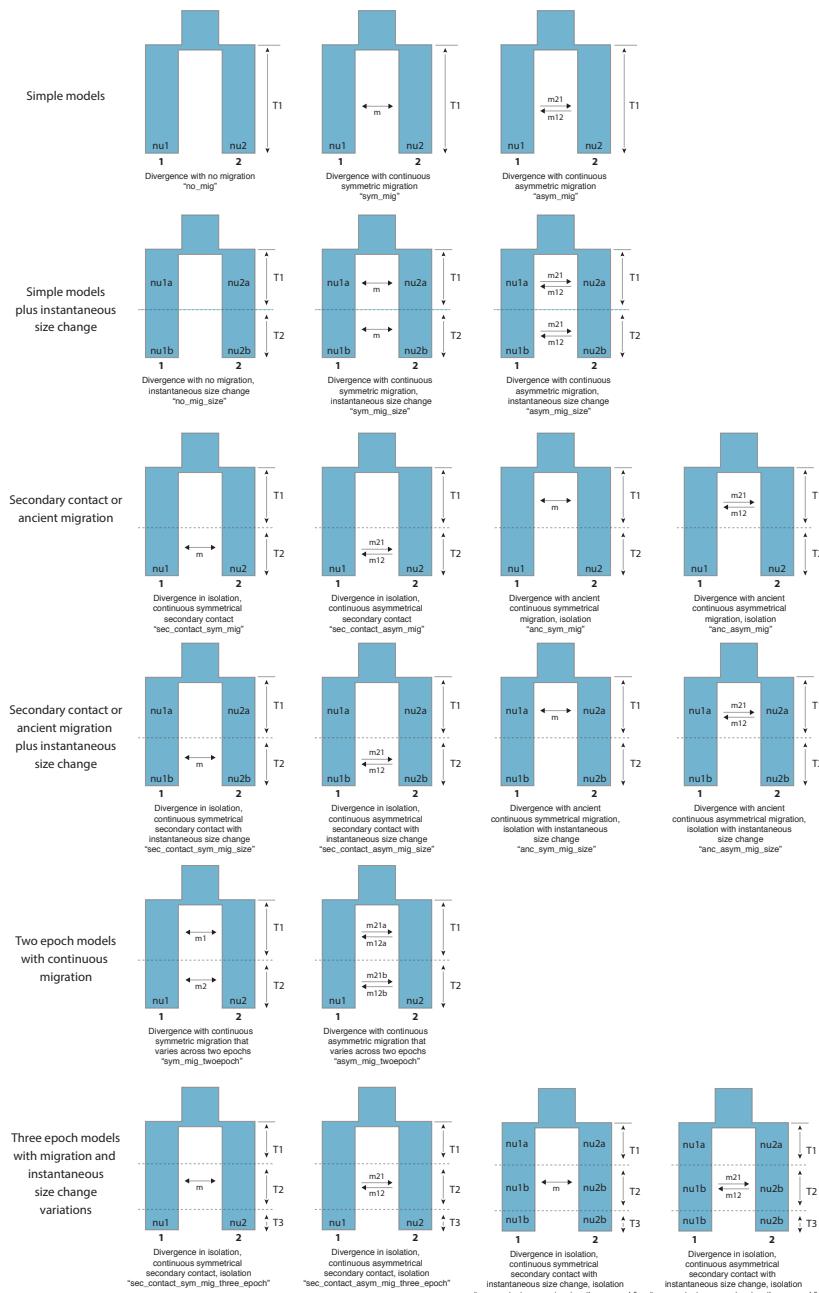
$m_{12}$  = Migrants per generation from population two to population one

$m_{21}$  = Migrants per generation from population one to population two

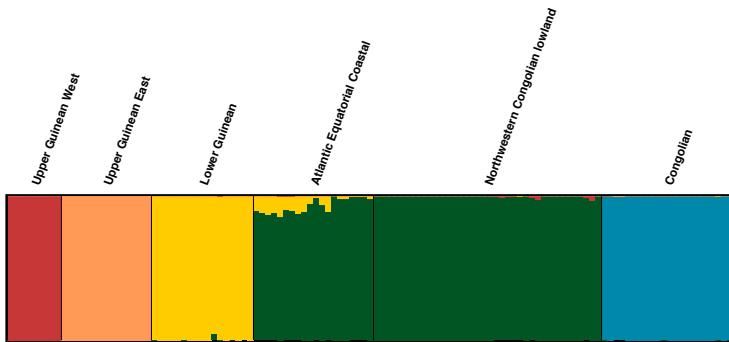
$T_1$  = Time interval from divergence to size change

$T_2$  = Time interval from size change to present (or second interval)

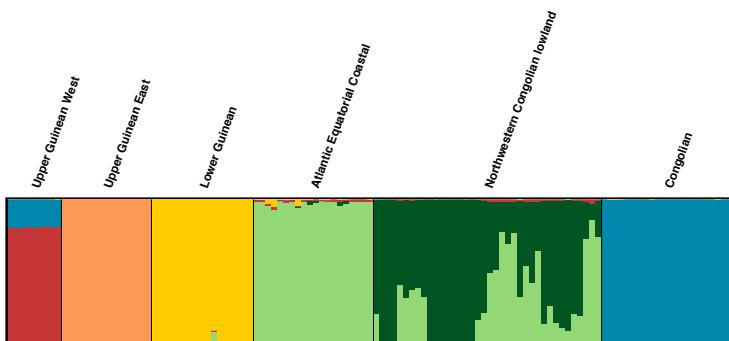
$T_3$  = Time interval from final size change to present



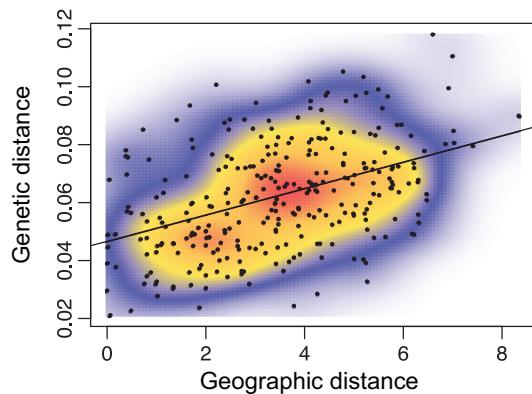
**FIGURE S1** 2D demographic models explored in *Chiromantis rufescens* using the program Moments. Python scripts for performing model fitting and other functions are available at [github.com/dportik/moment\\_pipeline](https://github.com/dportik/moment_pipeline).



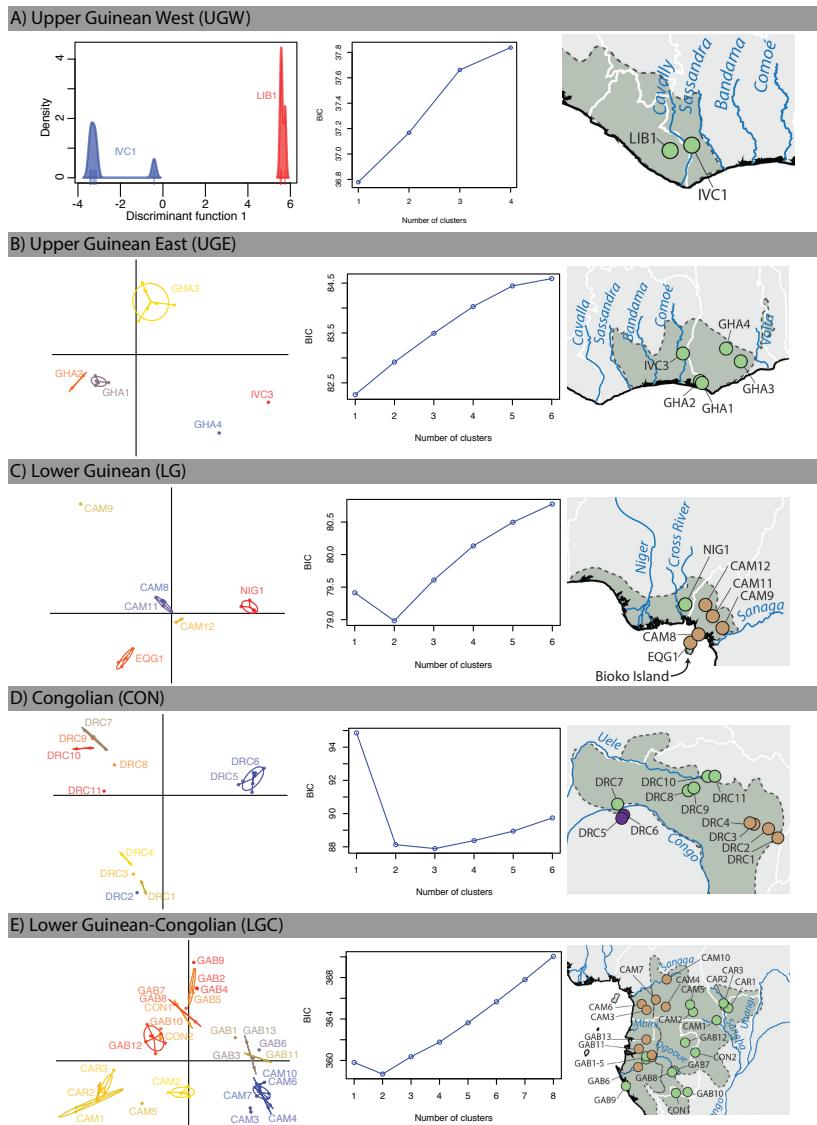
**FIGURE S2** Population structure results for the  $K = 5$  model using Structure.



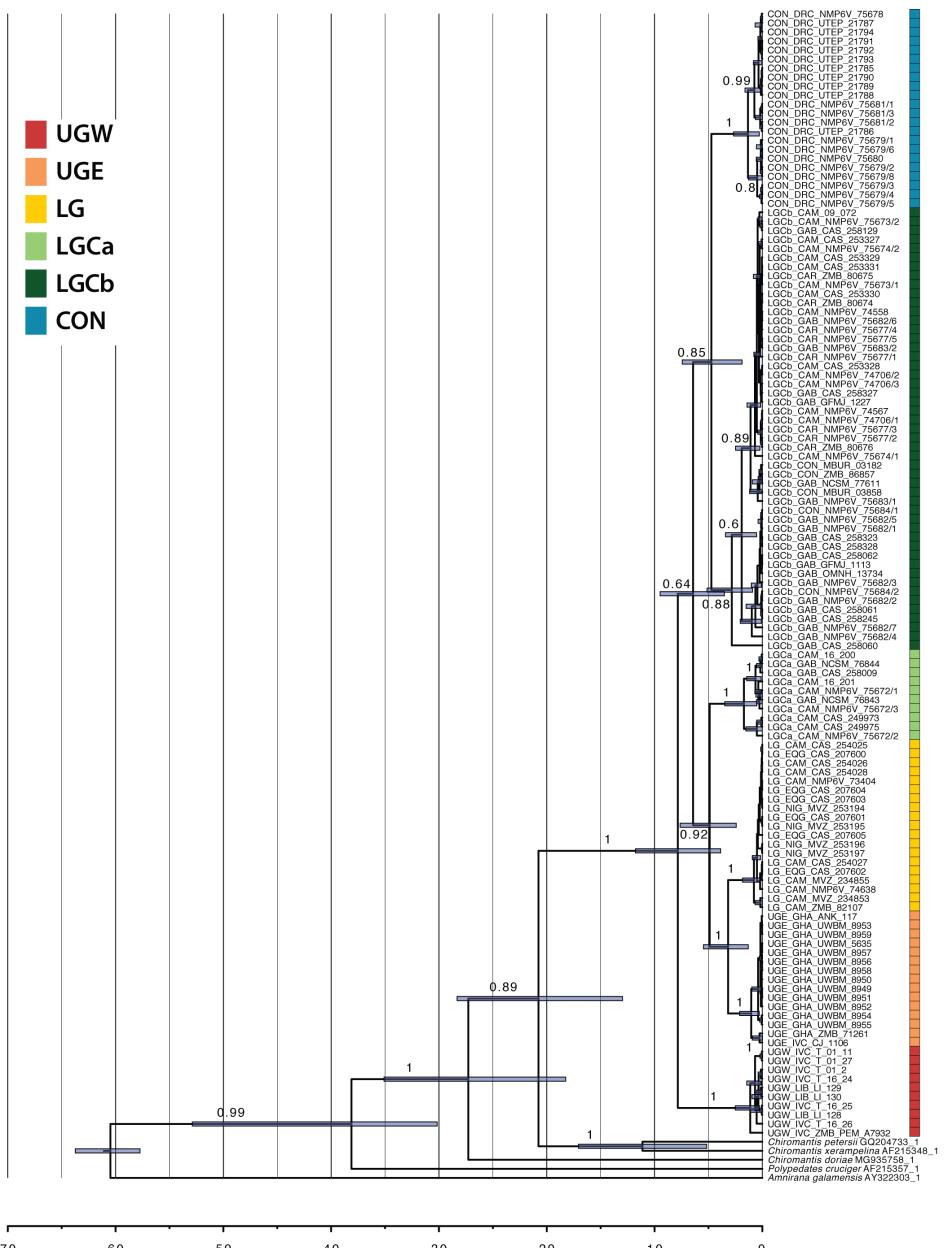
**FIGURE S3** Population structure results for the  $K = 6$  model using Structure.



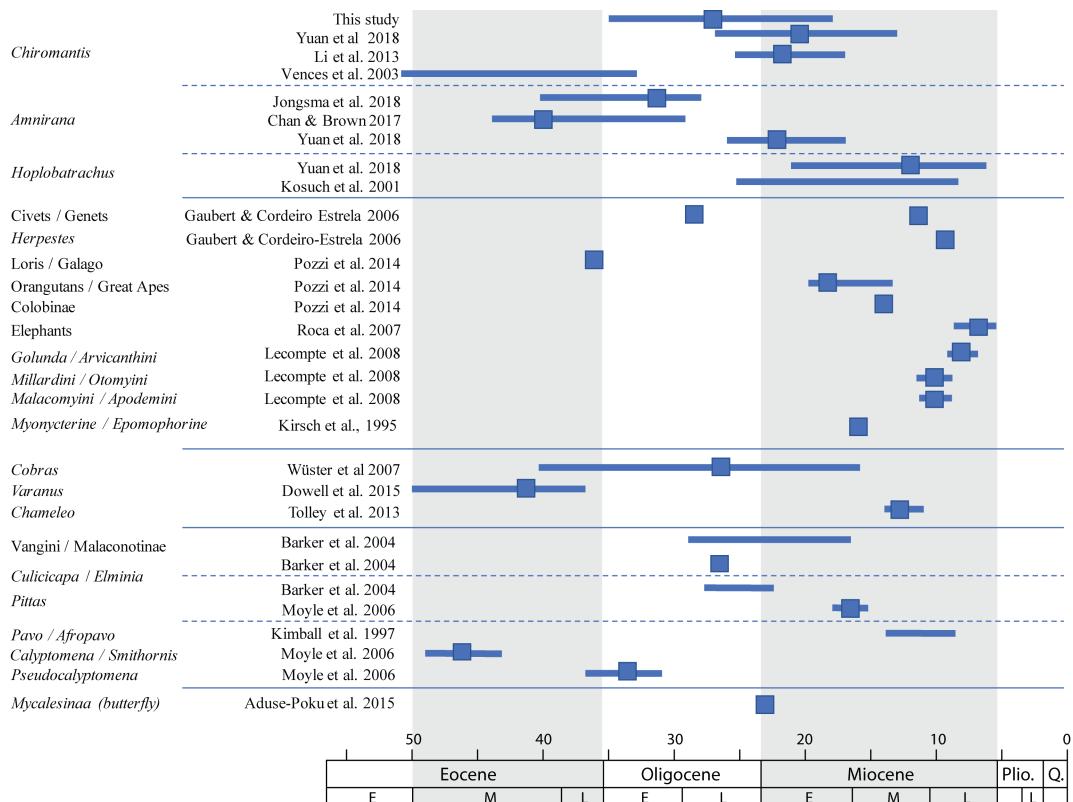
**FIGURE S4** Isolation by distance (IBD) analysis for the LGC population, which includes samples from the Atlantic Equatorial Coastal (AEC) and Northwestern Congolian lowland (NWC) forests, supports a strong positive relationship between geographic and genetic distance ( $P$ -value = 0.001). Colors represent local sampling density (white, lowest; red, highest).



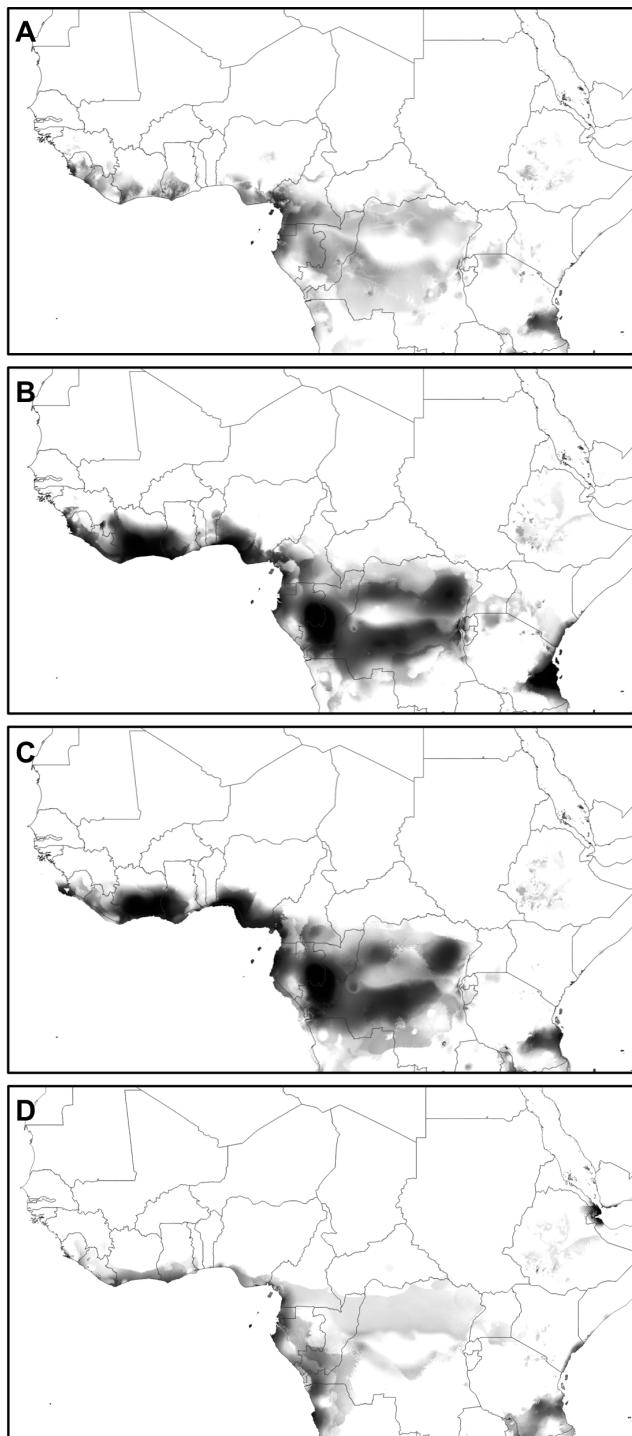
**FIGURE S5** Population structure results using adegenet for the  $K = 5$  populations. Each panel shows the DAPC clustering results when using sample localities as pre-defined groupings. The results of *de novo* clustering are shown with BIC plots, and the optimal  $K$  model is mapped.



**FIGURE S6** Mitochondrial DNA gene tree estimated using StarBEAST2. The gene tree was estimated jointly with the species tree. Numbers on branches are posterior probability values.



**FIGURE S7** Summary of divergence times estimated for taxonomic groups with Afro-Asian distributions.



**FIGURE S8** SDMs for (A) current, (B) mid-Holocene (6 kybp), (C) LGM, and (D) LIG climates using only climate variables (Mean Diurnal Range [bio2], Max Temperature of Warmest Month [bio5], Min Temperature of Coldest Month [bio6], Mean Temperature of Coldest Quarter [bio11], Precipitation of Driest Month [bio14], Precipitation of Wettest Quarter [bio16], Precipitation of Warmest Quarter [bio18], and Precipitation of Coldest Quarter [bio19]). AUC = 0.82.