

Supplementary information

Supplementary information S1: Microsatellite optimization

The aim was to design and optimize microsatellite markers that would amplify on both lineages of our target species. A total set of 40 loci was initially chosen from the database considering the quality rate (primers classified as “best” were favoured), repeat motif (balanced motifs were preferred), high number of repeats (above 11), small estimated product size (sizes below 200 bp due to the limitations of museum samples under PCR amplification methods (1); although these samples were not used in this study, it is one of the aims for future research) and melting temperatures. The selected loci were arranged in multiplexes for optimization. Multiplexes were designed combining markers with similar melting temperatures (maximum range of 5°C) of forward and reverse primers, and with a minimal interval of around 50 to 70 bp of the product size between loci labelled with the same dye colour (FAM, VIC, NED and PET) in order to avoid overlapping of the loci. AUTODIMER v1.0 (2) was used to perform screening analyses for intramolecular hairpins structures and primer dimer formation within each multiplex to avoid high complementarity between primers, thus promoting a higher amplification success. Uniplex PCRs were performed when markers failed to amplify in multiplex reactions in order to estimate the loci individual amplification success, optimal conditions and genotypes profile.

All PCRs were performed in 10µl reaction volumes. Multiplex reactions consisted of 5µl of QIAGEN PCR Master Mix, 3µl of pure water, 1µl of primer mix and 1µl of template DNA. Individual PCRs included 5µl of QIAGEN PCR Master Mix, 2.8µl of pure water, 0.4µl of each primer (forward and reverse), 0.4µl of fluorescent tail and 1µl of template DNA. All PCRs were performed using a touchdown (TD) protocol, which varied on each multiplex and individual reaction conditions (see Annex 6). Each PCR reaction was carried out with an initial denaturation step at 95°C of 15 min, a denaturation at 95°C for 30s, a TD method (-0.5°C) with the respective annealing temperature (Annex 6) of 60s, an extension at 72°C of 30 s, followed by a final extension of 30 min at 60°C. The number of cycles for each multiplex/individual reaction is displayed in Annex 6. PCR products were run on an ABI 3130xl Genetic Analyser (AB Applied Biosystems) using 1µl of the amplified product for 10µl of formamide +75-400 (-250) LIZ NEW size standard.

Tables

Table S1. Maximum Likelihood estimates (95% posterior density intervals in parentheses) of demographic parameters obtained with IMA2 between *J. jaculus* and *J. hirtipes* (mean generation time of 1 year) without the candidate genes for fur colouration (*MC1R* and *Agouti*). The values are in millions.

N_{e1}	N_{e2}	N_A	t	$2Nm_1$	$2Nm_2$
7.01 (5.08-9.93)	5.66 (3.79-8.405)	4.85 (1.67-9.30)	4.73 (0.44-7.65)	0.14*** (0-0.38)	0.24*** (0.04-0.43)

N_{e1} , effective population size of *J. jaculus*; N_{e2} , effective population size of *J. hirtipes*; N_A , effective population size of the ancestral population; t, time since the split between *J. jaculus* and *J. hirtipes*; $2Nm_1$, population migration rate into *J. jaculus*; $2Nm_2$, population migration rate into *J. hirtipes*. Significant values indicated ***($P < 0.001$).

Table S2. P-values and standard error (se) for deviations of the Hardy-Weinberg equilibrium, for excess and deficiency of heterozygotes. The p-value for this analysis was obtained with the Bonferroni correction. Significance levels are indicated: * p-value < 0.002273

Locus	<i>J. jaculus</i>				<i>J. hirtipes</i>			
	Heterozygote deficiency		Heterozygote excess		Heterozygote deficiency		Heterozygote excess	
	p-value	se	p-value	se	p-value	se	p-value	se
Jac11	0.0000*	0.0000	1.00	0.0000	0.1379	0.0238	0.8622	0.0238
Jac18	0.1873	0.0145	0.8157	0.0142	0.0428	0.0115	0.9572	0.0115
Jac27	0.0000*	0.0000	1.00	0.0000	0.0437	0.0181	0.9563	0.0181
Jac12	0.0018*	0.0016	0.9982	0.0016	0.0000*	0.0000	1.00	0.0000
Jac37	0.1109	0.0206	0.8901	0.0205	0.4944	0.0310	0.5100	0.0309
Jac02	0.3059	0.0371	0.6999	0.0375	0.5673	0.0339	0.4328	0.0339
Jac04	0.0020*	0.0007	0.9980	0.0007	0.0166	0.0036	0.9835	0.0036
Jac07	0.6960	0.0354	0.3315	0.0368	0.0000*	0.0000	1.00	0.0000
Jac08	0.6659	0.0290	0.3478	0.0292	0.1495	0.0218	0.8505	0.0218
Jac23	0.0914	0.0234	0.9095	0.0231	0.2382	0.0243	0.7618	0.0243
Jac24	0.1139	0.0218	0.8917	0.0211	0.0005*	0.0005	0.9995	0.0005

Table S3. Results of Structure Harvester for each number of clusters (K) analysed.

K	Mean LnP(K)	Stdev LnP(K)	Delta K
1	-3617.960000	0.733485	—
2	-3123.180000	0.432435	1094.916084
3	-3101.880000	2.265392	12.006753
4	-3107.780000	5.481514	6.826581
5	-3151.100000	11.777733	3.858128
6	-3239.860000	55.360121	1.061053
7	-3387.360000	82.978690	0.046036
8	-3531.040000	34.125401	2.548835
9	-3587.740000	64.127358	1.356987
10	-3731.460000	100.459012	—

Mean LnP(K): mean likelihood of each value of K; **Stdev LnP(K):** standard deviation of each likelihood; **Delta K:** likelihood of each cluster according to the Evanno method (3)

Table S4. List of the complete *Jaculus* samples used in analysis. The two columns labelled as “Cytb (short/long fragment)” and “Nuclear markers” indicate the samples that successfully amplified for at least one of the markers. The respective mitochondrial clade is displayed. *J. orientalis* samples used are also included. The samples geographic distribution is shown in Figure 1; although for some samples the exact coordinates are not available.

ADRA2B (*alpha-2B adrenergic receptor*); GHR (*growth hormone receptor*); IRBP (*interstitial retinoid binding protein*); vWF (*von Willebrand factor*); DBX5 (intron 5 from the *DBX* gene); MC1R (*melanocortin 1 receptor*); *Agouti*; M (microsatellites).

Sample Code	Museum/Field Collections	Country	Latitude	Longitude	Clade	Cytb (short/long fragment)	Nuclear markers
ZBSC 0013	Mauritania 2010	Morocco	28,829	-10,266	2		
ZBSC 0019	Mauritania 2010	Mauritania	20,997	-16,283	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0020	Mauritania 2010	Mauritania	20,929	-16,221	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0021	Mauritania 2010	Mauritania	20,602	-16,012	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0027	Mauritania 2010	Mauritania	16,566	-14,198	2		
ZBSC 0028	Mauritania 2010	Mauritania	16,435	-14,037	2		
ZBSC 0064	Mauritania 2010	Mauritania	18,901	-15,416	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0070	Mauritania 2010	Mauritania	20,724	-16,057	2	Short/Long	ADRA2B, DBX5, M
ZBSC 0072	Mauritania 2010	Mauritania	20,379	-15,991	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M

ZBSC 0079	Mauritania 2010	Mauritania	20,613	-16,013	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0081	Mauritania 2010	Western Sahara	22,639	-16,337	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0082	Mauritania 2010	Western Sahara	24,297	-15,333	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0083	Mauritania 2010	Western Sahara	24,630	-14,945	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0084	Mauritania 2010	Western Sahara	25,322	-14,795	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0193	Mauritania 2011	Western Sahara	25,267	-14,821	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0196	Mauritania 2011	Western Sahara	24,006	-15,611	2	Short/Long	ADRA2B, DBX5, M
ZBSC 0197	Mauritania 2011	Western Sahara	22,829	-16,250	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
ZBSC 0198	Mauritania 2011	Western Sahara	22,557	-16,370	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
ZBSC 0218	Mauritania 2011	Mauritania	21,438	-12,980	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0219	Mauritania 2011	Mauritania	21,352	-13,039	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0224	Mauritania 2011	Mauritania	20,557	-12,572	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0226	Mauritania 2011	Mauritania	20,508	-12,831	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0240	Mauritania 2011	Mauritania	20,254	-13,296	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
ZBSC 0241	Mauritania 2011	Mauritania	20,253	-13,311	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0242	Mauritania 2011	Mauritania	20,016	-13,887	2	Short/Long	ADRA2B, GHR, IRBP, DBX5, MC1R, Agouti, M
ZBSC 0243	Mauritania 2011	Mauritania	19,651	-14,504	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0244	Mauritania 2011	Mauritania	19,651	-14,504	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0245	Mauritania 2011	Mauritania	19,651	-14,504	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0246	Mauritania 2011	Mauritania	19,651	-14,504	1	Short	GHR
ZBSC 0256	Mauritania 2011	Mauritania	17,591	-12,848	1	Short/Long	ADRA2B, DBX5, M

ZBSC 0265	Mauritania 2011	Mauritania	18,094	-12,132	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0267	Mauritania 2011	Western Sahara	22,136	-16,570	2	Short/Long	GHR, DBX5, MC1R, Agouti,
ZBSC 0290	Mauritania 2012	Western Sahara	27,149	-10,847			
ZBSC 0291	Mauritania 2012	Western Sahara	27,055	-11,410	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0292	Mauritania 2012	Western Sahara	26,959	-11,657	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0293	Mauritania 2012	Western Sahara	26,933	-11,700	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0294	Mauritania 2012	Western Sahara	26,811	-11,746	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0295	Mauritania 2012	Western Sahara	25,246	-12,488	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0296	Mauritania 2012	Western Sahara	27,167	-10,964	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
ZBSC 0303	Mauritania 2012	Mauritania	21,021	-16,304	1	Short	GHR, IRBP, VWF, DBX5, M
ZBSC 0306	Mauritania 2012	Mauritania	16,633	-15,196	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0382	Mauritania: October/December 2012	Morocco	32,474	-4,494			
ZBSC 0383	Mauritania: October/December 2012	Morocco	28,961	-10,508	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0384	Mauritania: October/December 2012	Morocco	28,394	-11,026	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0385	Morocco 2012	Morocco	28,330	-10,913	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
ZBSC 0388	Morocco 2012	Morocco	28,823	-10,371	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0403	Mauritania 2014	Western Sahara	25,936	-14,514	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0404	Mauritania 2014	Western Sahara	25,654	-14,660	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0408	Mauritania 2014	Western Sahara	23,846	-15,863	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0413	Mauritania 2014	Western Sahara	23,595	-15,715	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0414	Mauritania 2014	Western Sahara	23,115	-14,964	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0417	Mauritania 2014	Mauritania	20,844	-16,149	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0420	Mauritania 2014	Mauritania	20,093	-15,927	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0423	Mauritania 2014	Mauritania	16,220	-13,260	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0424	Mauritania 2014	Mauritania	15,565	-12,327	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0509	Mauritania 2014	Mauritania	18,383	-9,313	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0526	Mauritania 2014	Mauritania	18,559	-11,248	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0542	Mauritania 2014	Mauritania	18,357	-11,816	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0543	Mauritania 2014	Mauritania	18,357	-11,816	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0558	Mauritania 2014	Mauritania	18,109	-11,916	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0559	Mauritania 2014	Mauritania	18,000	-11,884	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0591	Mauritania 2014	Morocco	32,255	-2,215	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
ZBSC 0599	Mauritania 2014	Morocco	32,156	-1,327	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0614	Mauritania 2014	Morocco	28,393	-11,028	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0626	Mauritania 2014	Morocco	28,179	-11,857	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0629	Mauritania 2014	Morocco	28,559	-10,918	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0647	Morocco winter 2015	Morocco	27,924	-11,444	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0650	Morocco winter 2015	Morocco	27,907	-11,600	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0651	Morocco winter 2015	Morocco	27,895	-11,610	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0652	Morocco winter 2015	Morocco	27,901	-11,605	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0653	Morocco winter 2015	Morocco	27,875	-11,588	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0654	Morocco winter 2015	Morocco	27,907	-11,600	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0665	Morocco winter 2015	Morocco	27,224	-12,883	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0675	Morocco winter 2015	Morocco	26,579	-12,769	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0678	Morocco winter 2015	Morocco	27,046	-11,537	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0679	Morocco winter 2015	Morocco	27,054	-11,432	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
ZBSC 0681	Morocco winter 2015	Morocco	27,076	-11,756	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0683	Morocco winter 2015	Morocco	27,386	-11,694	2	Short/Long	MC1R, Agouti,
ZBSC 0684	Morocco winter 2015	Morocco	27,453	-11,681	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0685	Morocco winter 2015	Morocco	27,453	-11,681	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0686	Morocco winter 2015	Morocco	27,575	-11,634	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0688	Morocco winter 2015	Morocco	27,938	-11,577	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0690	Morocco winter 2015	Morocco	27,902	-11,605	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0691	Morocco winter 2015	Morocco	27,918	-11,553	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0692	Morocco winter 2015	Morocco	27,918	-11,554	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0693	Morocco winter 2015	Morocco	27,914	-11,545	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0694	Morocco winter 2015	Morocco	27,902	-11,604	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0695	Morocco winter 2015	Morocco	27,927	-11,571	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0696	Morocco winter 2015	Morocco	27,907	-11,601	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0697	Morocco winter 2015	Morocco	27,938	-11,577	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
ZBSC 0699	Morocco winter 2015	Morocco	27,926	-11,444	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

ZBSC 0703	Morocco winter 2015	Morocco	28,110	-11,301	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D100	National Geographic:Sept-Decem 2004	Mauritania	17,938	-12,267	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D1283	National Geographic:Sept-Decem 2004	Western Sahara	22,446	-16,448	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D144	National Geographic:Sept-Decem 2004	Western Sahara	24,847	-14,844	2	Short/Long	ADRA2B, GHR, IRBP, DBX5, Agouti, M
D145	National Geographic:Sept-Decem 2004	Western Sahara	25,245	-14,821	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
D535	National Geographic:Sept-Decem 2004	Western Sahara	21,937	-16,875	2	Short/Long	ADRA2B, VWF
D549	National Geographic:Sept-Decem 2004	Western Sahara	24,788	-14,865	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
D576	National Geographic:Sept-Decem 2004	Morocco	29,389	-8,129	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
D577	National Geographic:Sept-Decem 2004	Morocco	30,038	-6,894	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D578	National Geographic:Sept-Decem 2004	Morocco	30,038	-6,894	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M

D796	National Geographic:Sept-Decem 2004	Western Sahara	24,686	-14,862	2	Short/Long	ADRA2B, GHR, VWF, DBX5
D800	National Geographic:Sept-Decem 2004	Western Sahara	25,306	-14,803	2	Short/Long	ADRA2B, GHR, IRBP, VWF, M
D684	National Geographic:Sept-Decem 2004	Morocco	31,075	-4,011	2	Short/Long	ADRA2B, GHR, IRBP, VWF, MC1R, Agouti, DBX5
D53	National Geographic:Sept-Decem 2004	Mauritania	17,195	-7,141	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
D52	National Geographic:Sept-Decem 2004	Mauritania	17,225	-7,069	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, M
D117	National Geographic:Sept-Decem 2004	Mauritania	17,393	-13,453	1	Short/Long	GHR, DBX5
D493	National Geographic:Sept-Decem 2004	Mauritania	17,408	-16,062	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
D113	National Geographic:Sept-Decem 2004	Mauritania	17,693	-12,571	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D3055	National Geographic:Sept-Decem 2004	Mauritania	17,895	-11,716	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D22	National Geographic:Sept-Decem 2004	Mauritania	17,899	-12,334	1	Short/Long	ADRA2B, GHR, VWF, DBX5, M
D101	National Geographic:Sept-Decem 2004	Mauritania	17,938	-12,267	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

D3107	National Geographic:Sept-Decem 2004	Mauritania	18,021	-12,050	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
D506	National Geographic:Sept-Decem 2004	Mauritania	19,439	-14,754	1	Short/Long	ADRA2B, GHR, IRBP, VWF, Agouti
D511	National Geographic:Sept-Decem 2004	Mauritania	19,641	-14,522	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
D1003	National Geographic:Sept-Decem 2004	Mauritania	20,378	-15,991	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D1630	National Geographic:Sept-Decem 2004	Mauritania	21,355	-13,025	1		
D945	National Geographic:Sept-Decem 2004	Morocco	28,633	-10,753	1		
D320	National Geographic:Sept-Decem 2004	Tunisia	33,014	10,952	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D536	National Geographic:Sept-Decem 2004	Western Sahara	21,969	-16,874	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D541	National Geographic:Sept-Decem 2004	Western Sahara	22,367	-16,462	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
D316	National Geographic:Sept-Decem 2004	Tunisia	33,498	9,383	2		ADRA2B, GHR, VWF
8067	Collected by Luis Garcia-Cardenete	Morocco	28,991	-10,315	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

8069	Collected by Luis Garcia-Cardenete	Morocco	28,598	-10,859	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
8070	Collected by Luis Garcia-Cardenete	Morocco	28,298	-11,189	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti, M
8072	Collected by Luis Garcia-Cardenete	Morocco	27,723	-11,565	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
8076	Collected by Luis Garcia-Cardenete	Western Sahara	26,689	-11,854	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
8345	Collected by Luis Garcia-Cardenete	Morocco	32,416	-2,087	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
8350	Collected by Luis Garcia-Cardenete	Morocco	32,141	-2,791	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
8367	Collected by Luis Garcia-Cardenete	Morocco	29,825	-7,524	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
8374	Collected by Luis Garcia-Cardenete	Morocco	28,905	-10,170	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
8545	Observed by F. Martínez-Freiría	Morocco	31,144	-7,404		Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M
9072	Collected by LG Cardenete	Morocco	28,069	-11,361	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

9083	Collected by LG Cardenete	Morocco	28,361	-10,859	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
9086	Collected by LG Cardenete	Morocco	29,010	-10,207	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
9087	Collected by LG Cardenete	Morocco	28,655	-10,486	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, M
10355	F Álvares, R Godinho, M Nakamura, J Layna	Senegal	16,355	-16,224	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
6064	Mauritania 2011	Mauritania	18,236	-11,519	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
6269	Mauritania 2011	Mauritania	18,480	-16,022	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
6367	Mauritania 2011	Mauritania	19,960	-16,084	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, M MC1R, Agouti,
6267	Mauritania 2011	Mauritania	18,480	-16,022	1		
6268	Mauritania 2011	Mauritania	18,480	-16,022	1	Short	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
6481	Mauritania 2011	Western Sahara	22,276	-16,494	2		ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M

6482	Mauritania 2011	Western Sahara	22,348	-16,469	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
1221	Mauritania 2011	Morocco	31,075	-4,011			
11043	Mauritania: November 2014	Mauritania	16,068	-11,509	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
11379	Mauritania: November 2014	Mauritania	18,197	-15,047	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
11382	Mauritania: November 2014	Mauritania	18,261	-14,981	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
11384	Mauritania: November 2014	Mauritania	18,490	-14,644	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
11408	Mauritania: November 2014	Mauritania	18,429	-14,801	1	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
11411	Mauritania: November 2014	Western Sahara	22,061	-16,736	2	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti, M
37709	Royal Museum of Central Africa Tervuren	Egypt	22,004	25,145	1	Short	
37711	Royal Museum of Central Africa Tervuren	Egypt	22,004	25,145			
37720	Royal Museum of Central Africa Tervuren	Egypt	22,004	25,145	1	Short	
37728	Royal Museum of Central Africa Tervuren	Egypt	22,004	25,145	1	Short/Long	
37731	Royal Museum of Central Africa Tervuren	Egypt	22,004	25,145	1	Short	
37750	Royal Museum of Central Africa Tervuren	Egypt	22,030	25,141	1	Short/Long	

37761	Royal Museum of Central Africa Tervuren	Egypt	22,037	25,097	1	Short	
37762	Royal Museum of Central Africa Tervuren	Egypt	22,037	25,097	1	Short	
37763	Royal Museum of Central Africa Tervuren	Egypt	22,037	25,097	1	Short	
37764	Royal Museum of Central Africa Tervuren	Egypt	22,004	25,145	1	Short	
5046	Royal Museum of Central Africa Tervuren	Sudan	15,600	32,800	1	Short	
5047	Royal Museum of Central Africa Tervuren	Sudan	15,600	32,800	1	Short	
13536	Natural History Museum (Naturhistorisches Museum) – Vienna	Israel			1	Short/Long	
16984	Natural History Museum, Brussels, Belgium	Egypt	22,010	25,140	1	Short	
16989	Natural History Museum, Brussels, Belgium	Egypt	22,010	25,140	1	Short/Long	
16992	Natural History Museum, Brussels, Belgium	Egypt	22,037	25,096	1	Short	
16993	Natural History Museum, Brussels, Belgium	Egypt	22,037	25,096	1	Short	
467B	Natural History Museum, Brussels, Belgium	Saudi-Arabia			1	Short	
72.64.1.	Hungarian Museum of natural History	Tunisia	36,480	10,670			
72.64.2.	Hungarian Museum of natural History	Tunisia	36,480	10,670			
72.64.3.	Hungarian Museum of natural History	Tunisia	36,480	10,670			
72.64.4.	Hungarian Museum of natural History	Tunisia	36,480	10,670			
72.64.5.	Hungarian Museum of natural History	Tunisia	36,480	10,670			
81.54.1	HNHM, Hungary	Iraq					
86.28.1.	Hungarian Museum of natural History	Algeria	32,833	3,767			
88.119.1.	Hungarian Museum of natural History	Tunisia	36,480	10,670			
2000.75.7	HNHM, Hungary	Iraq					

3302	MZUF, Florence	Somalia	4,720	46,597			
6262	MZUF, Florence	Somalia	8,237	48,265			
3299	MZUF, Florence	Somalia	4,720	46,597			
6261	MZUF, Florence	Somalia	4,720	46,597			
6296	MZUF, Florence	Somalia	9,975	50,540			
10010	MZUF, Florence	Somalia	4,083	46,550			
10011	MZUF, Florence	Somalia	4,083	46,550			
2484	MZUF, Florence	Somalia	4,720	46,597			
6260	MZUF, Florence	Somalia	4,720	46,597			
M/9798/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	28,250	0,200	1	Short	
M/9799/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	30,717	3,133	1	Short	
M/9796/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	33,100	1,267			
M/9795/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	32,166	5,189			
M/9801/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	35,137	3,016	1	Short	
M/9800/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	23,700	5,133			
M/9797/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	28,250	-0,200	1	Short	
M/9794/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria	35,094	3,017			

M/9790/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria					
M/9792/90	Polish Academy of Science, Museum of Institute of Systematics and Evolution of Mammals	Algeria					
5606	MZUF Florence	Lybia					
22020	Belgium Royal Museum of Natural History Brussels	Tunisia			1	Short	
22021	Belgium Royal Museum of Natural History Brussels	Tunisia	34,483	9,583	1	Short	
30263	Natural History Museum (Naturhistorisches Museum) – Vienna	Libya			1	Short	
30264	Natural History Museum (Naturhistorisches Museum) – Vienna	Libya					
M-0274	Belgium Royal Museum of Cantral Africs Tervuren	Tunisia					
M-0275	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia			1	Short	
M-0277	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia					
M-0278	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia					
M-0279	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia					
M-0280	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia					
M-0281	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia			1	Short	
M-0282	Belgium Royal Museum of Cantral Africs Tervuren	Libya			1	Short	
M-0283	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia			2	Short	
M-0284	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia					
M-0285	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia			2	Short	
M-0286	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia					
M-0287	Belgium Royal Museum of Cantral Africs Tervuren	Tunesia			2	Short	

11908	Natural History Museum (Naturhistorisches Museum) – Vienna	Tunisia					
9812	Belgium Royal Museum of Natural History Brussels	Libya			2	Short	
9813	Belgium Royal Museum of Natural History Brussels	Libya					
9814	Belgium Royal Museum of Natural History Brussels	Libya					
9815	Belgium Royal Museum of Natural History Brussels	Libya					
9816	Belgium Royal Museum of Natural History Brussels	Libya					
9817	Belgium Royal Museum of Natural History Brussels	Libya					
9818	Belgium Royal Museum of Natural History Brussels	Libya					
18044	Belgium Royal Museum of Natural History Brussels	Libya	30,766	17,783	1		
18043	Belgium Royal Museum of Natural History Brussels	Libya	30,833	17,783	1		
18042	Belgium Royal Museum of Natural History Brussels	Libya	30,833	17,783	2	Short	
18041	Belgium Royal Museum of Natural History Brussels	Libya	30,766	17,833	1	Short	
16995	Belgium Royal Museum of Natural History Brussels	Libya	21,963	24,820	2	Short	
16994	Belgium Royal Museum of Natural History Brussels	Libya	21,963	24,820	2	Short	
11908	Natural History Museum (Naturhistorisches Museum) – Vienna	Tunisia	34,466	8,716			
ZBSC 0169	Morocco 2011	Morocco	32,894316	-4,999255	outgroup	Short	
ZBSC 0170	Morocco 2011	Morocco	32.894316	-4.999255	outgroup	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti
ZBSC 0171	Morocco 2011	Morocco	32.895635	-5.003515	outgroup	Short/Long	
ZBSC 0172	Morocco 2011	Morocco	32.895635	-5.003515	outgroup	Short	
ZBSC 0173	Morocco 2011	Morocco	32.895635	-5.003515	outgroup	Short	

ZBSC 0174	Morocco 2011	Morocco	32.910272	-5.032408	outgroup	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, Agouti
ZBSC 0400	Morocco 2011	Morocco	33.25945	2.69051	outgroup	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5
10178	Morocco 2012	Morocco	34,388593	-3,009135	outgroup	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti
10233	Morocco 2013	Morocco	32,939682	-2,490725	outgroup	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R
10234	Morocco 2013	Morocco	32,820313	-2,585565	outgroup	Short/Long	ADRA2B, GHR, IRBP, VWF, DBX5, MC1R, Agouti

Table S5. List of the primers and respective PCR conditions used in mitochondrial and nuclear DNA analysis.

Locus	Size (bp)	Forward primer		Reverse primer		Ta (°C)	Reference
Cytb	897	Jac1Fw	GGACTCCCCATGACCTAT	Jac1Rv	TGCTGGTTTACAAGACCA	55	(4)
		Jac4Fw	CAAACCCACTTAATACGC	Jac4Rv	CGAGAAGAGGGGATACGAC		
	325	Jac4Fw	CAAACCCACTTAATACGC	Jac1Rv	TGCTGGTTTACAAGACCA		
DBX5	317	DBX5F	CAACAACCTGTCCTCCACA	DBX5R	CATGATAATTTCTCCCATCTC	TD 60-50 (-0.5)	(5)
ADRA2B	693	J-adra2B1F	CTGGCGCTCGACGTGCTCTT	J-adra2B1R	AGCACCTGGCCACGGAGAGT	TD 68-64 (-0.5)	This study
GHR	798	J-ghr3F	ACAATGATGACTCTTGGGTTGAG T	J-ghr3R	AAGGGCAGGGCAGTTGCATT		
IRBP	1058	J-irbp2F	GCGGCCATCCAGCAGGTAAT	J-irbp3R	CCGGCAGCACTGACACCTGA		
UWF	874	J-UWF4F	ACGGATGCCTCGCTCAGCTC	J-UWF7R	CTCCAGTTCCTGCTGGTTGGC A		(4)
Agouti	545	exon2F	GTCAGTACTCCGCCCTCTGG	exon2R	AGACAAGGAGCAAGCCATAG C	TD 60-65 (-0.5)	This study
MC1R	1091	F3	GACACTAGAACCCTCCTGATG	R3	GAATATCACCATCTCCCTCTG C	TD 55-60 (-0.5)	

Table S6. List of the GenBank sequences used in *cytb* analysis.

Identification	GB		Province, Country	Latitude	Longitude	Clade	Cytb Sequence	Reference
	Accession number							
D144	JX885131	Richard Toll, Senegal	16,43	-15,66	1	Short/Long	(6)	
D145	JX885132	Thilé, Senegal	16,51	-15,08	1	Short/Long	(6)	
D146	JX885133	Nbeika, Mauritania	17,95	-12,23	1	Short/Long	(6)	
D147	JX885134	Nbeika, Mauritania	17,95	-12,23	1	Short/Long	(6)	
D149	JX885136	Akjoujt, Mautitania	19,74	-14,37	1	Short/Long	(6)	
D150	JX885137	Ayn El taya, Mauritania	20,25	-13,27	1	Short/Long	(6)	
D151	JX885138	Ayn El taya, Mauritania	20,25	-13,27	2	Short/Long	(6)	
D152	JX885139	El Mhaoudat, Mauritania	22,97	-12,00	2	Short/Long	(6)	
D153	JX885140	El Mhaoudat, Mauritania	22,97	-12,00	2	Short/Long	(6)	
D154	JX885141	Niafounke, Mali	15,93	-3,97	1	Short/Long	(6)	
D155	JX885142	Niafounke , Mali	15,93	-3,97	1	Short/Long	(6)	
D156	JX885143	Tsinsack, Mali	16,73	-2,96	1	Short/Long	(6)	
D157	JX885144	Tsinsack, Mali	16,73	-2,96	1	Short/Long	(6)	
D158	JX885145	Tidarmene, Mali	17,02	2,11	1	Short/Long	(6)	
D159	JX885146	Tidarmene, Mali	17,02	2,11	1	Short/Long	(6)	
D160	JX885147	Abeibara, Mali	19,01	1,83	2	Short/Long	(6)	
D161	JX885148	Abeibara, Mali	19,01	1,83	2	Short/Long	(6)	
D162	JX885149	Oued Chacheguerène, Mali	19,70	0,00	1	Short/Long	(6)	
D163	JX885150	Oued Chacheguerène, Mali	19,70	0,00	2	Short/Long	(6)	
D164	JX885151	Kreb in Karoua, Mali	19,78	0,33	1	Short/Long	(6)	
D165	JX885152	Babangata, Niger	12,91	2,40	1	Short/Long	(6)	
D166	JX885153	Gangara, Niger	14,61	8,50	1	Short/Long	(6)	
D168	JX885155	Gangara, Niger	14,61	8,50	2	Short/Long	(6)	

D169	JX885156	Gangara, Niger	14,61	8,50	2	Short/Long	(6)
D170	JX885157	Gangara , Niger	14,61	8,50	1	Short/Long	(6)
D171	JX885158	Goûgaram, Niger	18,55	7,78	2	Short/Long	(6)
D172	JX885159	Al Baydah, Algeria	33,69	1,01	1	Short/Long	(6)
D174	JX885161	Batna, Algeria	35,32	5,83	2	Short/Long	(6)
D175	JX885162	Tebessa, Algeria	35,40	8,12	2	Short/Long	(6)
D176	JX885163	Tebessa, Algeria	35,40	8,12	2	Short/Long	(6)
D191	JX885164	Hamma, Tunisia	33,95	9,63	2	Short/Long	(6)
D194	JX885165	Matmata, Tunisia	33,55	9,96	2	Short/Long	(6)
D177	JX885166	Sbeitla, Tunisia	35,22	9,12	1	Short/Long	(6)
D178	JX885167	Sbeitla, Tunisia	35,22	9,12	1	Short/Long	(6)
D179	GU433437	Sbeitla, Tunisia	35,22	9,12	2	Short/Long	(7)
D180	GU433439	Menzel Chaker, Tunisia	34,96	10,36	2	Short	(7)
D182	GU433422	Nefta, Tunisia	33,87	7,87	1	Short	(7)
D186	GU433408	Nefta, Tunisia	33,87	7,87	1	Short	(7)
D187	GU433409	Douz, Tunisia	33,45	9,02	1	Short	(7)
D188	GU433410	Douz, Tunisia	33,45	9,02	1	Short	(7)
D189	GU433424	Douz, Tunisia	33,45	9,02	1	Short/Long	(7)
D190	GU433412	Hamma, Tunisia	33,95	9,63	1	Short	(7)
D192	GU433413	Hamma, Tunisia	33,95	9,63	1	Short	(7)
D195	GU433415	Matmata, Tunisia	33,55	9,96	1	Short	(7)
D197	GU433427	Matmata, Tunisia	33,55	9,96	1	Short/Long	(7)
D198	GU433411	Matmata, Tunisia	33,55	9,96	1	Short	(7)
D200	GU433421	Matmata, Tunisia	33,55	9,96	1	Short	(7)
D201	GU433441	Matmata, Tunisia	33,55	9,96	2	Short/Long	(7)
D202	GU433418	Matmata, Tunisia	33,55	9,96	1	Short/Long	(7)
D203	GU433435	Matmata, Tunisia	33,55	9,96	2	Short/Long	(7)
D205	GU433438	Matmata, Tunisia	33,55	9,96	2	Short	(7)
D207	GU433425	Matmata, Tunisia	33,55	9,96	1	Short/Long	(7)
D208	GU433426	Matmata, Tunisia	33,55	9,96	1	Short/Long	(7)
D212	GU433429	Matmata, Tunisia	33,55	9,96	1	Short/Long	(7)

D215	GU433420	Tataouine, Tunisia	32,93	10,45	1	Short/Long	(7)
D209	GU433423	Matmata, Tunisia	33,55	9,96	1	Short/Long	(7)
D213	JX885168	Medenine, Tunisia	33,33	11,00	2	Short	(6)
D217	JX885169	Hun, Libya	29,12	15,93	2	Short/Long	(6)
D218	JX885170	Hun, Libya	29,12	15,93	2	Short/Long	(6)
D219	JX885171	Hun, Libya	29,12	15,93	1	Short/Long	(6)
D220	JX885172	Hun, Libya	29,12	15,93	1	Short/Long	(6)
D221	JX885173	Adiri, Libya	27,53	13,19	1	Short/Long	(6)
D222	JX885174	Adiri, Libya	27,53	13,19	1	Short/Long	(6)
D223	JX885175	Adiri, Libya	27,53	13,19	1	Short/Long	(6)
D224	JX885176	Adiri, Libya	27,53	13,19	1	Short	(6)
D225	JX885177	Birak, Libya	27,54	14,24	1	Short/Long	(6)
D226	JX885178	Birak, Libya	27,54	14,24	1	Short/Long	(6)
D227	JX885179	Birak, Libya	27,54	14,24	1	Short/Long	(6)
D228	JX885180	Birak, Libya	27,54	14,24	1	Short/Long	(6)
D229	JX885181	Jalu, Libya	29,02	21,55	1	Short/Long	(6)
D230	JX885182	Jalu, Libya	29,02	21,55	1	Short/Long	(6)
D231	JX885183	Tazirbu, Libya	25,70	21,13	1	Short/Long	(6)
D232	JX885184	Tazirbu, Libya	25,70	21,13	2	Short/Long	(6)
D233	JX885185	Burj El Arab, Egypt	29,97	31,27	2	Short/Long	(6)
D234	JX885186	Burj El Arab, Egypt	29,97	31,27	2	Short/Long	(6)
D235	JX885187	Burj El Arab, Egypt	29,97	31,27	2	Short/Long	(6)
D236	JX885188	Abu Rauwash , Egypt	29,66	31,23	2	Short/Long	(6)
D237	JX885189	Al Jizah, Egypt	29,15	29,98	2	Short/Long	(6)
D239	JX885191	Al Minya, Egypt	28,17	30,74	2	Short/Long	(6)
D240	JX885192	Al Minya, Egypt	28,17	30,74	2	Short/Long	(6)
D241	JX885193	Sulaibiya, Kuwait	29,27	47,71	2	Short/Long	(6)
D242	JX885194	Sulaibiya, Kuwait	29,27	47,71	2	Short/Long	(6)
USNM483105	KC663576	Morocco	28,77	-10,23	2	Short	(8)
USNM482686	KC663514	Niger	15,75	6,60	2	Short	(8)
USNM482681	KC663512	Niger	17,37	6,72	1	Short	(8)

USNM482673	KC663513	Niger	18,97	5,97	1	Short	(8)
USNM482671	KC663526	Niger	16,55	6,87	2	Short	(8)
USNM482504	KC663580	Algeria	23,17	5,12	1	Short	(8)
USNM482503	KC663577	Algeria	22,93	5,42	2	Short	(8)
USNM482502	KC663565	Algeria	22,63	5,73	2	Short	(8)
USNM482499	KC663557	Algeria	23,57	5,12	1	Short	(8)
USNM482491	KC663549	Algeria	26,87	-0,97	1	Short	(8)
USNM482482	KC663539	Algeria	30,05	-2,22	1	Short	(8)
USNM482480	KC663531	Algeria	32,46	-0,58	1	Short	(8)
USNM475885	KC663572	Morocco	32,68	-3,08	2	Short	(8)
USNM475865	KC663579	Morocco	30,30	-5,93	2	Short	(8)
USNM475820	KC663525	Morocco	32,15	-1,25	1	Short	(8)
USNM475797	KC663524	Morocco	31,83	-4,58	1	Short	(8)
USNM475783	KC663574	Morocco	32,50	-2,05	2	Short	(8)
USNM475780	KC663575	Morocco	31,95	-3,55	1	Short	(8)
USNM475764	KC663573	Morocco	32,12	-2,85	2	Short	(8)
USNM475761	KC663578	Morocco	31,90	-4,48	2	Short	(8)
USNM401212	KC663571	Mauritania	21,52	-13,05	1	Short	(8)
USNM350066	KC663536	Egypt	30,08	31,58	2	Short	(8)
USNM342084	KC663515	Sudan	15,23	36,39	1	Short	(8)
USNM342040	KC663521	Egypt	29,70	32,35	1	Short	(8)
USNM342034	KC663529	Egypt	28,54	30,57	1	Short	(8)
USNM342033	KC663540	Egypt	28,32	31,12	2	Short	(8)
USNM342030	KC663528	Egypt	27,14	31,38	2	Short	(8)
USNM342028	KC663543	Egypt	27,22	30,80	1	Short	(8)
USNM325828	KC663550	Libya	29,59	24,86	1	Short	(8)
USNM325821	KC663569	Libya	31,19	16,40	1	Short	(8)
USNM325819	KC663566	Libya	30,55	18,47	2	Short	(8)
USNM325805	KC663563	Libya	29,57	24,70	1	Short	(8)
USNM325802	KC663562	Libya	29,75	24,55	1	Short	(8)
USNM325789	KC663570	Libya	25,75	21,15	1	Short	(8)

USNM325774	KC663561	Libya	29,25	21,23	1	Short	(8)
USNM325770	KC663560	Libya	32,42	13,05	1	Short	(8)
USNM322811	KC663554	Libya	27,53	13,20	1	Short	(8)
USNM322809	KC663553	Libya	27,55	14,25	1	Short	(8)
USNM322803	KC663568	Libya	27,00	14,45	1	Short	(8)
USNM322798	KC663558	Libya	25,90	13,89	1	Short	(8)
USNM322788	KC663556	Libya	24,95	10,21	1	Short	(8)
USNM322770	KC663555	Libya	26,77	14,00	1	Short	(8)
USNM322767	KC663559	Libya	27,22	14,66	1	Short	(8)
USNM322762	KC663564	Libya	29,09	15,90	1	Short	(8)
USNM321864	KC663551	Libya	30,75	11,52	2	Short	(8)
USNM321863	KC663567	Libya	32,06	11,35	1	Short	(8)
USNM319773	KC663552	Libya	24,18	23,32	1	Short	(8)
USNM317068	KC663546	Egypt	28,56	33,96	2	Short	(8)
USNM317065	KC663527	Egypt	24,01	32,83	1	Short	(8)
USNM317059	KC663522	Egypt	30,41	30,60	2	Short	(8)
USNM317050	KC663534	Egypt	30,10	31,58	1	Short	(8)
USNM317049	KC663519	Egypt	30,63	29,84	1	Short	(8)
USNM317047	KC663518	Egypt	29,49	30,40	1	Short	(8)
USNM317041	KC663520	Egypt	30,22	30,90	1	Short	(8)
USNM317028	KC663541	Egypt	25,26	32,46	1	Short	(8)
USNM317020	KC663537	Egypt	30,50	30,79	2	Short	(8)
USNM317018	KC663533	Egypt	30,41	30,60	1	Short	(8)
USNM317017	KC663542	Egypt	25,67	32,77	1	Short	(8)
USNM317015	KC663544	Egypt	31,52	25,61	2	Short	(8)
USNM317014	KC663532	Egypt	22,30	36,54	1	Short	(8)
USNM317013	KC663545	Egypt	22,27	36,40	1	Short	(8)
USNM317012	KC663530	Egypt	22,53	36,23	1	Short	(8)
USNM297613	KC663516	Sudan	19,87	37,18	1	Short	(8)
USNM297612	KC663517	Sudan	19,54	37,19	1	Short	(8)
USNM283260	KC663538	Egypt	30,31	32,28	2	Short	(8)

USNM282539	KC663535	Egypt	30,09	31,43	2	Short	(8)
2002512	JX885154	Babangata, Niger	12,91	2,40	2	Short/Long	(6)
2002274	JX885160	Goûgaram, Niger	18,55	7,78	1	Short/Long	(6)

Table S7. Evolutionary models of each locus used for phylogenetic and demographic analyses. Calculations made with jModelTest.

	Phylogenetics analyses/ Species tree inference	EBSP analyses	
		<i>J. jaculus</i>	<i>J. hirtipes</i>
Cytb	HKY+I+G	HKY+I+G	HKY+I
DBX5	HKY	-	-
DBX5 without recombination	HKY	HKY	HKY
ADRA2B	HKY+I	HKY+I	HKY+I
GHR	HKY	HKY	HKY
IRBP	HKY+I	-	-
UWF	HKY+I	-	-
UWF without recombination	HKY+I	HKY+I	HKY+I
MC1R	HKY+I	GTR	GTR
Agouti	HKY+I	HKY	HKY

Table S8. Information on the microsatellites used in each multiplex and individual reaction and respective PCR conditions.

Multiplex	Locus	Size(bp)	Forward Primer	Reverse primer	Repeat number	Motif	Volume (in 100µL)	Tail	Ta (°C)	N° of cycles
1	Jac01	101	GATGGCTGTAGCTGTCTGGG	GAACCATAGTAAGATAACAGCATGG	14	tg	0.8	FAM	TD 57-51 (-0.5)	40
	Jac02	144	CACAGACTGAAACCGTGAGC	CCAAAGAGGAGGCACAGAAG	12	ac	0.8	FAM		
	Jac04	105	ATCAGCCTCTCAGCCTTCTG	ACTGCAGGCTCTCGTGTTCT	11	ga	0.8	VIC		
	Jac23	234	AACAAGAATGAATACATGGGGA	TAGGTGTGCACCACCACACT	11	ac	1.04	VIC		
	Jac07	95	TTCATGCCAAGTTCAAAGGC	ATCGCAACAAGAAAGATGGC	18	ac	0.8	NED		
	Jac08	140	CAAGGAACGTGCCTGACTTT	TAGCGTCCCTGTTTTCTTC	12	ac	2.0	NED		
	Jac24	141	ACAGTCCCCTTTAACATGATAGTC	CTTCTGTTAGTAGCTGAGACATGATT	16	gt	2.0	PET		
2	Jac11	111	CCACCTTCTATCATAAATACACAGTGA	GGCCGTTGTATGTGAGTCAA	21	ca	2.0	FAM	TD 55-49 (-0.5)	45
	Jac27	140	GGTGTAAACCCTGACCTAATCC	TGTCTATGTAACCTCATGACCAAGAA	14	ac	2.0	VIC		
	Jac16	190	TCTGTCTTAGGAATATTGGGCA	TGTCTTGATTCTCTCTGTTTTATTG	12	ac	0.8	VIC		
	Jac18	176	GCCCCAATATTTTCATGTTTCA	GGCTTCTGGAGTTCATTTGC	20	ca	1.0	NED		
Individual reactions	Jac12	166	ACCTGCCAGCAACGATGT	GGCCGTTGTATGTGAGTCAA	20	tg	-	FAM	TD 58-51 (-0.5)	40
	Jac37	190	TGTCACATGAAATTAATAGGGCAT	TCTTTGGTATTCCTCAACTCGG	11	atgaa	-	PET		

Figures



Fig. S1. Phenotypic variation between the two lineages described. (a) A photograph demonstrating the wide range of fur colour of the two species; (b) A photograph representing the colour variation observed within African jerboas, defining two putative cryptic species (8).

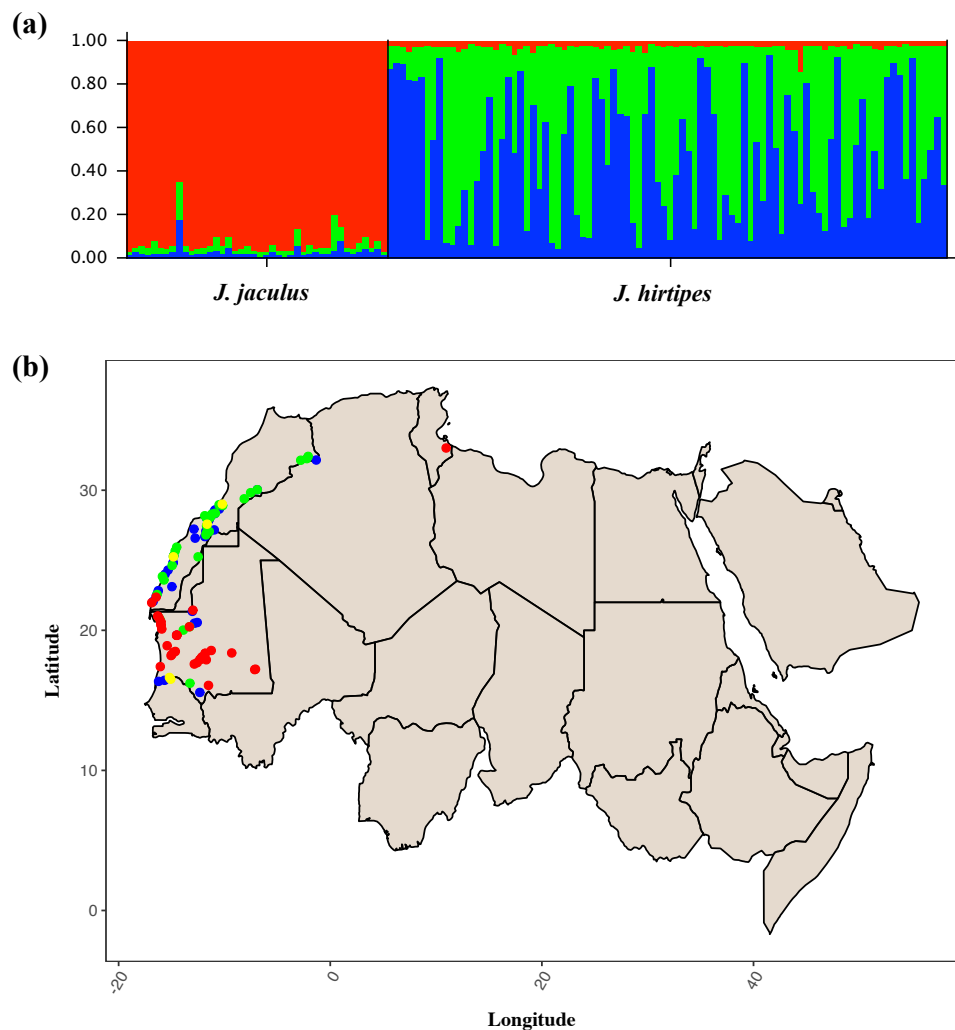


Fig. S2. (a) Structure bar plot of Bayesian assignments of the individuals to the respective cluster for K=3. Vertical bars indicate individuals and the colours within each bar denote for the probability of membership of each specimen to a cluster. (b) Geographic distribution of the specimens used in (a) plotted using the R packages “ggplot2” (9) and

“ggmaps” (10). Red, blue and green dots correspond to the individuals with a proportion of membership to the respective cluster in (a) higher than 50%, and yellow dots correspond to the specimens with mixed memberships in (a), where the proportion of membership is lower than 50% in each cluster.

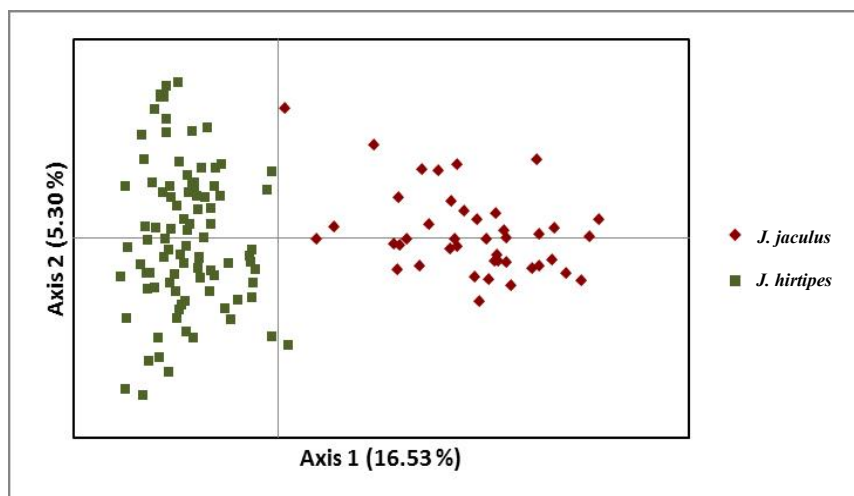


Fig. S3. Principal coordinate analysis (PCA) based on the individual-by-individual genetic distances.

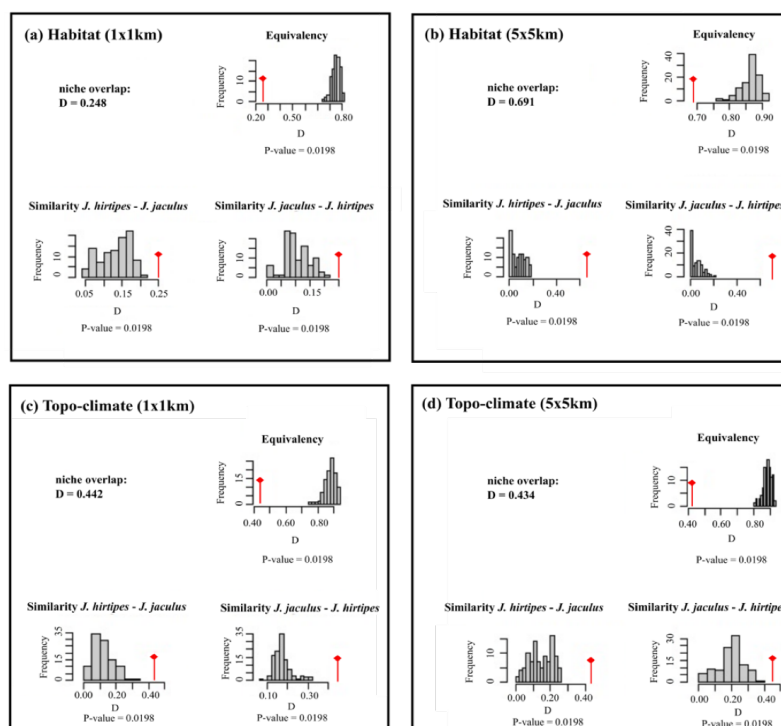
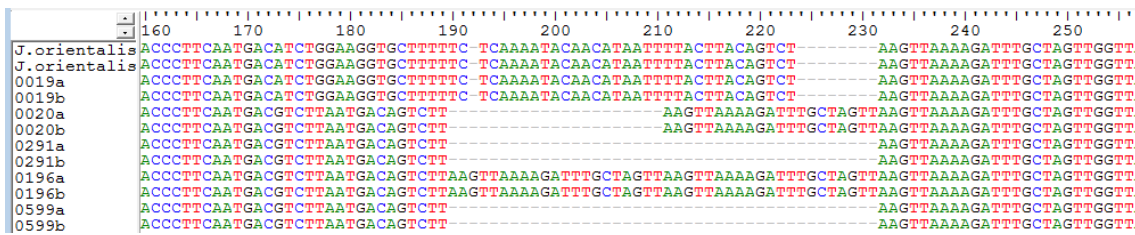


Fig. S4. Representation of Schoener's D Index value (D) for niche overlap (red sign), similarity and identity tests for habitat (at 1x1km and 5x5km scales for (a) and (b) respectively) and topo-climate variables (at 1x1km and 5x5km scales for (c) and (d) respectively). P-values are presented on the bottom of each analysis.

(a)



(b)

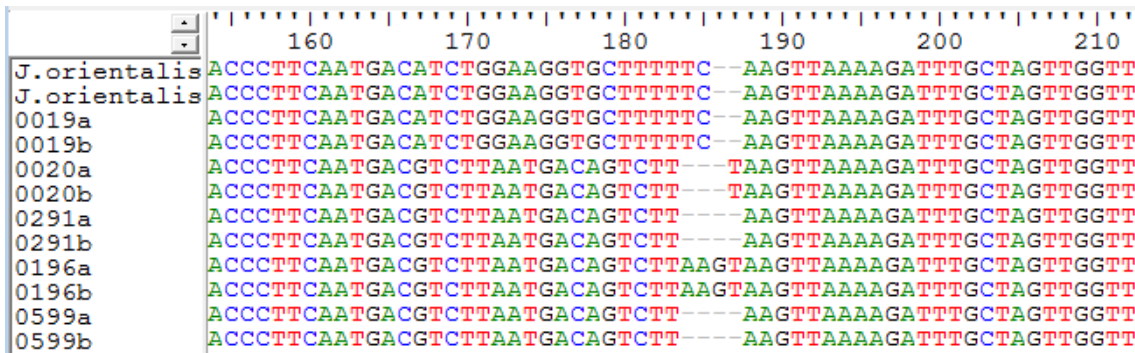


Fig. S5. Sequence alignment of the DBX intron where the insertion/deletion polymorphisms can be observed (a). Indels were coded so that a more robust approximation of the mutational steps could be made for the phylogenetic network's reconstruction. In (b) is displayed the alignment after coding the polymorphisms.

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