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Supplementary material

Appendix 1

Most of the samples were obtained either from the Fauna Rehabilitation Centres at the Canary Islands (FRC) or during field work. In the FRCs, either a blood sample was collected during the birds' rehabilitation period, or alternatively a muscle tissue sample was obtained in case of fatality (e.g. injuries, diseases, accidents or infections) and samples were grouped into a sampling location based on the origin of the individuals. In the field, the birds were captured using a bal-chatri trap (Bloom, 1987) and released at the same site after taking a blood sample from the brachial artery. In addition, a couple of muscle samples were obtained from museum collections (Madeira, Museum of Funchal). Samples of individuals suspected to be from wintering kestrels or known relatives, were not included. Of the total number of 470 samples, altogether 449 samples were provided with accurate geographic coordinates of the sampling locations (or capturing locations in case of birds sampled in the FRC). Appropriate sampling permits were granted by the authorities; The Canary Government and the Cabildos (Island authorities, permits MA-570, GS-010049, GS-014073, LLH-ACE-prs, LLH-ACE-prs, EIC-141, FYF 171-05, FYF 129-06, FYF 101-07, FYF 380-07, A-OT-087-2013, 4447, 406 104 and 304 829), the Consulate of Morocco (permits 248 HCEFLCD/DLCDPN/DPRN/CFF and 512/0747), Regional Governments of Spain: Andalucía (samples from FRC in Cádiz, Córdoba, Granada, Jaén and Málaga, permit 10965), Cataluña (samples from FRC in Barcelona, Gerona and Tarragona), Extremadura (samples from FRC in Badajoz and Cáceres), Ceuta, Murcia, Galicia (samples from FRC in Lugo) and Madrid, as well as by authorities from Portugal and Madeira (13/2010/FAU MAD, 09/2011/FAU MAD, 06/2012/FAU MAD and 15354/2010/UAC).

All the fresh samples were stored in EDTA or 100% alcohol and placed in a refrigerator at below 10°C. DNA was extracted from muscle or blood samples either with UltraClean Tissue & Cells DNA Isolation Kit or Blood Spin DNA Isolation Kit (MoBio) according to manufacturers' instructions.

References

Bloom P.H. 1987. Capturing and handling raptors. In – Millsap B.A. Cline K.W. Pendleton B.A. and Bird D.M. (eds.) *Raptor Management Techniques Manual*. National Wildlife Federation scientific & technical series 10, Washington DC U.S.A., pp. 99–123.

Table A1. Sampling sites, coordinates/capture locations, Fauna Rehabilitation codes (marked with *), ring number or sample code, sampled tissue type and sampling or capture year. Last column has been marked with GenBank accession number if the specimen was sequenced for mitochondrial cytochrome b.

Sample Name	Sampling site	Geographic coordinates /capture locations	Fauna Rehabilitation Centre Code / Ring /Tube code	Sampled tissue	Sampling/ Capture Year	GenBank accession number
FT1	Mallorca	Palma	1476/09*	blood	2009	

FT2	Mallorca	Sencelles	1054/09*	blood	2009	
FT3	Mallorca	Sant Joan	1095/09*	blood	2009	
FT4	Mallorca	Binissalem	1047/09*	blood	2009	
FT5	Mallorca	Marratxi	1149/09*	blood	2009	
FT6	Mallorca	Palma	1274/09*	blood	2009	
FT7	Mallorca	Palma	937/09*	blood	2009	
FT8	Mallorca	Muro	1353/09*	blood	2009	
FT9	Mallorca	Sant Llorenç	1225/09*	blood	2009	
FT10	Mallorca	Sóller	1083/09*	blood	2009	MH541918
FT11	Mallorca	Son Servera	1454/09*	blood	2009	MH541919
FT12	Mallorca	Sa Pobla	1439/09*	blood	2009	MH541920
FT13	Mallorca	Llucmajor	970/09*	blood	2009	MH541921
FT14	Mallorca	Sant Llorenç	1335/09*	blood	2009	MH541922
FT15	Mallorca	Palma	1200/09*	blood	2009	MH541923
FT16	Mallorca	Algaida	1198/09*	blood	2009	MH541924
FT17	Mallorca	Andratx	1496/09*	blood	2009	MH541925
FT18	Mallorca	Son Servera	1464/09*	blood	2009	MH541926
FT19	Mallorca	Consell	1663/09*	blood	2009	MH541927
FT20	Mallorca	Andratx	1620/09*	blood	2009	MH541928
FT21	Mallorca	Son Servera	1359/09*	blood	2009	MH541929
FT22	Mallorca	Palma	1788/09*	blood	2009	MH541930
FT23	Mallorca	Lloseta	1562/09*	blood	2009	MH541931
FT24	Mallorca	Porreres	939/11*	blood	2011	MH541932
FT25	Mallorca	Sa Pobla	980/11*	blood	2011	MH541933
FT26	Mallorca	Muro	869/11*	blood	2011	
FT27	Mallorca	Consell	926/11*	blood	2011	MH541934
FT28	Mallorca	Palma	920/11*	blood	2011	
FT29	Mallorca	Llucmajor	1026/11*	blood	2011	MH541935
FT30	Mallorca	Alcúdia	899/11*	blood	2011	
FT31	Mallorca	Llubí	1037/11*	blood	2011	
FT32	Mallorca	Calviá	1084/11*	blood	2011	
FT33	Mallorca	Santa Eugènia	1118/11*	blood	2011	
FT34	Ibiza	38º58'58.76''N, 1º26'26.35''E	cernícalo 1*	muscle	2009	MH541936
FT35	Ibiza	38º57'31.02''N, 1º26'43.06''E	cernícalo 2*	muscle	2009	MH541937
FT36	Ibiza	39º04'30.97''N, 1º28'40.19''E	cernícalo 3*	muscle	2009	MH541938
FT37	Ibiza	28º59'57.04''N, 1º25'45.58''E	cernícalo 4*	blood	2010	MH541939
FT38	Ibiza	38º52'59.09''N, 1º23'39.28''E	cernícalo 5*	blood	2010	MH541940
FT39	Ibiza	38º52'59.09''N, 1º23'39.28''E	cernícalo 5*	muscle	2010	MH541941

FT40	Ibiza	39º02'05.57''N, 1º33'54.52''E	cernícalo 6*	muscle	2010	MH541942
FT41	Ibiza	38º56'23.67''N, 1º17'37.59''E	cernícalo 7*	muscle	2010	MH541943
FT42	Ibiza	38º55'06.25''N, 1º24'59.48''E	cernícalo 8*	muscle	2010	MH541944
FT43	Ibiza	39º00'17.28''N, 1º26'04.98''E	cernícalo 9*	muscle	2011	MH541945
FT44	Ibiza	39º00'17.28''N, 1º26'04.98''E	cernícalo 10*	muscle	2011	MH541946
FT45	Ibiza	39º00'17.28''N, 1º26'04.98''E	cernícalo 11*	muscle	2011	MH541947
FT46	Ibiza	38º55'16.70''N, 1º17'28.82''E	cernícalo 12*	muscle	2011	MH541948
FT47	Ibiza	39º04'42.71''N, 1º30'50.36''E	cernícalo 13*	muscle	2011	MH541949
FT48	Ibiza	39º04'39.60''N, 1º30'51.34''E	cernícalo 14*	muscle	2011	MH541950
FT49	Ibiza	38º55'16.70''N, 1º17'28.82''E	cernícalo 15*	muscle	2011	MH541951
FT50	Ibiza	38º59'15.03''N, 1º32'03.65''E	cernícalo 16*	muscle	2011	MH541952
FT51	Ibiza	39º00'17.28''N, 1º26'04.98''E	cernícalo 17*	muscle	2011	MH541953
FT52	Ibiza	38º59'19.20''N, 1º32'16.93''E	cernícalo 18*	muscle	2011	MH541954
FT53	Menorca	Ciutadella	ME 1	blood	2010	MH541955
FT54	Menorca	Ciutadella	ME 2	blood	2010	
FT55	Menorca	Maó	ME 3/5120251	blood	2010	MH541956
FT56	Menorca	Maó	ME 4/5107297	blood	2010	MH541957
FT57	Menorca	Ciutadella	ME 5/5107298	blood	2010	MH541958
FT58	Menorca	Maó	ME 6	blood	2010	MH541959
FT59	Menorca	Alaior	ME 7	blood	2010	MH541960
FT60	Menorca	Ciutadella	ME 8	blood	2010	MH541961
FT61	Menorca	Ciutadella	ME 9	blood	2010	MH541962
FT62	Menorca	Sant Lluís	ME 10	blood	2010	
FT63	Menorca	Maó	ME11/5107299	blood	2010	MH541963
FT64	Menorca	Ciutadella	ME 12/M8A	blood	2012	MH541964
FT65	Menorca	Ciutadella	ME13/M8L	blood	2012	MH541965
FT66	La Palma	Breña Baja	LP1	muscle	2009	MH541988
FT67	La Palma	Puntallana	LP2	muscle	2009	MH541989
FT68	La Palma	Barlovento	LP3	blood	2009	MH541990
FT69	La Palma	Tazacorte	LP4	blood	2010	MH541991
FT70	La Palma	Breña Alta	LP5	blood	2010	MH541992
FT71	La Palma	Breña Baja	LP6	muscle	2010	MH541993
FT72	La Palma	Breña Baja	LP7	muscle	2010	MH541994

FT73	La Palma	Tazacorte	LP8	muscle	2010	MH541995
FT74	La Palma	Los Llanos de Aridane	LP9	blood	2010	MH541996
FT75	La Palma	El Paso	LP10	blood	2010	MH541997
FT76	La Palma	El Paso	LP11	blood	2010	MH541998
FT77	La Palma	El Paso	LP12	blood	2010	MH541999
FT78	La Palma	El Paso	LP13	blood	2011	MH542000
FT79	La Palma	Breña Baja	LP14	blood	2011	MH542001
FT80	La Palma	Santa Cruz de La Palma	LP15	blood	2011	MH542002
FT81	La Palma	Tazacorte	LP16	blood	2011	MH542003
FT82	La Palma	Santa Cruz de La Palma	LP17	blood	2011	MH542004
FT83	La Palma	Santa Cruz de La Palma	LP18	blood	2011	MH542005
FT84	La Palma	Barlovento	LP19	blood	2011	MH542006
FT85	La Palma	28º39'41.6''N, 17º51'04.9''W	LP20	blood	2011	MH542007
FT86	La Palma	28º39'34.8''N, 17º51'04.5''W	LP21	blood	2011	
FT87	La Palma	28º39'31.5''N, 17º51'03.8''W	LP22	blood	2011	
FT88	La Palma	28º39'31.5''N, 17º51'03.8''W	LP23	blood	2011	
FT89	La Palma	Tazacorte	LP24/C4	muscle	2014	
FT90	La Palma	Tazacorte	LP25/C1	muscle	2010	
FT91	La Palma	El Paso	LP26/C5	muscle	2014	
FT92	La Palma	Los Llanos de Aridane	LP27/C3	muscle	2013	
FT93	La Palma	El Paso	LP28/C2	muscle	2013	
FT94	La Palma	Breña Baja	LP29	blood	2014	
FT95	La Palma	28º34'08.1''N, 17º46'55.1''W	LP30	blood	2014	
FT96	La Palma	28º32'49.4''N, 17º48'32.2''W	LP31	blood	2014	
FT97	Tenerife	La Orotava	TF6A	muscle	2004	MH542008
FT98	Tenerife	San Cristóbal de La Laguna	TF8A	muscle	2005	
FT99	Tenerife	San Cristóbal de La Laguna	TF14A	feather with blood	2005	
FT100	Tenerife	El Rosario	TF5168*	muscle	2005	MH542009
FT101	Tenerife	Adeje	TF5332*	muscle	2005	MH542010
FT102	Tenerife	Icod de los Vinos	TF 5186*	muscle	2005	
FT103	Tenerife	Puerto de la Cruz	TF 5169*	muscle	2005	MH542011
FT104	Tenerife	Puerto de la Cruz	TF 5078*	muscle	2005	MH542012
FT105	Tenerife	Güimar	TF 6693*	muscle	2007	MH542013
FT106	Tenerife	Granadilla de Abona	TF 6577*	muscle	2007	MH542014
FT107	Tenerife	Güimar	TF 5971*	muscle	2006	
FT108	Tenerife	Arona	TF 5980*	muscle	2006	MH542015
FT109	Tenerife	Playa San Juan	TF 5982*	muscle	2006	MH542016

FT110	Tenerife	Güimar	TF 4705*	muscle	2004	
FT111	Tenerife	La Victoria	TF 5032*	muscle	2005	
FT112	Tenerife	Santa Cruz Tenerife	TF 4416*	muscle	2004	MH542017
FT113	Tenerife	Adeje	TF 4336*	muscle	2004	MH542018
FT114	Tenerife	Los Realejos	TF 4273*	muscle	2004	MH542019
FT115	Tenerife	Santa Cruz Tenerife	TF 6445*	muscle	2007	MH542020
FT116	Tenerife	Güimar	TF 6788*	muscle	2008	MH542021
FT117	Tenerife	La Orotava	TF 7547*	muscle	2008	
FT118	Tenerife	El Rosario	TF 7530*	muscle	2008	
FT119	Tenerife	La Esperanza	TF 7515*	muscle	2008	
FT120	Tenerife	Santa Úrsula	TF 7489*	muscle	2008	
FT121	Tenerife	Santa Cruz Tenerife	TF 7485*	muscle	2008	
FT122	Tenerife	San Cristóbal de La Laguna	TF 7453*	muscle	2008	
FT123	Tenerife	San Cristóbal de La Laguna	TF 7484*	muscle	2008	
FT124	Tenerife	Tacoronte	TF 5120*	muscle	2005	
FT125	Tenerife	Candelaria	TF 7455*	muscle	2008	
FT126	Tenerife	Granadilla de Abona	TF PVC 208	muscle	2009	
FT127	Tenerife	Granadilla de Abona	TF 8680*, 1MT	muscle	2009	
FT128	Tenerife	Granadilla de Abona	TF 8123*, 0U7	muscle	2009	
FT129	Tenerife	San Cristóbal de La Laguna	TF 426/2011*	blood	2011	
FT130	Tenerife	San Cristóbal de La Laguna	TF 468/2011*	blood	2011	
FT131	Tenerife	San Cristóbal de La Laguna	TF 507/2011*	blood	2011	
FT132	Tenerife	Guía de Isora	TF 573/2011*	blood	2011	
FT133	Tenerife	San Cristóbal de La Laguna	TF ORANGE 7	muscle	2011	
FT134	Tenerife	Güimar (casco)	TF 5130581	muscle	2011	
FT135	Tenerife	Güimar	TF 5130582	muscle	2011	
FT136	Tenerife	San Cristóbal de La Laguna	TF 5130583	muscle	2011	
FT137	Tenerife	Arona	TF 5130584	muscle	2011	
FT138	Tenerife	La Orotava	TF 5130585	muscle	2011	
FT139	Tenerife	Granadilla	4689*	muscle	2004	
FT140	Tenerife	Arona	4818*	muscle	2005	
FT141	Tenerife	Los Realejos	6263*	muscle	2006	
FT142	Tenerife	Exact location unknown	1640*	muscle	2005	
FT143	Tenerife	Adeje	4821*	muscle	2007	
FT144	Tenerife	El Sobradillo (El Rosario)	6532*	muscle	2006	
FT145	Tenerife	Adeje	5611*	muscle	2008	
FT146	Tenerife	Adeje	780/05*	muscle	2008	
FT147	Tenerife	El Rosario	1507/04*	muscle	2002	
FT148	Tenerife	San Cristóbal de La Laguna	286/05*	muscle	2005	
FT149	Tenerife	Puerto de la Cruz	5508*	muscle	2005	
FT150	Tenerife	Guía de Isora	4810*	muscle	2004	
FT151	Tenerife	Icod de los Vinos	4769*	muscle	2005	
FT152	Tenerife	La Orotava	5065*	muscle	2005	

FT153	Tenerife	Costa Adeje	4825*	muscle	2007	
FT154	Tenerife	Tejina	6409*	muscle	2004	
FT155	Tenerife	Santa Cruz de Tenerife	4754*	muscle	2007	
FT157	Tenerife	Güímar (Bco. de Guaza)	4705*	muscle	2004	
FT158	Tenerife	Adeje	5457*	muscle	2005	
FT159	Tenerife	La Orotava	7547*	muscle	2008	
FT160	Tenerife	Granadilla de Abona	5299*	muscle	2005	
FT161	Tenerife	San Cristóbal de La Laguna	4748*	muscle	2004	
FT162	Tenerife	San Cristóbal de La Laguna	4773*	muscle	2004	
FT163	Tenerife	Adeje	4618*	muscle	2004	
FT164	Tenerife	Santa Cruz de Tenerife	4412*	muscle	2004	
FT165	Tenerife	La Orotava	5543*	muscle	2005	
FT166	Tenerife	aeropuerto Norte	airport N, 25.10.2004 Tenerife	muscle	2004	
FT167	Tenerife	aeropuerto Norte	airport N, 29.07.2005 Tenerife	muscle	2005	
FT168	Tenerife	Tacoronte	5685*	muscle	2006	
FT169	Tenerife	San Cristóbal de La Laguna	5721*	muscle	2006	
FT170	Tenerife	Arona	7707*	muscle	2008	
FT171	Tenerife	Candelaria	7630*	muscle	2008	
FT172	Tenerife	Exact location unknown	1382/03*	muscle	No data	
FT173	Tenerife	Güímar	661/06*	muscle	2006	
FT174	Tenerife	Exact location unknown	858/04*	muscle	No data	
FT175	Tenerife	Exact location unknown	08/07/*	muscle	No data	
FT176	Tenerife	Exact location unknown	1633/05*	muscle	No data	
FT177	Gran Canaria	Las Palmas de Gran Canaria	GC 655/06*	muscle	2006	MH542022
FT178	Gran Canaria	Santa Brígida	GC 563/06*	muscle	2006	MH542023
FT179	Gran Canaria	Telde	GC 373/07*	muscle	2007	MH542024
FT180	Gran Canaria	Agüimes	GC 818/06*	muscle	2006	MH542025
FT181	Gran Canaria	Tejeda	GC 528/06*	muscle	2006	
FT182	Gran Canaria	Artenara	GC 415/07*	muscle	2006	
FT183	Gran Canaria	Santa Lucía	GC 862/06*	blood	2006	
FT184	Gran Canaria	Mogán	GC 768/06*	blood	2006	MH542026
FT185	Gran Canaria	Gáldar	GC 789/06*	blood	2006	
FT186	Gran Canaria	Las Palmas de Gran Canaria	GC 73/07*	blood	2007	
FT187	Gran Canaria	Las Palmas de Gran Canaria	GC 304/07*	blood	2007	MH542027
FT188	Gran Canaria	Las Palmas de Gran Canaria	GC 304/07*	muscle	2007	MH542028
FT189	Gran Canaria	San Bartolomé de Tirajana	GC 225/07*	blood	2007	MH542029
FT190	Gran Canaria	Las Palmas de Gran Canaria	GC 365/07*	blood	2007	MH542030
FT191	Gran Canaria	San Bartolomé de Tirajana	GC 719/06*	muscle	2006	MH542031
FT192	Gran Canaria	Valsequillo	GC 408/06*	muscle	2006	
FT193	Gran Canaria	Ingenio	GC 396/06*	muscle	2006	
FT194	Gran Canaria	Telde	GC 286/05*	muscle	2005	

FT195	Gran Canaria	Las Palmas de Gran Canaria	GC 423/06*	muscle	2006	
FT196	Fuerteventura	Gran Tarajal	211/11*	muscle	2011	
FT197	Gran Canaria	Las Palmas de Gran Canaria	GC 647/10*	muscle	2010	MH542032
FT198	Gran Canaria	San Bartolomé de Tirajana	GC 652/10*	muscle	2010	MH542033
FT199	Gran Canaria	Guía	GC 736/10*	muscle	2010	MH542034
FT200	Gran Canaria	Santa Brígida	GC 748/10*	muscle	2010	MH542035
FT201	Gran Canaria	Las Palmas de Gran Canaria	GC 259/07*	muscle	2007	MH542036
FT202	Gran Canaria	Guía	GC 483/08*	muscle	2008	MH542037
FT203	Gran Canaria	Mogán	GC 378/07*	muscle	2007	MH542038
FT204	Gran Canaria	Temisas	GC 818/06*	muscle	2006	
FT205	Gran Canaria	Agaete	GC 380/07*	muscle	2007	
FT206	Gran Canaria	Agüimes	GC 767/07*	muscle	2007	
FT207	Gran Canaria	Arinaga	GC 340/07*	muscle	2007	
FT208	Gran Canaria	San Bartolomé	GC 776/06*	muscle	2006	
FT209	Gran Canaria	Las Palmas de Gran Canaria	GC 685/07*	muscle	2007	
FT210	Gran Canaria	Las Palmas de Gran Canaria	GC 450/07*	muscle	2007	
FT211	Gran Canaria	Las Palmas de Gran Canaria	GC 454/07*	muscle	2007	
FT212	Gran Canaria	Arucas	GC 446/07*	muscle	2007	
FT213	Gran Canaria	Mogán	GC 479/07*	muscle	2007	
FT214	Gran Canaria	Guía	GC 452/07*	muscle	2007	
FT215	Gran Canaria	Las Palmas de Gran Canaria	GC 485/06*	muscle	2006	
FT216	Gran Canaria	Agüimes	GC 409/09*	muscle	2009	
FT217	Gran Canaria	Mogán	GC 645/09*	muscle	2009	
FT218	Gran Canaria	San Bartolomé de Tirajana	GC 719/06*	muscle	2006	
FT219	Gran Canaria	Agüimes	GC 43/12*	muscle	2012	
FT220	Gran Canaria	San Bartolomé de Tirajana	GC 575/07*	muscle	2007	
FT221	Gran Canaria	Telde	GC 349/07*	muscle	2007	
FT222	Gran Canaria	desconocido	GC 359/07*	muscle	2007	
FT223	Gran Canaria	Mogán	GC 377/07*	muscle	2007	
FT224	Gran Canaria	Las Palmas de Gran Canaria	GC 436/11*	muscle	2011	
FT225	Gran Canaria	Mogán	GC 480/11*	muscle	2011	
FT226	Gran Canaria	Las Palmas de Gran Canaria	GC 477/09*	muscle	2009	
FT227	Gran Canaria	Las Palmas de Gran Canaria	GC 509/11*	muscle	2011	
FT228	Gran Canaria	Las Palmas de Gran Canaria	GC 477/11*	muscle	2011	
FT229	Gran Canaria	Gáldar	GC 529/09*	muscle	2009	
FT230	Gran Canaria	San Bartolomé de Tirajana	GC 628/09*	muscle	2009	
FT231	Gran Canaria	Telde	GC 401/09*	muscle	2009	
FT232	Gran Canaria	Artenara	GC 1122/09*	muscle	2009	
FT233	Gran Canaria	San Bartolomé de Tirajana	GC 170/08*	muscle	2008	
FT234	Gran Canaria	Las Palmas de Gran Canaria	GC 042/12*	muscle	2012	
FT235	Gran Canaria	San Bartolomé de Tirajana	GC 337/11*	muscle	2011	
FT236	Gran Canaria	Gáldar	GC 551/09*	muscle	2009	
FT237	Gran Canaria	Agüimes	GC 233/11*	muscle	2011	

FT238	Gran Canaria	Las Palmas de Gran Canaria	GC 475/11*	muscle	2011	
FT239	Gran Canaria	Arguineguín	GC 1455/06*	muscle	2006	
FT240	Gran Canaria	Santa Lucía	GC 752/10*	muscle	2010	
FT241	Gran Canaria	Telde	GC 592/11*	muscle	2011	
FT242	Gran Canaria	Las Palmas de Gran Canaria	GC 499/11*	muscle	2011	
FT243	Gran Canaria	Telde	GC 187/08*	muscle	2008	
FT244	Gran Canaria	Tejeda	GC 517/11*	muscle	2011	
FT245	Gran Canaria	Las Palmas de Gran Canaria	GC 123/11*	muscle	2011	
FT246	Gran Canaria	Arucas	GC 187/09*	muscle	2009	
FT247	Gran Canaria	Telde	GC 343/09*	muscle	2009	
FT248	Gran Canaria	Santa Lucía	GC 431/10*	muscle	2010	
FT249	Gran Canaria	Teror	GC 385/09*	muscle	2009	
FT250	Gran Canaria	San Bartolomé de Tirajana	GC 507/11*	muscle	2011	
FT251	Gran Canaria	Arinaga	GC 86/09*	muscle	2009	
FT252	Gran Canaria	Arucas	GC 13/09*	muscle	2009	
FT253	Gran Canaria	Telde	GC 82/09*	muscle	2009	
FT254	Gran Canaria	Arucas	GC 336/09*	muscle	2009	
FT255	Gran Canaria	Moya	GC 74/12*	muscle	2012	
FT256	Gran Canaria	San Bartolomé de Tirajana	GC 76/12*	muscle	2012	
FT257	Gran Canaria	Mogán	GC 78/12*	muscle	2012	
FT258	Gran Canaria	Santa Lucía	GC 112/12*	muscle	2012	
FT259	Gran Canaria	Gáldar	GC 131/12*	muscle	2012	
FT260	La Gomera	Valle Gran Rey	LG 784/06	blood	2006	MH542039
FT261	La Gomera	San Sebastián de La Gomera	LG 5121220	blood	2009	MH542040
FT262	La Gomera	San Sebastián de La Gomera	LG 5121221	blood	2009	MH542041
FT263	La Gomera	Hermigua	LG 5121222	blood	2010	MH542042
FT264	La Gomera	Hermigua	LG 5121223	blood	2010	MH542043
FT265	La Gomera	Agulo	LG 5121224	blood	2010	MH542044
FT266	La Gomera	Vallehermoso	LG 5121225	blood	2010	MH542045
FT267	La Gomera	Valle Gran Rey	LG 5121226	blood	2010	MH542046
FT268	La Gomera	San Sebastián de La Gomera	LG 5121227	blood	2010	MH542047
FT269	La Gomera	28º06'55.9''N, 17º16'47.5''W	LG 5125638	blood	2010	MH542048
FT270	La Gomera	28º05'31.62"N, 17º20'16.08''W	LG 5125644	blood	2010	MH542049
FT271	La Gomera	28º05'34.93"N, 17º20'06.82"W	LG 5125645	blood	2010	MH542050
FT272	La Gomera	28º05'31.62"N, 17º20'16.08''W	LG 5125646	blood	2010	MH542051
FT273	La Gomera	28º05'21.82''N, 17º07'16.43''W	LG 5127857	blood	2011	MH542052

FT274	La Gomera	28º05'21.82''N, 17º07'16.43''W	LG 5127858	blood	2011	MH542053
FT275	La Gomera	28º07'46.7''N, 17º17'40.8''W	LG 5127859	blood	2011	MH542054
FT276	La Gomera	28º04'51.04''N, 17º07'41.14''W	LG 5127860	blood	2011	
FT277	La Gomera	28º04'51.04''N, 17º07'41.14''W	LG 5127861	blood	2011	MH542055
FT278	La Gomera	28º04'51.04''N, 17º07'41.14''W	LG 5127862	blood	2011	MH542056
FT279	La Gomera	28º06'01.2''N, 17º16'51.1''W	LG 5135406	blood	2011	MH542057
FT280	La Gomera	28º06'56.1''N, 17º17'05.9''W	LG 5135407	blood	2011	
FT281	La Gomera	28º05'31.62''N, 17º20'16.08''W	LG 5135408	blood	2011	
FT282	La Gomera	28º06'30.2''N, 17º16'28.4''W	LG 5135409	blood	2011	
FT283	La Gomera	28º05'15.3''N, 17º08'42.2''W	LG 5135415	blood	2011	
FT284	La Gomera	28º05'56.7''N, 17º10'48.1''W	LG 5135416	blood	2011	
FT285	La Gomera	28º05'56.7''N, 17º10'48.1''W	LG 5135417	blood	2011	
FT286	La Gomera	28º02'51.2''N, 17º11'43.5''W	LG 5135418	blood	2011	
FT287	La Gomera	28º05'00.1''N, 17º08'06.3''W	LG 5135419	blood	2011	
FT288	La Gomera	28º03'05.3''N, 17º12'00.0''W	LG 5135420	blood	2011	
FT289	La Gomera	28º06'01.9''N, 17º15'15.1''W	LG 5135455	blood	2012	
FT290	La Gomera	28º06'54.4''N,17º16'59.5''W	LG 5135456	blood	2012	
FT291	La Gomera	28º06'54.4''N,17º16'59.5''W	LG 5135457	blood	2012	
FT292	La Gomera	La Oliva	LG 463/11	muscle	2011	
FT293	Fuerteventura	Tuineje	F 764/06*	blood	2006	
FT294	Fuerteventura	Puerto del Rosario	F 740/05*	blood	2005	MH542058
FT295	Fuerteventura	Puerto del Rosario	F 780/05*	muscle	2005	MH542059
FT296	Fuerteventura	Puerto del Rosario	F 274/06*	muscle	2006	MH542060
FT297	Fuerteventura	Puerto del Rosario	F 1609/05*	muscle	2006	MH542061
FT298	Fuerteventura	Betancuria	F 25/11*	muscle	2005	MH542062
FT299	Fuerteventura	Morro Jable	F 21/11*	muscle	2011	MH542063
FT300	Fuerteventura	Corralejo	F 657/10*	muscle	2010	MH542064
FT301	Fuerteventura	Morro Jable	F 622/10*	blood	2010	MH542065

FT302	Fuerteventura	28º13'28.3''N, 14º00'55.8''W	F 5135436	blood	2010	MH542066
FT303	Fuerteventura	28º13'28.3''N, 14º00'55.8''W	F 5135437	blood	2011	MH542067
FT304	Fuerteventura	28º13'19.8''N, 14º01'07.6''W	F 5135438	blood	2011	MH542068
FT305	Fuerteventura	28º16'30.4''N, 13º59'31.8''W	F 5135439	blood	2011	MH542069
FT306	Fuerteventura	28º15'46.6''N, 14º01'02.9''W	F 5135440	blood	2011	
FT307	Fuerteventura	28º14'24.1''N, 14º01'18.7''W	F 5135441	blood	2011	MH542070
FT308	Fuerteventura	28º21'28.6''N, 14º05'09.6''W	F 5135442	blood	2011	MH542071
FT309	Fuerteventura	28º21'28.6''N, 14º05'09.6''W	F 5135443	blood	2011	MH542072
FT310	Fuerteventura	28º25'18.0''N, 14º03'30.3''W	F 5135444	blood	2011	MH542073
FT311	Fuerteventura	28º32'58.2''N, 13º56'49.3''W	F 5135445	blood	2011	
FT312	Fuerteventura	28º37'03.2''N, 13º56'09.8''W	F 5135446	blood	2011	MH542074
FT313	Fuerteventura	28º37'03.2''N, 13º56'09.8''W	F 5135447	blood	2011	
FT314	Fuerteventura	28º31'46.6''N, 13º54'44.1''W	F 5135448	blood	2011	
FT315	Fuerteventura	28º29'21.7''N, 13º58'13.1''W	F 5135449	blood	2011	
FT316	Fuerteventura	28º30'49.8''N, 13º54'40.0''W	F 5135450	blood	2011	
FT317	Fuerteventura	28º29'22.7''N, 13º56'29.1''W	F 5135451	blood	2011	
FT318	Fuerteventura	28º23'06.7''N, 14º00'06.5''W	F 5135452	blood	2011	
FT319	Fuerteventura	28º23'16.1''N, 14º00'26.0''W	F 5135453	blood	2011	
FT320	Fuerteventura	28º22'37.6''N, 14º01.30.2''W	F 5135454	muscle	2011	
FT321	Fuerteventura	Villaverde	F 1804/08	muscle	2008	
FT322	Fuerteventura	Puerto del Rosario	F 494/09	muscle	2009	
FT323	Fuerteventura	desconocido	F 021/12	muscle	2012	
FT324	Fuerteventura	desconocido	F 736/07	muscle	2007	
FT325	Fuerteventura	La Oliva	F 513/11	muscle	2011	
FT326	Fuerteventura	Puerto del Rosario	F 438/09	muscle	2009	
FT327	Fuerteventura	Antigua	F 691/07	muscle	2007	
FT328	Fuerteventura	Corralejo	F 255/12	muscle	2012	
FT329	El Hierro	Exact location unknown	H1bis	muscle	No data	MH542075

FT330	El Hierro	Exact location unknown	H2bis	muscle	No data	MH542076
FT331	El Hierro	Exact location unknown	H3	muscle	No data	MH542077
FT332	El Hierro	El Golfo, Frontera	H4bis	muscle	No data	MH542078
FT334	El Hierro	Frontera	H6bis	muscle	No data	MH542079
FT335	El Hierro	La Torre	H7 5125620	blood	2010	MH542080
FT336	El Hierro	La Torre	H8 5125621	blood	2010	
FT337	El Hierro	La Torre	H9 5125622	blood	2010	MH542081
FT338	El Hierro	La Torre	H10 5125623	blood	2010	
FT339	El Hierro	La Torre	H11 5125624	blood	2010	MH542082
FT340	El Hierro	La Torre	H12 5125625	blood	2010	MH542083
FT341	El Hierro	La Torre	H13 5125626	blood	2010	MH542084
FT342	El Hierro	Isora	H14 5125627	blood	2010	MH542085
FT343	El Hierro	Isora	H15 5125628	blood	2010	MH542086
FT344	El Hierro	Isora	H16 5125629	blood	2010	MH542087
FT345	El Hierro	Isora	H17 5125630	blood	2010	MH542088
FT346	El Hierro	Isora	H18 5125631	blood	2010	MH542089
FT347	El Hierro	Isora	H19 5125632	blood	2010	MH542090
FT348	El Hierro	Isora	H20 5125633	blood	2010	MH542091
FT350	El Hierro	27º45'34.6''N, 17º57'53.1''W	H22 5135402	blood	2011	
FT351	El Hierro	27º45'34.6''N, 17º57'53.1''W	H23 5135403	blood	2011	
FT352	El Hierro	27º45'50.3''N, 17º57'52.3''W	H24 5135404	blood	2011	
FT353	El Hierro	27º45'01.0''N, 17º58'05.3''W	H25 5135405	blood	2011	
FT354	Lanzarote	Teguise	L1bis	muscle	2010	
FT355	Lanzarote	Tías	L2	muscle	2011	MH542092
FT356	Lanzarote	Haría	L3	muscle	2011	MH542093
FT357	Lanzarote	Arrecife	L4	muscle	2011	MH542094
FT358	Lanzarote	Tías	L5	muscle	2011	MH542095
FT359	Lanzarote	Puerto del Carmen	L6	muscle	2011	MH542096
FT360	Lanzarote	Tías	L7	muscle	2011	MH542097
FT361	Lanzarote	Candelaria	L 5125639	blood	2010	MH542098
FT362	Lanzarote	San Bartolomé	L 5125640	blood	2010	MH542099
FT363	Lanzarote	Teguise	L 5125641	blood	2010	MH542100
FT364	Lanzarote	Teguise	L 5125642	blood	2010	MH542101
FT365	Lanzarote	San Bartolomé	L 5125643	blood	2010	MH542102
FT366	Lanzarote	29º08'32.1''N, 13º50'51.5''W	L 5125647	blood	2010	MH542103
FT367	Lanzarote	29º08'32.1''N, 13º50'51.5''W	L 5125648	blood	2010	MH542104
FT368	Lanzarote	28º56'07.4''N, 13º39'28.8''W	L 5125649	blood	2010	MH542105

FT369	Lanzarote	28º56'45.4''N, 13º44'20.3''W	L 5125650	blood	2010	
FT370	Lanzarote	29º01'04.16''N, 13º32'26.8''W	L 5127851	blood	2010	MH542106
FT371	Lanzarote	29º00'06.6''N, 13º32'59.9''W	L 5127852	blood	2010	
FT372	Lanzarote	28º56'29.6''N, 13º48'56.2''W	L 5127853	blood	2010	MH542107
FT373	Lanzarote	29º03'35.7''N, 13º33'22.2''W	L 5127854	blood	2010	MH542108
FT374	Lanzarote	29º03'48.1''N, 13º33'01.2''W	L 5127855	blood	2010	
FT375	Lanzarote	28º59'58.0''N, 13º37'04.4''W	L 5127856	blood	2010	
FT376	Lanzarote	28º55'01.5''N, 13º48'44.7''W	L 5135421	blood	2011	
FT377	Lanzarote	28º54'45.1''N, 13º47'32.6''W	L 5135422	blood	2011	
FT378	Lanzarote	28º54'45.1''N, 13º47'32.6''W	L 5135423	blood	2011	
FT379	Lanzarote	28º54'39.2''N, 13º47'18.4''W	L 5135424	blood	2011	
FT380	Lanzarote	29º03'28.1''N, 13º31'38.7''W	L 5135425	blood	2011	
FT381	Lanzarote	29º03'56.2''N, 13º31'12.9''W	L 5135426	blood	2011	
FT382	Lanzarote	29º00'13.1''N, 13º36'32.0''W	L 5135427	blood	2011	
FT385	Lanzarote	28º08'39.9''N, 13º29'27.3''W	L 5135430	blood	2011	
FT386	Lanzarote	29º08'50.9''N, 13º28'53.1''W	L 5135431	blood	2011	
FT387	Lanzarote	29º00'54.1''N, 13º32'38.5''W	L 5135432	blood	2011	
FT388	Lanzarote	29º01'40.8''N, 13º32'52.4''W	L 5135433	blood	2011	
FT389	Lanzarote	29º02'13.9''N, 13º33'30.2''W	L 5135434	blood	2011	
FT390	Lanzarote	29º05'27.3''N, 13º33'32.3''W	L 5135435	blood	2011	
FT391	Lanzarote (Alegranza)	Alegranza	A 02.10.2010	blood	2010	
FT392	Spain	Lugo	V-6006*	blood	2009	MH541966
FT393	Spain	Lugo	V-6019*	blood	2009	MH541967
FT394	Spain	Murcia	A09/0578*	blood	2009	MH541968
FT395	Spain	Murcia	A09/0694*	blood	2009	MH541969
FT396	Spain	Murcia	A09/0667*	blood	2009	MH541970

FT397	Spain	Murcia	A09/0564*	blood	2009	MH541971
FT398	Spain	Murcia	A09/0608*	blood	2009	MH541972
FT399	Spain	Murcia	A09/0502*	blood	2009	MH541973
FT400	Spain	Murcia	A09/0716*	blood	2009	MH541974
FT401	Spain	Murcia	A09/0581*	blood	2009	MH541975
FT402	Spain	Murcia	A09/0507*	blood	2009	MH541976
FT404	Spain	Valdivia	B0999*	blood	2009	MH541977
FT405	Spain	San Pedro de Mérida	09/0769*	blood	2009	MH541978
FT406	Spain	Navaconcejo	B0901*	blood	2009	MH541979
FT408	Spain	Zarza de Alange	08/0993*	blood	2008	MH541980
FT409	Spain	Barcelona	TF/2009/1545*	blood	2009	
FT410	Spain	Castelldefels	TF/2009/2146*	blood	2009	MH541981
FT411	Spain	Gerona	TF/2009/3121*	blood	2009	MH541982
FT412	Spain	Cruilles, Monells i Sant Hilari de l´Heura	TF/2009/3841*	blood	2009	
FT413	Spain	Vimbodí i Poblet	TF/2009/3715*	blood	2009	
FT414	Spain	San Fernando (casco urbano)	CACREA 658/09*	blood	2009	
FT415	Spain	Cádiz (casco urbano)	CACREA 647/09*	blood	2009	
FT416	Spain	Jeréz de la Frontera	CACREA 592/09*	blood	2009	
FT417	Spain	San Fernando (casco urbano)	CACREA 618/09*	blood	2009	
FT418	Spain	San Fernando (casco urbano)	CACREA 572/09*	blood	2009	
FT419	Spain	Benalup	CACREA 534/09*	blood	2009	
FT420	Spain	Bornos	CACREA 523/09*	blood	2009	
FT421	Spain	Almuñéquar	GR CREA 028/09*	blood	2009	
FT422	Spain	Baena	CO/1006/06/001*	blood	2009	
FT423	Spain	Instán	MA-CREA 962/09*	blood	2009	
FT424	Spain	Rus	JA-CREA 202/09*	blood	2009	
FT425	Spain	Mancha Real	JA-CRA 291/09*	blood	2009	
FT426	Spain	Móstoles	10/1238*	blood	2010	
FT427	Spain	Madrid capital	08/0588*	blood	2008	
FT428	Spain	Las Rozas	10/1189*	blood	2010	
FT429	Spain	Madrid capital	10/1303*	blood	2010	
FT430	Spain	Parla	08/1242*	blood	2008	
FT431	Spain	Las Rozas	10/1190*	blood	2010	
FT432	Portugal	Exact location unknown	02-0240*	muscle	2001	MH541983
FT433	Portugal	Exact location unknown	03-0157*	muscle	2003	MH541984
FT434	Portugal	Castelo Branco	1228/10*	muscle	2010	MH541985
FT435	Portugal	Abrantes	1227/10*	muscle	2010	MH541986
FT436	Portugal	Castelo Branco	1326/10*	blood	2010	MH541987
FT437	Madeira	Funchal	MAD 1	muscle	2002	MH542109
FT438	Madeira	Exact location unknown	MAD 2	muscle	No data	MH542110

FT439	Madeira	Funchal	MAD 3/MMF 31759	muscle	1998	MH542111
FT440	Madeira	Funchal	MAD 4	muscle	2005	MH542112
FT441	Madeira	Funchal	MAD 5	muscle	2010	MH542113
FT442	Madeira	Funchal	MAD 6	muscle	2010	MH542114
FT443	Madeira	Exact location unknown	MAD 7	muscle	No data	MH542115
FT444	Madeira	Exact location unknown	MAD 8	muscle	No data	MH542116
FT445	Madeira	32º 43' 54.8'' N; 17º 03' 24.2''W	MAD J011401	blood	2010	MH542117
FT446	Madeira	32º 44' 05.0'' N; 17º 03' 39.2'' W	MAD J011402	blood	2010	MH542118
FT447	Madeira	32º 44' 57.0'' N; 16º 41' 49.2'' W	MAD J011403	blood	2010	MH542119
FT448	Madeira	32º 44' 39.9'' N; 16º 42' 46.4'' W	MAD J011404	blood	2010	MH542120
FT449	Madeira	32º 39' 18.0''N; 16º 54' 57.7'' W	MAD 9	muscle	2011	MH542121
FT450	Madeira	32º 44' 47.5''N; 16º 42' 00.6''W	MAD J011405	blood	2011	MH542122
FT451	Madeira	32º 44' 40.7''N; 16º 42 '07.3''W	MAD J011406	blood	2011	MH542123
FT452	Madeira	32º 46' 33.6''N; 17º 13' 28.8''W	MAD J011407	blood	2011	MH542124
FT453	Madeira	32º 48' 50.8''N; 17º 15' 47.1''W	MAD J011408	blood	2011	MH542125
FT454	Madeira	32º 42' 52.6''N; 16º 54' 49.0''W	MAD J011409	blood	2011	MH542126
FT455	Madeira	32º 48' 54.3''N; 17º 15' 12.3''W	MAD J011410	blood	2011	MH542127
FT456	Madeira	32º 48' 57.5''N; 17º 15' 18.1''W	MAD J011411	blood	2011	MH542128
FT457	Madeira	32º44'06.4''N; 17º03'20.7''W	MAD 10	muscle	2012	
FT459	Madeira (Porto Santo)	Farrobo 33º04'36.24''N; 16º20'39.98''W	PS2	muscle	2011	MH542129
FT460	Morocco (Ceuta)	parque San Amaro 35º33'44.01''N; 5º17'44.01''W	CE1	muscle	2010	MH542130
FT461	Morocco (Ceuta)	ciudad de Ceuta 35º33'18.91''N; 5º19'16.22''W	CE2	blood	2010	MH542131
FT462	Morocco (Ceuta)	35º 53' 35.4'' N; 05º 21' 30.5' W	CE 5046255	blood	2010	MH542132
FT463	Morocco (Ceuta)	35º 53' 35.4'' N; 05º 21' 30.5' W	CE 5046256	blood	2010	MH542133
FT464	Morocco (Ceuta)	35º 53' 53.6'' N; 05º 17' 03.8'' W	CE 5082907	blood	2010	MH542134

FT465	Morocco (Ceuta)	35º 53' 53.6'' N; 05º 17' 03.8'' W	CE 5082908	blood	2010	MH542135
FT466	Morocco (Ceuta)	35º 53' 53.6'' N; 05º 17' 03.8'' W	CE 5082909	blood	2010	MH542136
FT467	Morocco (Ceuta)	35º 53' 53.6'' N; 05º 17' 03.8'' W	CE 5082910	blood	2010	MH542137
FT468	Morocco (Ceuta)	35º 53' 28.1'' N; 05º 17' 42.9'' W	CE 5132111	blood	2010	MH542138
FT469	Morocco (Ceuta)	35º 53' 33.3'' N; 05º 17' 22.3'' W	CE 5132112	blood	2010	MH542139
FT470	Morocco (Ceuta)	35º 53' 35.6'' N; 05º 21' 36.4'' W	CE 5132113	blood	2010	MH542140
FT471	Morocco (Ceuta)	35º 53' 35.6'' N; 05º 21' 36.4'' W	CE 5132114	blood	2010	MH542141
FT473	Morocco (Ceuta)	35º50'49.42''N, 5º22'00.39''W	CE 5132116	blood	2010	MH542142
FT474	Morocco (Atlas Mountains)	31º12'59.4''N, 07º50'10.1''W	MAR 5135490	blood	2012	
FT475	Morocco (Atlas Mountains)	31º12'59.4''N, 07º50'10.1''W	MAR 5135491	blood	2012	MH542143
FT476	Morocco (Atlas Mountains)	31º12'22.8''N, 07º51'26.8''W	MAR 5135492	blood	2012	
FT477	Morocco (Atlas Mountains)	31º10'52.7''N, 08º04'19.2''W	MAR 5135493	blood	2012	MH542144
FT478	Morocco (Atlas Mountains)	31º14'19.8''N, 07º48'49.2''W	MAR 5135494	blood	2012	MH542145
FT480	Morocco (Atlas Mountains)	31º21'51.1''N, 07º46'11.0''W	MAR 5135496	blood	2012	MH542146

Appendix 2

Methods

Microsatellite amplification and checking of data quality

We used nine polymorphic loci (NVHfp13, NVHfp79-4, NVHfp89, NVHfp31, NVHfp46-1, NVHfp86-2, NVHfp107, NVHfp82-2 and NVHfp92-1), developed originally for the peregrine falcon (*Falco peregrinus*) by Nesje *et al*. (2000). These loci were amplified in three multiplex PCRs. Multiplex I included 0.2 µM of reverse and forward primers for locus NVHfp13, 0.4 µM for locus NVHfp79-4 and 0.3 µM for locus NVHfp89, multiplex II included 0.4 µM of both primers for locus NVHfp31 and 0.2 µM for loci NVHfp46-1 and NVHfp86-2 and multiplex III included 0.4 µM of primers for NVHfp107 and 0.2 µM for loci NVHfp82-2 and NVHfp92-1. All reactions were performed in 10 µl volumes containing 50 – 100 ng of template DNA, 0.2 mM of each dNTP, 1 µl of reaction buffer, 2.0 mM MgCl2 and 0.06 units of DNA-polymerase (Biotools). The PCR profile for all multiplexes included an initial denaturation at 94°C for 5 min followed by 35 cycles of 94 °C for 30 s, 52 °C for 30 s and 72 °C for 45 s and a final extension at 72 °C for 5 min. Reactions were run on the ABI 3730 Genetic Analyzer and alleles were scored with GENEMAPPER v.3.7 (Applied Biosystems). Approximately 8 % of the reactions were repeated to estimate a genotyping error rate, which was calculated for each locus separately by considering a mismatch on one or both alleles between the two runs as an error. In addition, program MICROCHECKER (van Oosterhout *et al*., 2004) was used to check for possible null alleles, stuttering, large allele dropouts and scoring errors.

Genetic variation, linkage disequilibrium and Hardy Weinberg equilibrium

Variation in the nuclear microsatellite loci was studied by calculating expected (H_E) and observed heterozygosities (H_O) and the inbreeding coefficient (F_{IS}) using the program GENETIX v. 4.05.2 (Belkhir *et al.,* 2004) and allelic richness (AR) using the program HP-RARE (with a minimum sample size of 14 genes; Kalinowski 2005), for each sampling location and subspecies separately as well as over all the locations. Linkage disequilibrium and deviations from Hardy Weinberg equilibrium were tested with GENEPOP v. 4.2 (Raymond & Rousset, 1995).

Population structure analyses from microsatellite data

Pairwise F_{ST}-values between the sampling locations and analyses of molecular variance (AMOVA) were calculated with ARLEQUIN v.3.5.1.3 (Excoffier & Lischer, 2010). For AMOVA, the sampling sites were grouped according to different scenarios up to five groups, based on geographic locations or subspecies designed for the sampling locations (Table A2 in Appendix 2). In addition, a Mantel test between Slatkin's linearized F_{ST}s and logarithms of geographic distances among sampling sites was performed with ARLEQUIN and correlations between the level of genetic variation (H_E, H_O and AR) of the island populations and their geographic distances to the closest mainland coastline and the sizes of the islands were estimated. STRUCTURE was run with K (number of genetic clusters) from 1 – 13, using 1 000 000 MCMC replicates, a burn-in of 100 000 and 10 iterations, admixture model and no prior information of origin of samples. The structure output was then used as an input to the *ad hoc* method by Evanno *et al*. (2005) that estimates the second order change of K-values between the consecutive numbers of genetic clusters (ΔK). The highest value can be inferred as the best estimator of the number of clusters (Evanno *et al*., 2005). The web-based program STRUCTURE HARVESTER v. 0.6.93 (Earl & vonHoldt, 2012) was used to transform the Structure result files for program CLUMPP v. 1.1.2 (Jakobsson & Rosenberg, 2007) that aligns the STRUCTURE output. These results were then visualized using program Distruct v. 1.1 (Rosenberg, 2004). The spatially explicit admixture model of TESS, in turn, was run 100 times for each K (2 – 6) with a burn-in period of 30 000 and 50 000 total iterations. To allow spatial dependencies in the analysis, only the individual geographic data with coordinates (N = 449) were used to build a Delaunay neighborhood network, which was then weighted by the geographic distances between the samples (François & Durand, 2010). To determine the most suitable number of K, deviance information criterion (DIC) values (averaged over all the iterations for each value of K) were plotted against K; according to Durand *et al*. (2009). The value of K for which the decreasing DIC first reaches a plateau should describe best the genetic structure. Additionally, the individual posterior membership probabilities (averaged over the 10 runs with the lowest DIC values using CLUMPP) were plotted and assessed for each value of K. A membership probability value of 0.70 was applied as a threshold for assignment to a cluster.

As an alternative to Bayesian methods in studying the genetic structure of the kestrel, we ran the model-free DAPC in the package adegenet (Jombart, 2008; Jombart *et al*., 2008) in R (R Development Core Team, 2011). Firstly, the analysis was performed with *a priori* information of the sampling locations to investigate, whether the individuals can be reassigned to their original sampling sites. Secondly, *find.cluster* command was applied to identify genetic clusters within the data, after which the data was subjected to the DAPC using the most supported grouping(s) based on Bayesian information criterion (BIC). In both cases, the optimal number of retained principal components in the analysis was determined after preliminary runs by applying the *optim.a.score* command and then re-running the $DAPC_S$ using the received number.

Sequencing of the mitochondrial cytochrome b gene

PCR was performed with primers L13851-cytb-falco (5' –GGC CTA CTA TTA GCC ATA CAC TA) and H14822-cytb-falco (5'- AGT AGT TGA GGA TTT TGT TTT CTA GG), designed for this study based on an alignment of several subspecies of kestrels and other closely related *Falco* species retrieved from GenBank (accession numbers: EU233099, EU233109, EU233119, EU233121-23, EU233125-7, EU233129-31, AF279465, AF279467-73, AF279475 AY390349, EU196361 and KM264304). The PCR was performed in 10 µl volumes containing 50 – 100 ng of template DNA, 0.2 mM of each dNTP, 0.5 µM of both primers, 2 µl of reaction buffer (5X), 2.5 mM MgCl2 and 0.02 units of Phusion DNA-polymerase (Thermo Scientific). The PCR profile included an initial denaturation at 98°C for 30 s followed by 35 – 40 cycles of 98 °C for 10 s, 52 °C for 20 s and 72 °C for 30 s and a final extension at 72 °C for 10 min. Sequencing was performed using the BigDye Terminator v.3.1 Kit, run on an ABI3730 (Applied Biosystems) and aligned manually with BIOEDIT v.7.2.5 (Hall *et al*., 1999). Sequencing was performed with the L-primer and almost half of the samples (111 out of the 229) were sequenced also from the other strand with the H-primer to check for consistency.

Substitution model selection

Program MEGA v.6.0 (Tamura *et al*., 2013) was used to search for the best nucleotide substitution model to be applied in the analysis. However, to calculate AMOVA and the pairwise Φ_{ST} -values, we used the Tamura-Nei substitution model, the second-best ranked model, since the best model suggested by MEGA (HKY+G+I) is not available in ARLEQUIN.

Demographic analyses

For analyses with program BOTTLENECK v. 1.2.02 (Cornuet & Luikart, 1996), we applied the infinite allele (IAM) and two-phase models (TPM) for the mutation model, using 30 % as the level of variance and 70 as the percentage of stepwise mutation model for TPM. We used the Wilcoxon test (with Bonferroni correction) for estimating the statistical significance of the heterozygosity excess.

In DIYABC analyses, we used the microsatellite data to simulated 4 million datasets with uniform priors for effective population sizes (N_e) and coalescent times (10 – 10 000 for both) and an admixture rate of 0.001 – 0.999. We compared the posterior probabilities of the simulated data with the observed data to choose the most likely scenario. We used all the available summary statistics to check for a match of the observed and simulated data. Furthermore, the type I and II errors were estimated to evaluate reliability of the chosen scenario, as recommended in the DIYABC manual. Originally, we made serious efforts to include the mitochondrial data into this analysis as well, but based on no fit between the observed and simulated datasets, we finally continued with the microsatellite data only. N_es were calculated also by applying the linkage equilibrium method in program NEESTIMATOR v. 2.01 (Do et al., 2013), where we set 0.02 as the critical value for the lowest allele frequency (Waples & Do, 2010) and assumed monogamy.

To detect genetic signs of past bottlenecks and demographic expansions in the mitochondrial sequence data, we used DNASP v.5 (Librado & Rozas, 2009) to estimate Ramons-Onsins and Rozas R2, raggedness index (r) and τ, the time since the expansion (measured as $\tau = 2ut$, where t is time in generations and μ is the mutation rate). Smooth unimodal mismatch distributions (tested with raggedness index and R2), with negative Tajima's D and Fu's Fs values are consistent with demographic change. Ragged distributions together with positive Tajima's D and Fu's F values indicate stable, sub-structured populations (Rogers & Harpending, 1992).

Furthermore, we looked for past changes in the kestrel N_es by constructing Bayesian skyline plots with program BEAST (Drummond *et al*., 2012). For these analyses, we applied the HKY+G+I model and estimated transition-transversion rates (κ; 3.17), the shape parameter (α; 0.05), and the proportion of invariable sites (0.56) with program MEGA. These figures were then applied as prior distributions in program BEAUTI (Drummond *et al*., 2012) to build the input for the Bayesian skyline analysis for BEAST. The Bayesian skyline model was set to piecewise-constant (Drummond *et al*., 2005), ten groups, strict clock and a random starting tree was used. We applied 10 – 20 million MCMC chains, recorded parameters every 10 000 chains and discarded the first 1 000 000 generations as a burn-in. The posterior distributions were examined with program TRACER (Rambaut *et al*., 2014) to verify sufficient effective sample sizes and convergence of the posterior distribution. During this process, it was discovered that the posterior distributions for the populations in Madeira, Iberia and Gran Canaria were bimodal and the effective sample sizes too small. Thus, a lognormal relaxed clock was applied, the number of groups was set from three to five instead of ten, and number of chains was increased to 100 million and burn-in to 10 million for these three populations. We used a mutation rate of 0.0027/site/Myr (Pacheco *et al*., 2011) when transforming effective population sizes from N_e x mutation rate to actual N_es and the time unit from number of generations to years. The same mutation rate was used when the pairwise net mean Tamura-Nei distances among the three subspecies were estimated with MEGA (Tamura *et al*., 2013), and transformed into divergence times between the subspecies.

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Table A2. AMOVA design, partitioning of the molecular variance and fixation indices with their significance. The largest among group variation is indicated in bold for both markers.

Number of groups	Group structure	Percentage of variance	Fixation indices
2	Group 1: Europe, North-western Africa , Menorca, Ibiza, Mallorca	*Cytochrome b*	*Cytochrome b*
		Among groups: 4.55	Among groups: F_{CT} = 0.0455 $p < 0.01$
		Among populations within groups: 9.61	Among populations within groups: F_{SC} = 0.1007 $p < 0.001$
	Group 2: Madeira, Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro, Lanzarote, Fuerteventura	Within populations: 85.83	Among populations: F_{ST} = 0.1417 $p < 0.001$
		Microsatellites	*Microsatellites*
		Among groups: 8.19	Among groups: F_{CT} = 0.0819 $p < 0.01$
		Among populations within groups: 2.33	Among populations within groups: F_{SC} = 0.0256 $p < 0.001$
		Within populations: 89.48	Among populations: F_{ST} = 0.0819 $p < 0.001$
2	Group 1: Europe, North-western Africa , Madeira, Menorca, Ibiza, Mallorca	*Cytochrome b*	*Cytochrome b*
		Among groups: 7.09	Among groups: F_{CT} = 0.0709 $p < 0.01$
		Among populations within groups: 7.99	Among populations within groups: F_{SC} = 0.0860 $p < 0.001$
		Within populations: 84.92	Among populations: F_{ST} = 0.1508 $p < 0.001$
	Group 2: Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro, Lanzarote, Fuerteventura	*Microsatellites*	*Microsatellites*
		Among groups: 5.86	Among groups: F_{CT} = 0.0586 $p < 0.01$
		Among populations within groups: 3.22	Among populations within groups: F_{SC} = 0.0343 $p < 0.001$
		Within populations: 90.92	Among populations: F_{ST} = 0.0909 $p < 0.001$
3	Group 1: Europe, North-western Africa , Menorca, Ibiza, Mallorca	*Cytochrome b*	*Cytochrome b*
		Among groups: 4.47	Among groups: F_{CT} = 0.0447 $p < 0.01$
		Among populations within groups: 9.07	Among populations within groups: F_{SC} = 0.0949 $p < 0.001$
	Group 2: Madeira, Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro	Within populations: 86.47	Among populations: F_{ST} = 0.1353 $p < 0.001$
		Microsatellites	*Microsatellites*
		Among groups: 6.32	Among groups: F_{CT} = 0.0634 $p < 0.01$
		Among populations within groups: 2.06	Among populations within groups: F_{SC} = 0.0220 $p < 0.001$
	Group 3: Fuerteventura, Lanzarote	Within populations: 91.63	Among populations: F_{ST} = 0.0841 $p < 0.001$
3	Group 1: Europe, North-western Africa , Menorca, Ibiza, Mallorca, Madeira	*Cytochrome b*	*Cytochrome b*
		Among groups: 7.62	Among groups: F_{CT} = 0.0762 $p < 0.01$
		Among populations within groups: 6.85	Among populations within groups: F_{SC} = 0.0742 $p < 0.001$
	Group 2: Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro	Within populations: 85.52	Among populations: F_{ST} = 0.1448 $p < 0.001$
		Microsatellites	*Microsatellites*
		Among groups: 4.66	Among groups: F_{CT} = 0.0468 $p < 0.01$

	Group 3: Fuerteventura, Lanzarote	Among populations within groups: 3.04 Within populations: 92.30	Among populations within groups: F_{SC} = 0.0320 $p < 0.001$ Among populations: F_{ST} = 0.0773 $p < 0.001$
4	Group 1: Europe, North-western Africa , Menorca, Ibiza, Mallorca, Group 2: Madeira Group 3: Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro Group 4: Fuerteventura, Lanzarote	*Cytochrome b* Among groups: 5.88 Among populations within groups: 7.70 Within populations: 86.43 *Microsatellites* Among groups: 5.72 Among populations within groups: 2.16 Within populations: 92.12	*Cytochrome b* Among groups: F_{CT} = 0.0586 $p < 0.05$ Among populations within groups: F_{SC} = 0.0818 $p < 0.001$ Among populations: F_{ST} = 0.1357 $p < 0.001$ *Microsatellites* Among groups: F_{CT} = 0.5740 $p < 0.01$ Among populations within groups: F_{SC} = 0.0230 $p < 0.001$ Among populations: F_{ST} = 0.0791 $p < 0.001$
5	Group 1: Europe, North-western Africa Group 2: Menorca, Ibiza, Mallorca Group 3: Madeira Group 4: Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro Group 5: Fuerteventura, Lanzarote	*Cytochrome b* Among groups: 4.74 Among populations within groups: 8.24 Within populations: 87.03 *Microsatellites* Among groups: 5.68 Among populations within groups: 2.03 Within populations: 92.30	*Cytochrome b* Among groups: F_{CT} = 0.0474 p = NS Among populations within groups: F_{SC} = 0.0865 $p < 0.001$ Among populations: F_{ST} = 0.1297 $p < 0.001$ *Microsatellites* Among groups: F_{CT} = 0.0543 $p < 0.01$ Among populations within groups: F_{SC} = 0.0230 $p < 0.001$ Among populations: F_{ST} = 0.0761 $p < 0.001$

Appendix 3

Results

Microsatellites

Data quality and linkage disequilibrium

The mean genotyping error rate was 7.2 %. Most of the errors seemed to have been caused by allelic dropouts, as the differences between two runs were commonly caused by observing a 'homozygote' in the first and a heterozygote in the other run (14 cases out of the 17 errors), sharing one of the alleles with the 'homozygote'. MICROCHECKER detected null alleles and stuttering in almost all loci, but the suspect loci were not consistent over the different populations, and thus all loci were kept for further analyses. There was linkage disequilibrium after the Bonferroni correction only in two pairs of loci in two different sampling sites (between NVHfp46-1 and NVHfp107 in Gran Canaria and between NVHfp79-4 and NVHfp46-1 in La Gomera). All sites showed significant excess of homozygotes ($p < 0.02$).

Pairwise F_{ST}-values

Pairwise F_{ST}-values were quite low, but still significant in divergence between the populations, with an overall F_{ST} of 0.0837 ($p < 0.01$). The highest divergence values were found in populations in La Gomera and Tenerife when compared with the rest. The mean F_{ST} between La Gomera and all the other populations was 0.0602 (range 0.0004–0.1703), while the mean F_{ST} between Tenerife and all the other the populations equaled to 0.0488 (range -0.0041–0.1703, Table A3). The low divergence was reflected in the reassignment success of the individuals. On average, DAPC could reassign only 55% of the individuals back to their sampling sites with the highest rate in Menorca (77%) and lowest in El Hierro (42%). In AMOVA, the grouping of sampling sites into two groups was the best supported alternative with an F_{CT} of 0.0819 (Table A2 in Appendix 2; Group 1: Europe, North-western Africa, Menorca, Ibiza, Mallorca, Group 2: Madeira, Fuerteventura, Tenerife, La Palma, Gran Canaria, La Gomera, El Hierro, Lanzarote).

Bayesian population structure analyses

Both Bayesian methods, STRUCTURE and TESS, suggested that the most probable number of genetic clusters in the data is two (K=2; Figs 1a and 1b). In STRUCTURE, the result was clear with the Evanno method (ΔK for K=2 was 388.27 and only 133.46 for the second highest supported model K=3) while the lnP(K) still increased slowly after K = 2, until reaching K = 7. With TESS, the DIC values kept on decreasing with each added K without reaching the expected plateau, but no true additional clusters (in terms of membership probabilities reaching 0.7) were detected after K = 2 (data not shown). In comparison, the clustering algorithm of DAPC gave more ambiguous results as the received BIC values kept on decreasing until K = 12 (Fig. A1 in Appendix 3). The biggest drops, however, did occur between K=1-3 after which the differences for the successive values of K remained low. Furthermore, the scatterplots depicting the genetic differentiation of the sampled individuals showed more and more overlap after K =3 (Figs A2 and A3 in Appendix 3), and no clear spatial patterns could be seen in the posterior membership probabilities either (data not shown).

In TESS, only 4 % of the sampled individuals remained un-assigned, whereas in DAPC and Structure, the percentages were 8.5 and 16.7, respectively. In TESS, several samples from Lanzarote and Fuerteventura and a few from all other Atlantic islands were divided into both, 'Mediterranean' and 'Atlantic' clusters (Fig. 1b). This division of individuals into both 'Mediterranean' and 'Atlantic' clusters was seen in all Atlantic island populations in Structure results as well, with most individuals from Lanzarote having a higher membership to 'Mediterranean' cluster than to the 'Atlantic' cluster (Fig. 1a). In DAPC, the sampling locations from Iberia, North Africa and the Balearic Islands were highly weighted towards the 'Mediterranean' group, whereas of the Canary Islands, El Hierro, Tenerife and La Palma were clearly weighted towards the 'Atlantic' group. However, the remaining populations from the Canary Islands and Madeira showed tendency to both groups (Fig. 1c). With K = 3, the third cluster was present everywhere in the Canaries, but was slightly more prominent in the western islands, suggesting a minor longitudinal differentiation (Fig. A4 in Appendix 3).

Mitochondrial cytochrome b sequences

Description of the data

An 803 bp alignment was obtained from 244 sequences (accession number to be added upon acceptance). All sequences from GenBank that were long enough and contained information of the origin of the sequenced individual, were also included into an alignment (altogether 15 sequences; accession numbers AF279468, Ethiopia; EU233127, EU233128, AF279467, AF279470, AF279471, South Africa; EU196361, Taiwan; EU233125, EU233126, Japan; AF279469(captive), EU2333130, United Kingdom; EU233129, Norway; EU233131, Greece; AF279473, Fuerteventura and AF279472, Tenerife). There were altogether 47 variable sites, of which 32 were parsimony informative and 35 synonymous. Excluding the 15 sequences from the GenBank, there were 32 variable sites, of which 25 were parsimony informative and 27 synonymous. Sequences from Sub-Saharan Africa and Asia were considered too few to provide reliable diversity estimates. The best substitution model obtained by MEGA was the HKY+G+I (BIC 9718.447, AIC 4719.828), and the second best was the Tamura-Nei-model TN93+I (BIC 9721.934, AIC 4723.314).

Φ_{ST}-analyses and AMOVA

Pairwise Φ_{ST}-values showed clear divergence between most of the sampling sites, with a mean overall Φ_{ST} of 0.2009 ($p < 0.01$). However, low divergence was seen among the populations in the Canary Islands (Φ_{ST} ranging between -0.0037 – 0.3181, mean 0.1267) and between the Balearic Islands and Europe, North Africa and Madeira (Φ_{ST} = -0.0230 – 0.2638, mean 0.0841) (Table A3). This dichotomy of the Canary Islands differentiating from the rest was reflected also in the AMOVA results, which showed the highest partitioning of the molecular variance to occur among the groups (7.62 %) and the lowest among populations within the groups (6.85 %), when the Canary Island population formed two groups (one for *F.t. dacotiae* and one for *F.t. canariensis*) and the rest of the populations a third one (with the small samples from Asia and Sub-Saharan Africa excluded; Table A2 in Appendix 2).

Demographic history and effective population sizes

The DIYABC analysis of the microsatellite data resulted in the posterior probability for scenario 1 of 0.434 according to the direct approach and 0.437 according to the logistic approach. In comparison, the corresponding values for the second-best scenario number 4 were 0.388 and 0.473. This scenario included the same early split of *F. t. tinnunculus* and *F. t. canariensis*, but instead of admixture, involved a split of *F. t. dacotiae* from *F. t. canariensis* at t1. According to the scenario number 1, only 2 out of the 36 summary statistics (estimated from the simulated data set) remained below the corresponding observed values. The observed data fitted well within the posterior distribution of the scenario 1 based on a principal component analysis. Type I errors were quite high for the best scenario: 0.620 for the direct approach and 0.530 for the logistic approach, respectively. Type II errors were in accordance with scenario 1, and were smaller, for the direct (0.119) and for the logistic (0.137) approaches. These error rates were influenced by the high support for the scenario number 4 to be the best historical scenario explaining the population history.

In comparison with the microsatellite data, the female effective population sizes estimated from the Bayesian skyline plots using the cytochrome b sequences were considerably larger, varying from 652 000 in Gran Canaria to 28.6 million in Menorca, with wide 95 % posterior density intervals (Fig. A5 in Appendix 3). All posterior distributions were unimodal and effective sample sizes large (> 200).

Table A3. Pairwise Φ_{ST}-values of the cytochrome b-sequences between the common kestrel study populations below and microsatellite F_{ST}-values above the diagonal. P<0.05 are shown in bold.

	Sub-Sahara	Asia	Europe	Fuerte-ventura	Tenerife	La Palma	Gran Canaria	La Gomera	El Hierro	Lanzarote	Mallorca	Ibiza	Menorca	Madeira
Sub-Sahara	–	**0.0703**	**0.0773**	0.0142	0.0018	**0.0750**	**0.0857**	0.0133	-0.0070	0.0127	-0.0042	0.0072	-0.0154	–
Asia	0.0109	–	**0.0222**	**0.1703**	0.0128	-0.0041	**0.0216**	**0.0586**	**0.0467**	**0.0731**	-0.0020	0.0270	**0.0892**	–
Europe	**0.1110**	**0.1161**	–	**0.0091**	**0.0305**	0.0075	0.0052	-0.0121	**0.0913**	**0.1215**	**0.1115**	**0.0884**	**0.1006**	–
Fuerteventura	-0.0037	0.0321	**0.1570**	–	**0.0647**	**0.1695**	**0.0261**	**0.0583**	0.0328	0.0392	**0.0731**	**0.0652**	0.0004	–
Tenerife	0.0186	**0.0894**	**0.1403**	0.0246	–	0.0084	**0.0416**	0.0078	-0.0087	-0.0038	-0.0247	-0.0112	0.0084	–
La Palma	**0.1612**	**0.2719**	**0.5069**	**0.1520**	**0.0862**	–	0.0046	0.0210	0.0405	0.0424	0.0062	0.0210	-0.0142	–
Gran Canaria	0.0150	**0.0920**	**0.2358**	0.0450	**0.0800**	**0.2129**	–	-0.0186	**0.0570**	**0.0998**	**0.0648**	**0.0635**	**0.0801**	–
La Gomera	**0.0700**	**0.1681**	**0.3181**	**0.0743**	0.0334	0.0250	0.0695	–	0.0014	-0.0078	0.0112	0.0026	0.0050	–
El Hierro	**0.0447**	**0.1459**	**0.3094**	**0.0537**	0.0469	**0.0409**	**0.0718**	-0.0036	–	-0.0165	-0.0089	-0.0108	0.0003	–
Lanzarote	**0.1482**	**0.2212**	**0.3634**	**0.1485**	**0.1096**	**0.0983**	**0.1879**	**0.0837**	**0.0512**	–	0.0155	-0.0028	0.0084	–
Mallorca	**0.1264**	**0.1329**	**0.3696**	**0.1024**	**0.2042**	**0.2638**	**0.1424**	**0.1633**	**0.1325**	**0.1936**	–	-0.0134	**0.0850**	–
Ibiza	**0.1108**	**0.2197**	**0.3957**	**0.1057**	**0.0558**	0.0006	**0.1862**	0.0407	0.0045	**0.0675**	**0.2437**	–	0.0048	–
Menorca	**0.0855**	**0.1810**	**0.3690**	**0.0920**	0.0467	0.0010	**0.1494**	0.0085	-0.0151	0.0439	**0.1578**	-0.0230	–	–
Madeira	**0.5923**	**0.6081**	**0.8048**	**0.6289**	**0.7039**	**0.8044**	**0.5747**	**0.6700**	**0.6358**	**0.6564**	**0.4863**	**0.7706**	**0.7071**	–
North-Western Africa	0.1201	0.1725	**0.5402**	0.1328	**0.1727**	**0.3149**	0.1602	0.1225	0.0840	**0.1099**	0.0843	**0.2153**	0.1414	**0.5786**

Table A4. Distribution of shared cytochrome b haplotypes. Co = Common, Me = Mediterranean, Ca = Canary Islands, SA = Sub-Saharan Africa.

	Haplotype															
Location	Co I	Co II	Co III	Co IV	Co V	Me I	Me II	Me III	Me IV	Ca I	Ca II	Ca III	Ca IV	Ca V	SAI	SA II
La Palma	2	1		1						4	1	2	2	1		
Tenerife	1									6	1	3				
Gran Canaria	2									13						
La Gomera	5				1					5	1			1		
El Hierro	7		1							4	2					
Madeira	18										1					
Fuerteventura	3									5	2					
Lanzarote	10									1	3					
Mallorca	7	1	1			2	2									
Ibiza	5					4	1	2	4							
Menorca	1				1		1	1								
Iberia[1]	18	2	1							1						
North Africa	10	1	1	1			1									
Sub-Saharan Africa	1														2	2

[1] includes sequences from UK (2), Greece (1) and Norway (1)

Figure A1. BIC-values for clusters (K) 1-50 of the DAPC-analyses of the common kestrels.

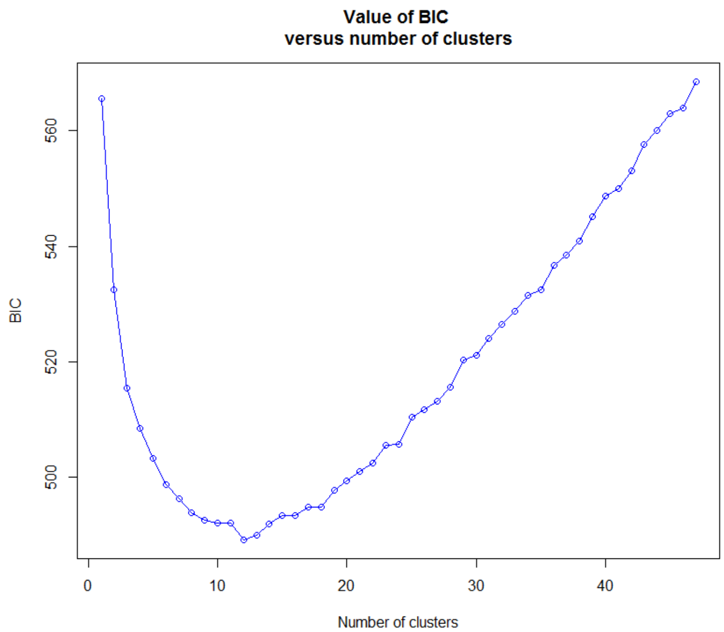

Figure A2. Scatterplot on the two first principal components of the DAPC analysis of the common kestrel for K = 3. Blue (1) = Atlantic cluster I, yellow (2) = Atlantic cluster II, red (3) = Mediterranean cluster

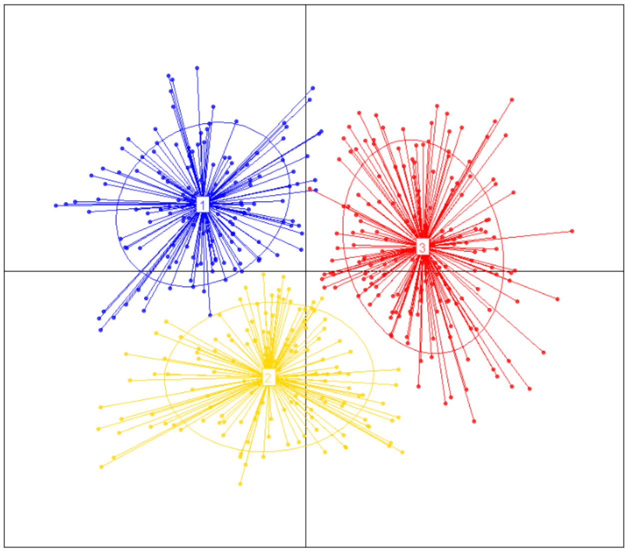

Figure A3. Scatterplot on the two first principal components of the DAPC analysis of the common kestrel for K = 4. Blue (1) = Atlantic cluster I, brown (2) = Atlantic cluster II, orange (3) =Mediterranean cluster and red (4) = mixed cluster.

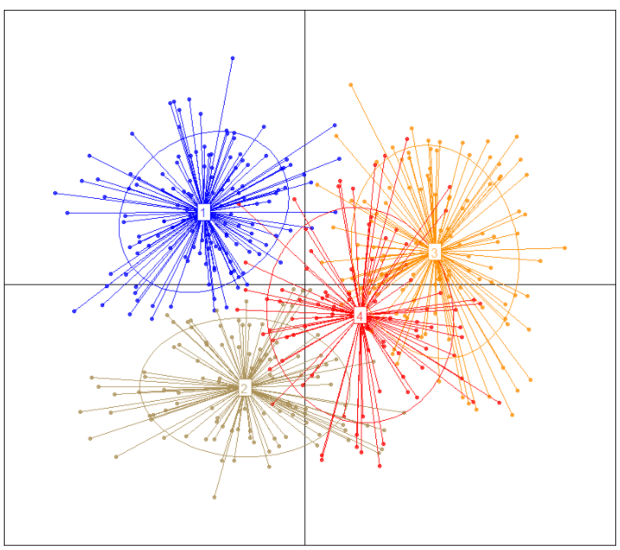

Figure A4.

Clustering of the common kestrels to sampling sites from DAPC-analysis for K = 3. The size of the square represents the proportion of individuals assigned with the scale given below.

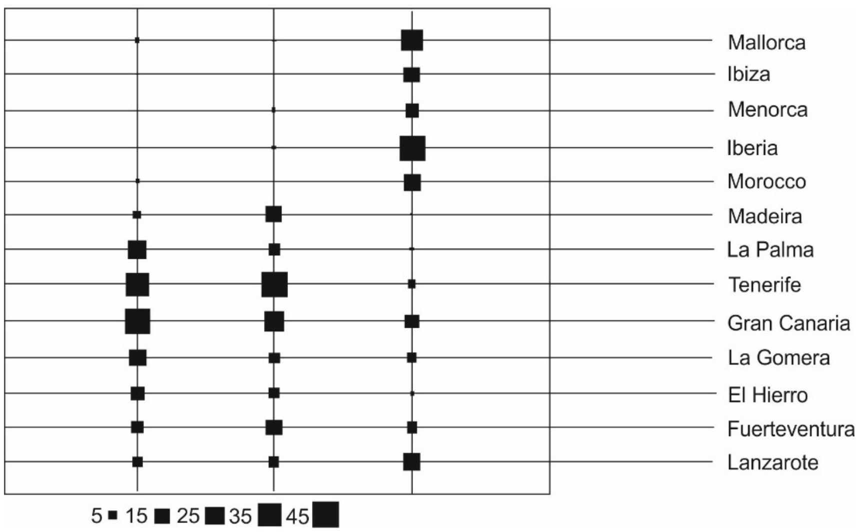

Figure A5.

Results of the Bayesian skyline analyses of the mitochondrial effective population sizes for the 13 common kestrel study sites.