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Appendix from A. B. Phillimore et al., "Sympatric Speciation in Birds Is Rare: Insights from Range Data and Simulations"

(Am. Nat., vol. 171, no. 5, p. 000)

Table A1
Summary of the results obtained from speciation and range change simulations

Allopatric mode of speciation	Proportion of sympatric simulations	Starting range size[a]	Simulation duration	Rate of range change	Range similarity before and after	Proportion of cases with overlap = 0	Proportion of cases with overlap = 1	Correlation with time since speciation[b]	Correlation with smaller range size[b]	Bimodality score
Vicariant	0	1,000	100	.5	.489	.605	.006	.038***	.140***	.015
Vicariant	.1	1,000	100	.5	.491	.542	.037	.028***	.107***	.079
Vicariant	.2	1,000	100	.5	.492	.478	.065	.026***	.068***	.123
Vicariant	.3	1,000	100	.5	.490	.428	.092	−.017**	.034***	.157
Vicariant	.4	1,000	100	.5	.493	.365	.125	−.017*	.005	.182
Vicariant	.5	1,000	100	.5	.492	.312	.153	−.027***	−.019**	.191
Vicariant	.6	1,000	100	.5	.492	.255	.178	−.041***	−.028***	.181
Vicariant	.7	1,000	100	.5	.491	.194	.206	−.053***	−.065***	.160
Vicariant	.8	1,000	100	.5	.493	.137	.233	−.076***	−.098***	.128
Vicariant	.9	1,000	100	.5	.493	.073	.269	−.096***	−.147***	.078
Vicariant	1	1,000	100	.5	.394	.012	.292	−.102***	−.182***	.014
Vicariant	0	1,000	200	.5	.396	.552	.015	.029***	.172***	.033
Vicariant	.1	1,000	200	.5	.394	.510	.027	.016*	.138***	.056
Vicariant	.2	1,000	200	.5	.393	.444	.052	.000	.117***	.092
Vicariant	.3	1,000	200	.5	.396	.404	.068	−.002	.083***	.110
Vicariant	.4	1,000	200	.5	.394	.347	.083	−.010	.063***	.115
Vicariant	.5	1,000	200	.5	.397	.299	.104	−.024***	.057***	.124
Vicariant	.6	1,000	200	.5	.393	.246	.125	−.040***	.023**	.123
Vicariant	.7	1,000	200	.5	.396	.205	.137	−.060***	.006	.112
Vicariant	.8	1,000	200	.5	.395	.151	.156	−.057***	−.011	.095
Vicariant	.9	1,000	200	.5	.396	.099	.179	−.084***	−.040***	.071
Vicariant	1	1,000	200	.5	.591	.049	.190	−.105***	−.041***	.037
Vicariant	0	2,000	100	.5	.591	.614	.003	.055***	.097***	.008
Vicariant	.1	2,000	100	.5	.589	.546	.045	.032***	.047***	.097
Vicariant	.2	2,000	100	.5	.589	.487	.089	.018*	.039***	.174
Vicariant	.3	2,000	100	.5	.591	.426	.123	−.005	.010	.210
Vicariant	.4	2,000	100	.5	.590	.365	.160	.007	−.006	.233
Vicariant	.5	2,000	100	.5	.590	.301	.210	−.020**	−.059***	.252
Vicariant	.6	2,000	100	.5	.589	.243	.258	−.025***	−.091***	.251
Vicariant	.7	2,000	100	.5	.591	.186	.282	−.037***	−.113***	.210
Vicariant	.8	2,000	100	.5	.589	.121	.327	−.065***	−.177***	.158
Vicariant	.9	2,000	100	.5	.588	.063	.358	−.063***	−.220***	.090
Vicariant	1	2,000	100	.5	.200	.004	.408	−.095***	−.269***	.006
Vicariant	0	100	100	.5	.198	.487	.028	.070***	.194***	.055
Vicariant	.1	100	100	.5	.199	.452	.035	.056***	.194***	.064
Vicariant	.2	100	100	.5	.198	.431	.045	.043***	.176***	.078

Table A1 (*Continued*)

Allopatric mode of speciation	Proportion of sympatric simulations	Starting range size[a]	Simulation duration	Rate of range change	Range similarity before and after	Proportion of cases with overlap = 0	Proportion of cases with overlap = 1	Correlation with time since speciation[b]	Correlation with smaller range size[b]	Bimodality score
Vicariant	.3	100	100	.5	.199	.400	.048	.033***	.155***	.076
Vicariant	.4	100	100	.5	.198	.367	.057	.020**	.147***	.083
Vicariant	.5	100	100	.5	.198	.348	.058	.016*	.128***	.081
Vicariant	.6	100	100	.5	.199	.316	.069	−.006	.120***	.088
Vicariant	.7	100	100	.5	.199	.287	.075	.008	.128***	.087
Vicariant	.8	100	100	.5	.200	.252	.076	−.018**	.118***	.077
Vicariant	.9	100	100	.5	.199	.227	.087	−.025***	.105***	.078
Vicariant	1	100	100	.5	.170	.195	.088	−.027***	.111***	.069
Vicariant	0	1,000	100	2	.169	.344	.049	.060***	.193***	.068
Vicariant	.1	1,000	100	2	.170	.335	.057	.062***	.185***	.076
Vicariant	.2	1,000	100	2	.170	.317	.062	.049***	.180***	.078
Vicariant	.3	1,000	100	2	.172	.299	.065	.038***	.171***	.078
Vicariant	.4	1,000	100	2	.170	.283	.063	.033***	.161***	.071
Vicariant	.5	1,000	100	2	.169	.278	.069	.027***	.155***	.077
Vicariant	.6	1,000	100	2	.171	.262	.072	.025***	.153***	.076
Vicariant	.7	1,000	100	2	.171	.247	.079	.012	.138***	.078
Vicariant	.8	1,000	100	2	.171	.243	.077	−.005	.155***	.074
Vicariant	.9	1,000	100	2	.170	.222	.082	−.006	.139***	.073
Vicariant	1	1,000	100	2	.121	.200	.084	−.012	.137***	.067
Vicariant	0	1,000	200	2	.123	.264	.072	.060***	.206***	.076
Vicariant	.1	1,000	200	2	.121	.257	.071	.043***	.185***	.073
Vicariant	.2	1,000	200	2	.123	.257	.074	.059***	.182***	.076
Vicariant	.3	1,000	200	2	.122	.251	.080	.042***	.187***	.080
Vicariant	.4	1,000	200	2	.122	.249	.073	.043***	.186***	.072
Vicariant	.5	1,000	200	2	.122	.240	.076	.041***	.182***	.073
Vicariant	.6	1,000	200	2	.124	.233	.078	.031***	.193***	.072
Vicariant	.7	1,000	200	2	.123	.226	.079	.023**	.174***	.071
Vicariant	.8	1,000	200	2	.124	.218	.081	.020**	.178***	.071
Vicariant	.9	1,000	200	2	.123	.219	.076	.013	.173***	.067
Vicariant	1	1,000	200	2	.212	.212	.082	.005	.162***	.070
Vicariant	0	1,000	1,000	.5	.215	.377	.043	.052***	.186***	.064
Vicariant	.1	1,000	1,000	.5	.214	.357	.047	.058***	.182***	.067
Vicariant	.2	1,000	1,000	.5	.213	.342	.056	.040***	.166***	.076
Vicariant	.3	1,000	1,000	.5	.215	.321	.056	.037***	.159***	.072
Vicariant	.4	1,000	1,000	.5	.213	.301	.061	.030***	.155***	.073
Vicariant	.5	1,000	1,000	.5	.215	.280	.065	.012	.139***	.072
Vicariant	.6	1,000	1,000	.5	.214	.258	.071	.004	.139***	.073
Vicariant	.7	1,000	1,000	.5	.216	.239	.076	−.003	.135***	.072
Vicariant	.8	1,000	1,000	.5	.214	.211	.080	−.022**	.130***	.067
Vicariant	.9	1,000	1,000	.5	.215	.202	.083	−.010	.127***	.067
Vicariant	1	1,000	1,000	.5	.407	.181	.094	−.033***	.097***	.068
Peripatric	0	1,000	100	.5	.418	.939	.004	.042***	.058***	.015
Peripatric	.1	1,000	100	.5	.427	.847	.033	.010	.228***	.111
Peripatric	.2	1,000	100	.5	.435	.756	.064	−.009	.286***	.195
Peripatric	.3	1,000	100	.5	.443	.661	.092	−.003	.316***	.243
Peripatric	.4	1,000	100	.5	.448	.567	.124	−.018*	.312***	.282
Peripatric	.5	1,000	100	.5	.458	.474	.152	−.028***	.294***	.288
Peripatric	.6	1,000	100	.5	.467	.385	.181	−.035***	.236***	.279

Table A1 (*Continued*)

Allopatric mode of speciation	Proportion of sympatric simulations	Starting range size[a]	Simulation duration	Rate of range change	Range similarity before and after	Proportion of cases with overlap = 0	Proportion of cases with overlap = 1	Correlation with time since speciation[b]	Correlation with smaller range size[b]	Bimodality score
Peripatric	.7	1,000	100	.5	.477	.288	.209	−.058***	.164***	.241
Peripatric	.8	1,000	100	.5	.484	.198	.241	−.063***	.083***	.190
Peripatric	.9	1,000	100	.5	.491	.107	.260	−.077***	−.036***	.111
Peripatric	1	1,000	100	.5	.335	.015	.300	−.107***	−.193***	.018
Peripatric	0	1,000	200	.5	.338	.908	.007	.044***	.093***	.024
Peripatric	.1	1,000	200	.5	.344	.817	.025	.024**	.174***	.081
Peripatric	.2	1,000	200	.5	.351	.734	.044	.007	.200***	.128
Peripatric	.3	1,000	200	.5	.356	.646	.061	−.004	.222***	.158
Peripatric	.4	1,000	200	.5	.363	.559	.085	−.021**	.209***	.191
Peripatric	.5	1,000	200	.5	.369	.474	.100	−.029***	.203***	.190
Peripatric	.6	1,000	200	.5	.377	.389	.121	−.059***	.172***	.188
Peripatric	.7	1,000	200	.5	.383	.306	.137	−.049***	.147***	.167
Peripatric	.8	1,000	200	.5	.388	.222	.160	−.062***	.084***	.142
Peripatric	.9	1,000	200	.5	.395	.133	.175	−.091***	.019**	.093
Peripatric	1	1,000	200	.5	.490	.051	.193	−.105***	−.060***	.039
Parapatric	0	1,000	100	.5	.493	.483	.015	.022**	.090***	.029
Parapatric	.1	1,000	100	.5	.492	.430	.041	.006	.082***	.071
Parapatric	.2	1,000	100	.5	.492	.393	.073	.005	.045***	.115
Parapatric	.3	1,000	100	.5	.493	.342	.098	.000	.022**	.134
Parapatric	.4	1,000	100	.5	.491	.302	.128	−.007	.000	.154
Parapatric	.5	1,000	100	.5	.493	.256	.154	−.021**	−.018**	.157
Parapatric	.6	1,000	100	.5	.493	.206	.178	−.037***	−.046***	.147
Parapatric	.7	1,000	100	.5	.494	.153	.211	−.064***	−.080***	.129
Parapatric	.8	1,000	100	.5	.492	.106	.243	−.069***	−.104***	.103
Parapatric	.9	1,000	100	.5	.491	.061	.272	−.086***	−.157***	.066
Parapatric	1	1,000	100	.5	.395	.014	.303	−.109***	−.176***	.017
Parapatric	0	1,000	200	.5	.394	.469	.023	.026***	.160***	.043
Parapatric	.1	1,000	200	.5	.395	.429	.040	.021**	.117***	.068
Parapatric	.2	1,000	200	.5	.393	.374	.057	.008	.090***	.085
Parapatric	.3	1,000	200	.5	.394	.344	.073	−.001	.092***	.100
Parapatric	.4	1,000	200	.5	.395	.298	.091	−.008	.052***	.109
Parapatric	.5	1,000	200	.5	.394	.258	.105	−.033***	.040***	.108
Parapatric	.6	1,000	200	.5	.398	.221	.123	−.037***	.013	.109
Parapatric	.7	1,000	200	.5	.395	.178	.143	−.068***	−.013	.102
Parapatric	.8	1,000	200	.5	.395	.135	.159	−.072***	−.013	.086
Parapatric	.9	1,000	200	.5	.394	.091	.173	−.085***	−.036***	.063
Parapatric	1	1,000	200	.5		.047	.196	−.091***	−.065***	.037

Note: For full details of the conditions used for simulations and how indices were calculated, see "Methods."

[a] Summed size of the two species ranges at the time of speciation.

[b] Kendall's τ correlations with proportion of range overlap.

* Significance at $P < .05$.

** Significance at $P < .01$.

*** Significance at $P < .001$.

Table A2
Summary of spatial, range overlap, and phylogenetic data

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Rhea americana	*Rhea pennata*	Taxonomy				6,540,342	1,095,590	.000	.062	
Apteryx owenii	*Apteryx haastii*	Phylogeny		1, 2		195	8,772	.000	.02	
Eudromia elegans	*Eudromia formosa*	Taxonomy				1,374,913	285,883	.034		
Tinamotis pentlandii	*Tinamotis ingoufi*	Taxonomy				589,020	401,949	.000		
Aptenodytes patagonicus	*Aptenodytes forsteri*	Phylogeny				25,017	86,687	.000	.067	
Pygoscelis papua	*Pygoscelis antarctica*	Phylogeny				31,445	21,512	.417	.079	
Rollandia rolland	*Rollandia microptera*	Taxonomy				4,838,180	81,827	.998		
Poliocephalus poliocephalus	*Poliocephalus rufopectus*	Taxonomy		2		3,737,850	88,283	.000		
Aechmophorus occidentalis	*Aechmophorus clarkii*	Taxonomy	1		1	4,866,510	2,116,840	.955		
Diomedea melanophris	*Diomedea chrysostoma*	Phylogeny		1, 2		24,211	12,398	.915	.019	
Diomedea albatrus	*Diomedea irrorata*	Phylogeny			1	9	547	.000	.044	
Diomedea immutabilis	*Diomedea nigripes*	Phylogeny	1		1	3,507	437	.463	.018	
Diomedea exulans	*Diomedea amsterdamensis*	Phylogeny				13,357	7	.000	.096	
Phoebetria fusca	*Phoebetria palpebrata*	Taxonomy		1, 2		8,090	12,860	.975	.021	
Fulmarus glacialis	*Fulmarus glacialoides*	Taxonomy			1	277,239	8,885	.000	.042	
Bulweria bulwerii	*Bulweria fallax*	Taxonomy			1	10,539	46,678	.000		
Calonectris diomedea	*Calonectris leucomelas*	Phylogeny			1	29,495	3,123	.000	.034	
Puffinus pacificus	*Puffinus bulleri*	Phylogeny		2		434,516	1,941	.000	.035	
Puffinus carneipes	*Puffinus creatopus*	Phylogeny	1	1		841	260	.000	.007	
Oceanites oceanicus	*Oceanites gracilis*	Taxonomy				36,195	829	.000		
Fregetta tropica	*Fregetta grallaria*	Taxonomy	1	2		29,442	202	.000	.074	
Morus serrator	*Morus capensis*	Phylogeny	1			43,5735	505	.126	.017	
Sula nebouxii	*Sula variegata*	Phylogeny				9,425	543	.058	.007	
Nycticorax nycticorax	*Nycticorax caledonicus*	Taxonomy	1		1	49,516,300	5,198,030	.040		
Mycteria cinerea	*Mycteria leucocephala*	Phylogeny			1	745,714	5,117,263	.386	.009	
Anastomus oscitans	*Anastomus lamelligerus*	Taxonomy			1	4,530,650	16,685,900	.000		
Ephippiorhynchus asiaticus	*Ephippiorhynchus senegalensis*	Taxonomy			1	7,052,794	16,501,930	.000	.082	
Geronticus calvus	*Geronticus eremita*	Taxonomy			1	223,908	154,272	.000	.009	
Eudocimus albus	*Eudocimus ruber*	Taxonomy	1		1	1,052,090	816,505	.278		
Chauna chavaria	*Chauna torquata*	Taxonomy				143,533	3,503,687	.000		
Aix sponsa	*Aix galericulata*	Taxonomy			1	6,238,800	1,795,479	.000	.095	
Anas clypeata	*Anas rhynchotis*	Phylogeny			1	29,025,931	2,154,804	.000	.003	.002
Anas versicolor	*Anas puna*	Phylogeny				3,095,756	586,343	.000	.007	.008
Anas falcata	*Anas strepera*	Phylogeny	1		1	5,076,287	18,299,842	.531	.017	.016
Anas americana	*Anas sibilatrix*	Phylogeny				7,674,522	2,182,269	.000	.004	.007
Anas castanea	*Anas gracilis*	Phylogeny	1			1,685,617	5,538,552	.992	0	.001
Leptodon cayanensis	*Leptodon forbesi*	Taxonomy				12,049,400	230	.000		
Henicopernis longicauda	*Henicopernis infuscatus*	Taxonomy				762,459	35,401	.000		
Ictinia mississippiensis	*Ictinia plumbea*	Taxonomy			1	825,313	13,049,600	.000		
Haliastur sphenurus	*Haliastur indus*	Taxonomy			1	6,169,990	7,482,430	.162		
Haliaeetus vocifer	*Haliaeetus vociferoides*	Phylogeny				16,907,085	122,356	.000	.024	.018
Haliaeetus leucogaster	*Haliaeetus sanfordi*	Phylogeny		2		5,655,293	36,492	.001	.002	.001
Haliaeetus albicilla	*Haliaeetus leucocephalus*	Phylogeny			1	20,094,203	8,875,500	.000	.025	.022
Ichthyophaga humilis	*Ichthyophaga ichthyaetus*	Phylogeny			1	3,093,052	6,107,359	.931	.069	.064
Polyboroides typus	*Polyboroides radiatus*	Taxonomy			1	14,892,000	413,729	.000		
Erythrotriorchis buergersi	*Erythrotriorchis radiatus*	Taxonomy				87,019	1,095,060	.000		
Harpyhaliaetus coronatus	*Harpyhaliaetus solitarius*	Taxonomy			1	4,742,503	449,169	.019	.013	.016
Asturina nitida	*Asturina plagiata*	Taxonomy			1	9,680,000	995,000	.000		

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Milvago chimachima	*Milvago chimango*	Taxonomy				11,196,600	3,230,530	.233		
Polihierax semitorquatus	*Polihierax insignis*	Taxonomy				2,684,320	1,380,640	.000		
Aepypodius arfakianus	*Aepypodius bruijnii*	Taxonomy				225,783	3,143	.000		
Pipile cumanensis	*Pipile pipile*	Phylogeny		1		3,849,772	4,757	.000	.003	.005
Chamaepetes unicolor	*Chamaepetes goudotii*	Taxonomy				22,012	280,305	.000		
Crax alberti	*Crax daubentoni*	Phylogeny				121,530	364,710	.000	.047	.051
Crax blumenbachii	*Crax globulosa*	Phylogeny				219,381	2,145,030	.000	.036	.053
Crax alector	*Crax fasciolata*	Phylogeny				2,099,947	3,699,470	.000	.019	.02
Lagopus lagopus	*Lagopus mutus*	Phylogeny	1		1	24,308,500	14,532,400	.871	.056	.046
Tetrao urogallus	*Tetrao parvirostris*	Phylogeny	1		1	11,122,288	6,434,665	.422	.062	.047
Tetrao mlokosiewiczi	*Tetrao tetrix*	Phylogeny			1	13,554,773	14,698,160	.735	.036	.029
Tympanuchus cupido	*Tympanuchus phasianellus*	Phylogeny	1		1	488,427	6,080,582	.534	.004	.006
Cyrtonyx montezumae	*Cyrtonyx ocellatus*	Taxonomy			1	686,283	130,830	.000		
Tetraophasis obscurus	*Tetraophasis szechenyii*	Taxonomy			1	271,545	595,821	.051		
Alectoris philbyi	*Alectoris magna*	Phylogeny			1	100,746	208,796	.000	.038	
Ammoperdix griseogularis	*Ammoperdix heyi*	Taxonomy			1	2,819,311	1,656,973	.000		
Bambusicola fytchii	*Bambusicola thoracica*	Taxonomy			1	835,332	1,696,588	.000		
Tragopan satyra	*Tragopan blythii*	Phylogeny	1		1	74,480	165,592	.115	.066	
Tragopan temminckii	*Tragopan caboti*	Phylogeny			1	1,239,340	400,540	.017	.037	
Lophura diardi	*Lophura ignita*	Phylogeny	1			618,556	1,386,138	.000	.043	
Lophura leucomelanos	*Lophura nycthemera*	Phylogeny	1		1	1,219,632	1,513,571	.077	.025	
Lophura edwardsi	*Lophura hatinhensis*	Phylogeny				17,723	9,081	.000	.001	
Chrysolophus pictus	*Chrysolophus amherstiae*	Taxonomy	1		1	969,518	605,900	.242	.021	
Polyplectron bicalcaratum	*Polyplectron chalcurum*	Phylogeny			1	1,449,001	254,049	.000	.014	
Pavo muticus	*Pavo cristatus*	Taxonomy			1	2,373,777	3,177,832	.000	.029	
Agelastes meleagrides	*Agelastes niger*	Taxonomy				348,417	620,179	.000		
Guttera plumifera	*Guttera pucherani*	Taxonomy				787,554	3,750,418	.319		
Mesitornis variegata	*Mesitornis unicolor*	Taxonomy				82,882	122,487	.000		
Balearica pavonina	*Balearica regulorum*	Phylogeny				2,519,204	3,925,905	.000	.032	
Grus virgo	*Grus paradisea*	Phylogeny			1	5,924,591	941,336	.000	.032	
Grus antigone	*Grus rubicunda*	Phylogeny	1			2,436,830	3,114,398	.190	.032	
Grus nigricollis	*Grus monacha*	Phylogeny			1	1,429,185	3,114,356	.000	.016	
Canirallus oculeus	*Canirallus kioloides*	Taxonomy				877,774	260,107	.000		
Nesoclopeus woodfordi	*Nesoclopeus poecilopterus*	Taxonomy		2		25,214	10,449	.000		
Gymnocrex rosenbergii	*Gymnocrex plumbeiventris*	Taxonomy				171,704	267,052	.000		
Amaurornis olivaceus	*Amaurornis phoenicurus*	Phylogeny		1	1	855,007	10,918,000	.315		
Amaurornis akool	*Amaurornis flavirostra*	Phylogeny			1	4,464,280	16,301,400	.000		
Amaurornis bicolor	*Amaurornis olivieri*	Phylogeny			1	1,832,080	36,898	.000		
Porzana fusca	*Porzana paykullii*	Phylogeny			1	9,319,190	1,588,240	.499		
Aenigmatolimnas marginalis	*Porzana cineraea*	Phylogeny				5,157,560	3,141,340	.000		
Neocrex colombianus	*Neocrex erythrops*	Taxonomy			1	43,892	1,427,197	.002		
Ardeotis arabs	*Ardeotis kori*	Phylogeny			1	2,678,115	2,762,388	.006	.047	
Ardeotis australis	*Ardeotis nigriceps*	Phylogeny			1	4,271,215	2,111,385	.000	.105	
Neotis denhami	*Neotis ludwigii*	Phylogeny				8,375,042	342,449	.462	.048	
Eupodotis afra	*Eupodotis afraoides*	Phylogeny	1			274,180	1,504,243	.000	.022	
Eupodotis gindiana	*Eupodotis savilei*	Phylogeny				534,708	1,555,036	.000	.005	
Actophilornis africanus	*Actophilornis albinucha*	Taxonomy				16,594,700	99,790	.000		
Irediparra gallinacea	*Microparra capensis*	Phylogeny			1	1,724,965	3,116,084	.000	.102	
Jacana jacana	*Jacana spinosa*	Phylogeny	1		1	13,881,681	1,044,361	.000	.02	
Coenocorypha pusilla	*Coenocorypha aucklandica*	Taxonomy		1, 2		5	691	.000		

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Tringa macularia	*Tringa hypoleucos*	Phylogeny			1	13,627,400	25,667,300	.000	.101	.126
Tringa flavipes	*Catoptrophorus semipalmatus*	Phylogeny			1	4,592,704	1,878,308	.092	.079	.092
Tringa nebularia	*Tringa melanoleuca*	Phylogeny			1	12,089,040	4,141,899	.000	.083	.07
Tringa glareola	*Tringa totanus*	Phylogeny			1	15,340,896	15,329,455	.312	.069	.054
Arenaria interpres	*Arenaria melanocephala*	Taxonomy			1	2,301,540	83,417	.356		
Phalaropus lobatus	*Phalaropus fulicaria*	Taxonomy			1	9,765,520	4,489,510	.859		
Attagis gayi	*Attagis malouinus*	Taxonomy				1,031,820	335,208	.256		
Thinocorus orbignyianus	*Thinocorus rumicivorus*	Taxonomy				1,466,630	1,269,050	.428		
Chionis alba	*Chionis minor*	Taxonomy				20,249	8,219	.000		
Catharacta skua	*Stercorarius pomarinus*	Phylogeny	1		1	16,645	3,156,307	.051	.007	
Stercorarius longicaudus	*Stercorarius parasiticus*	Phylogeny			1	6,244,073	6,284,347	.780	.084	
Larus glaucoides	*Larus schistisagus*	Phylogeny			1	1,478,831	294,831	.000	.001	
Larus glaucescens	*Larus hyperboreus*	Phylogeny	1		1	401,769	3,262,749	.043	.009	
Larus cachinnans	*Larus argentatus*	Phylogeny	1		1	977,846	19,527,938	.414	.006	
Larus belcheri	*Larus atlanticus*	Phylogeny				746	388	.000	.011	
Larus ichthyaetus	*Larus hemprichii*	Phylogeny			1	1,434,553	227,350	.000	.036	
Larus pipixcan	*Larus fuliginosus*	Phylogeny		2	1	1,433,194	7,275	.000	.011	
Larus modestus	*Larus scoresbii*	Phylogeny				82,675	12,888	.000	.033	
Larus minutus	*Rhodostethia rosea*	Phylogeny			1	8,195,576	408,626	.000	.059	
Larus ridibundus	*Larus brunnicephalus*	Phylogeny	1		1	16,737,708	6,258,861	.034	.004	
Larus cirrocephalus	*Larus hartlaubii*	Phylogeny	1		1	5,430,349	69,973	1.000	0	.003
Larus genei	*Larus philadelphia*	Phylogeny			1	1,619,799	4,369,737	.000	.037	.048
Larus novaehollandiae	*Larus scopulinus*	Phylogeny				2,594,078	41,848	.000	.005	
Pagophila eburnea	*Xema sabini*	Phylogeny			1	397,124	1,560,466	.025	.045	
Rissa tridactyla	*Rissa brevirostris*	Phylogeny		2	1	1,147,471	2,025	.000	.045	
Sterna anaethetus	*Sterna lunata*	Phylogeny		2	1	2,105,795	569,295	.925	.04	.044
Sterna antillarum	*Sterna superciliaris*	Phylogeny			1	458,292	11,363,927	.000	.039	.049
Sterna albifrons	*Sterna nereis*	Phylogeny	1		1	9,805,160	359,916	.333	.032	.043
Sterna caspia	*Sterna nilotica*	Phylogeny			1	4,434,262	7,597,501	.595	.087	.067
Sterna bengalensis	*Sterna maxima*	Phylogeny			1	494,302	882,027	.000	.016	.012
Sterna forsteri	*Sterna trudeaui*	Phylogeny			1	1,679,554	450,770	.000	.041	.085
Sterna hirundinacea	*Sterna vittata*	Phylogeny				396,149	18,134	.011	.018	.01
Sterna dougalli	*Sterna striata*	Phylogeny		2		611,686	26,462	.000	.031	.05
Chlidonias niger	*Chlidonias leucopterus*	Phylogeny	1		1	12,516,039	5,026,839	.899	.033	.02
Gygis alba	*Gygis microrhyncha*	Taxonomy	1			48,245	1,074	.148		
Uria aalge	*Uria lomvia*	Phylogeny	1		1	634,582	630,945	.613	.067	
Brachyramphus brevirostris	*Brachyramphus marmoratus*	Phylogeny	1		1	311,704	2,272,853	.477	.068	
Aethia cristatella	*Aethia pusilla*	Phylogeny			1	198,703	18,323	.664	.059	
Fratercula arctica	*Fratercula corniculata*	Phylogeny			1	304,005	193,238	.000	.029	
Syrrhaptes tibetanus	*Syrrhaptes paradoxus*	Taxonomy			1	1,419,290	6,389,020	.000		
Streptopelia capicola	*Streptopelia vinacea*	Phylogeny	1		1	9,655,063	6,312,730	.075	.026	.029
Turacoena manadensis	*Turacoena modesta*	Taxonomy				185,901	31,585	.000		
Chalcophaps indica	*Chalcophaps stephani*	Taxonomy			1	7,725,794	542,493	.525	.082	
Henicophaps albifrons	*Henicophaps foersteri*	Taxonomy				672,536	36,310	.000		
Petrophassa rufipennis	*Petrophassa albipennis*	Taxonomy	1			34,480	214,829	.000		
Zenaida macroura	*Zenaida graysoni*	Phylogeny			1	11,134,430	1	.000	.01	.007
Cacatua alba	*Cacatua moluccensis*	Phylogeny		1, 2		26,112	18,828	.000	.051	
Neopsittacus musschenbroekii	*Neopsittacus pullicauda*	Taxonomy				71,572	159,353	.630		

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Nestor notabilis	*Nestor meridionalis*	Taxonomy		1, 2		66,577	88,443	.702	.042	
Cyclopsitta gulielmitertii	*Cyclopsitta diophthalma*	Taxonomy				267,863	270,995	.395		
Aprosmictus jonquillaceus	*Aprosmictus erythropterus*	Taxonomy		1		32,809	2,925,665	.000		
Agapornis nigrigenis	*Agapornis lilianae*	Phylogeny	1			16,369	128,858	.771	.005	
Coracopsis vasa	*Coracopsis nigra*	Taxonomy				417,846	416,023	.980		
Anodorhynchus hyacinthinus	*Anodorhynchus leari*	Taxonomy				3,206,625	4,890	.000	.04	
Rhynchopsitta pachyrhyncha	*Rhynchopsitta terrisi*	Taxonomy	1		1	81,591	35,755	.000		
Enicognathus ferrugineus	*Enicognathus leptorhynchus*	Taxonomy				572,046	126,995	1.000		
Nannopsittaca panychlora	*Nannopsittaca dachilleae*	Taxonomy				42,060	156,675	.000		
Pionites melanocephala	*Pionites leucogaster*	Taxonomy	1			2,920,536	3,563,959	.000		
Amazona vittata	*Amazona leucocephala*	Phylogeny		1, 2		916	112,174	.000	.022	
Amazona amazonica	*Amazona guildingii*	Phylogeny		2		7,419,446	350	.000	.057	
Amazona finschi	*Amazona viridigenalis*	Phylogeny	1		1	194,153	83,606	.000	.034	
Crinifer piscator	*Crinifer zonurus*	Taxonomy				2,906,492	999,991	.002	.046	
Oxylophus jacobinus	*Oxylophus levaillantii*	Taxonomy			1	16,312,369	9,141,014	.875		
Clamator coromandus	*Clamator glandarius*	Taxonomy			1	4,925,868	13,639,311	.000		
Carpococcyx radiceus	*Carpococcyx renauldi*	Taxonomy				857,533	747,298	.000		
Hyetornis pluvialis	*Hyetornis rufigularis*	Taxonomy		1, 2		11,022	4,552	.000		
Dromococcyx phasianellus	*Dromococcyx pavoninus*	Taxonomy				8,845,106	3,082,707	.775		
Geococcyx californianus	*Geococcyx velox*	Taxonomy			1	2,930,104	517,109	.062	.095	
Phodilus badius	*Phodilus prigoginei*	Taxonomy			1	5,704,554	9,585	.000		
Aegotheles bennettii	*Aegotheles cristatus*	Phylogeny				152,209	5,216,011	.042	.06	
Nyctibius maculosus	*Nyctibius leucopterus*	Phylogeny				5,974	441,137	.000		
Lurocalis semitorquatus	*Lurocalis rufiventris*	Taxonomy				8,388,108	222,806	.117		
Macrodipteryx vexillarius	*Macrodipteryx longipennis*	Taxonomy				3,406,520	3,561,670	.000		
Uropsalis lyra	*Uropsalis segmentata*	Taxonomy				231,832	222,191	.357		
Hydropsalis climacocerca	*Hydropsalis brasiliana*	Taxonomy				5,855,996	7,852,394	.248		
Schoutedenapus myoptilus	*Schoutedenapus schoutedeni*	Taxonomy				291,349	64,089	.605		
Mearnsia picina	*Mearnsia novaeguineae*	Taxonomy		1		132,023	430,286	.000		
Telacanthura ussheri	*Telacanthura melanopygia*	Taxonomy				2,884,794	11,592	1.000		
Rhaphidura leucopygialis	*Rhaphidura sabini*	Taxonomy				1,498,421	596,589	.000		
Neafrapus cassini	*Neafrapus boehmi*	Taxonomy				994,969	1,138,655	.000		
Panyptila sanctihieronymi	*Panyptila cayennensis*	Taxonomy			1	366,859	8,540,776	.078		
Cypsiurus parvus	*Cypsiurus balasiensis*	Taxonomy				15,200,134	7,037,503	.000	.06	.089
Tachymarptis melba	*Tachymarptis aequatorialis*	Taxonomy			1	7,554,055	1,373,816	.251		
Ramphodon naevius	*Ramphodon dohrnii*	Taxonomy				220,329	74,514	.236		
Eutoxeres aquila	*Eutoxeres condamini*	Taxonomy				250,635	370,060	.111		.197
Glaucis hirsuta	*Glaucis aenea*	Taxonomy				7,820,115	128,123	.011		
Doryfera ludovicae	*Doryfera johannae*	Taxonomy				387,987	459,631	.106		
Topaza pella	*Topaza pyra*	Taxonomy				1,629,400	787,342	.015		
Eulampis holosericeus	*Eulampis jugularis*	Taxonomy		1, 2		8,332	5,545	1.000		.018
Elvira chionura	*Elvira cupreiceps*	Taxonomy				9,598	5,224	.000		
Cynanthus sordidus	*Cynanthus latirostris*	Taxonomy	1		1	96,199	781,537	.273		
Chalybura buffonii	*Chalybura urochrysia*	Taxonomy				512,995	199,596	.359		
Lampornis sybillae	*Lampornis viridipallens*	Phylogeny				45,192	90,294	.134	.05	
Phlogophilus hemileucurus	*Phlogophilus harterti*	Taxonomy				25,433	37,922	.000		
Sephanoides sephaniodes	*Sephanoides fernandensis*	Taxonomy		2		554,266	91	.973	.034	
Haplophaedia aureliae	*Haplophaedia lugens*	Taxonomy				190,965	4,915	.000		
Urosticte benjamini	*Urosticte ruficrissa*	Taxonomy	1			17,570	31,247	.000		
Lesbia victoriae	*Lesbia nuna*	Taxonomy	1			170,830	232,249	.680		.065

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Ramphomicron microrhynchum	*Ramphomicron dorsale*	Taxonomy				199,046	5,467	.555		
Metallura theresiae	*Metallura eupogon*	Phylogeny				18,246	25,485	.000	.003	.004
Aglaiocercus kingi	*Aglaiocercus coelestis*	Taxonomy	1			342,827	29,539	.364		
Heliothryx barroti	*Heliothryx aurita*	Taxonomy				491,319	6,893,516	.000		
Doricha enicura	*Doricha eliza*	Taxonomy				78,679	9,497	.000		
Calliphlox evelynae	*Calliphlox amethystina*	Taxonomy		1		13,855	7,988,121	.000		
Philodice bryantae	*Philodice mitchellii*	Taxonomy				9,185	36,179	.000		
Calothorax lucifer	*Calothorax pulcher*	Taxonomy			1	338,093	52,860	.000		
Mellisuga minima	*Mellisuga helenae*	Taxonomy		1, 2		86,169	106,634	.000		
Archilochus colubris	*Archilochus alexandri*	Taxonomy	1		1	4,936,990	2,371,677	.052		
Calypte anna	*Calypte costae*	Taxonomy	1		1	492,757	563,588	.325		
Atthis heloisa	*Atthis ellioti*	Taxonomy			1	247,491	94,985	.000		
Urocolius macrourus	*Urocolius indicus*	Taxonomy			1	5,931,839	4,006,115	.001		
Priotelus temnurus	*Priotelus roseigaster*	Taxonomy		1, 2		109,335	15,245	.000		.161
Trogon curucui	*Trogon violaceus*	Phylogeny			1	7,396,207	6,901,229	.524	.056	.025
Trogon massena	*Trogon melanurus*	Phylogeny				493,382	6,812,502	.114		.062
Trogon aurantiiventris	*Trogon collaris*	Phylogeny			1	26,841	5,365,529	.000		.05
Syma torotoro	*Syma megarhyncha*	Taxonomy	1			308,950	105,582	.081		
Todus multicolor	*Todus angustirostris*	Phylogeny		1, 2		109,693	74,118	.000	.095	
Todus todus	*Todus mexicanus*	Phylogeny		1, 2		11,022	8,774	.000	.121	
Momotus mexicanus	*Momotus momota*	Taxonomy			1	322,909	9,751,475	.053	.062	
Baryphthengus martii	*Baryphthengus ruficapillus*	Taxonomy				2,809,483	1,565,811	.000		
Electron carinatum	*Electron platyrhynchum*	Taxonomy				184,582	2,864,259	.317		
Nyctyornis amictus	*Nyctyornis athertoni*	Taxonomy			1	1,491,989	3,840,736	.000		
Atelornis crossleyi	*Atelornis pittoides*	Phylogeny				130,525	138,776	.945	.071	.107
Uratelornis chimaera	*Brachypteracias squamigera*	Phylogeny				12,721	73,446	.000	.09	.128
Upupa epops	*Upupa africana*	Taxonomy	1		1	40,663,510	7,512,406	.000		
Anorrhinus tickelli	*Anorrhinus galeritus*	Taxonomy			1	1,000,678	1,381,919	.000		
Bucorvus abyssinicus	*Bucorvus leadbeateri*	Taxonomy				2,869,454	4,179,078	.012		
Galbalcyrhynchus leucotis	*Galbalcyrhynchus purusianus*	Taxonomy				478,041	821,115	.000		
Capito quinticolor	*Capito dayi*	Phylogeny				52,468	1,182,894	.000	.152	
Semnornis frantzii	*Semnornis ramphastinus*	Taxonomy				15,874	21,947	.000	.089	
Pteroglossus erythropygius	*Pteroglossus sanguineus*	Phylogeny	1			56,046	68,644	.000	.007	
Pteroglossus beauharnaesii	*Pteroglossus bitorquatus*	Phylogeny				1,823,381	2,069,872	.197	.059	
Pteroglossus castanotis	*Pteroglossus pluricinctus*	Phylogeny				5,071,416	1,262,866	.533	.02	
Pteroglossus inscriptus	*Pteroglossus viridis*	Phylogeny	1			4,855,832	1,558,687	.002	.035	
Ramphastos ambiguus	*Ramphastos swainsonii*	Phylogeny	1			164,646	432,970	.000	.019	.011
Melignomon eisentrauti	*Melignomon zenkeri*	Taxonomy				28,742	764,907	.000		
Jynx torquilla	*Jynx ruficollis*	Taxonomy	1		1	14,853,482	1,833,394	.000		
Veniliornis callonotus	*Veniliornis dignus*	Phylogeny				136,188	90,484	.003	.04	
Veniliornis frontalis	*Veniliornis passerinus*	Phylogeny	1			102,728	11,103,197	.362	.008	
Chrysocolaptes festivus	*Chrysocolaptes lucidus*	Taxonomy			1	2,652,413	3,235,503	.053		
Gecinulus grantia	*Gecinulus viridis*	Taxonomy			1	1,888,086	1,715,913	.162		
Blythipicus rubiginosus	*Blythipicus pyrrhotis*	Taxonomy				497,347	757	.000		
Hemicircus concretus	*Hemicircus canente*	Taxonomy				1,109,208	1,336,409	.013		
Philepitta castanea	*Philepitta schlegeli*	Taxonomy				139,507	552	.196		
Neodrepanis coruscans	*Neodrepanis hypoxantha*	Taxonomy	1			130,984	5,814	.496		
Geobates poecilopterus	*Geositta crassirostris*	Phylogeny				1,347,042	51,587	.000	.093	.107

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Geositta rufipennis	*Geositta punensis*	Phylogeny				758,546	382,891	.390	.04	.101
Geositta isabellina	*Geositta saxicolina*	Phylogeny				49,294	44,750	.000	.084	.074
Geositta cunicularia	*Geositta tenuirostris*	Phylogeny				2,874,663	622,311	.569	.089	.098
Aphrastura spinicauda	*Aphrastura masafuerae*	Taxonomy		2		491,327	55	.000		
Limnornis curvirostris	*Limnornis rectirostris*	Taxonomy				217,560	179,710	.792	.139	
Certhiaxis mustelina	*Certhiaxis cinnamomea*	Taxonomy				693,880	8,364,900	.529		
Xenerpestes singularis	*Xenerpestes minlosi*	Taxonomy				20,049	108,359	.000		
Premnoplex brunnescens	*Premnoplex tatei*	Taxonomy				407,212	4,285	.000		
Anabacerthia striaticollis	*Anabacerthia variegaticeps*	Taxonomy	1			337,007	215,439	.059		
Pseudocolaptes boissonneautii	*Pseudocolaptes lawrencii*	Taxonomy				391,420	14,684	.262		
Simoxenops ucayalae	*Simoxenops striatus*	Taxonomy				257,689	63,170	.054		
Hylocryptus rectirostris	*Hylocryptus erythrocephalus*	Taxonomy				1,014,117	23,410	.000		
Deconychura longicauda	*Deconychura stictolaema*	Taxonomy				5,123,970	2,839,244	.969		
Hylexetastes stresemanni	*Hylexetastes perrotii*	Taxonomy	1			2,188,107	1,087,372	.001		
Xiphorhynchus lachrymosus	*Xiphorhynchus flavigaster*	Phylogeny			1	271,663	767,326	.009	.04	.038
Xiphorhynchus pardalotus	*Xiphorhynchus ocellatus*	Phylogeny				1,710,548	2,806,684	.021	.04	.044
Xiphorhynchus triangularis	*Xiphorhynchus erythropygius*	Phylogeny	1		1	286,846	391,696	.027	.049	.051
Cymbilaimus lineatus	*Cymbilaimus sanctaemariae*	Taxonomy				6,643,438	494,497	.984		
Mackenziaena severa	*Mackenziaena leachii*	Taxonomy				955,425	796,751	.722		
Frederickena viridis	*Frederickena unduligera*	Taxonomy				1,266,934	1,735,730	.000		
Clytoctantes alixii	*Clytoctantes atrogularis*	Taxonomy				74,996	200	.000		
Hypocnemoides melanopogon	*Hypocnemoides maculicauda*	Taxonomy				3,491,726	3,323,951	.056		
Phlegopsis nigromaculata	*Phlegopsis erythroptera*	Taxonomy	1			3,847,916	1,942,209	.659	.04	
Pittasoma michleri	*Pittasoma rufopileatum*	Taxonomy				49,172	58,479	.039	.119	
Myrmothera campanisona	*Myrmothera simplex*	Taxonomy				4,560,390	109,178	.391		.043
Pteroptochos tarnii	*Pteroptochos megapodius*	Taxonomy				326,664	111,835	.243		
Scelorchilus albicollis	*Scelorchilus rubecula*	Taxonomy				104,251	271,524	.000		
Merulaxis ater	*Merulaxis stresemanni*	Taxonomy				163,732	194	.000		
Phoenicircus nigricollis	*Phoenicircus carnifex*	Taxonomy				1,721,010	1,387,126	.077		
Laniocera rufescens	*Laniocera hypopyrra*	Taxonomy				394,161	6,640,200	.000		
Tijuca atra	*Tijuca condita*	Taxonomy				31,553	3,956	.560		
Carpornis cucullatus	*Carpornis melanocephalus*	Taxonomy				251,728	191,197	.339		
Ampelion rubrocristata	*Ampelion rufaxilla*	Taxonomy				413,489	79,829	.870		
Rupicola peruviana	*Rupicola rupicola*	Taxonomy				257,489	1,710,974	.000	.102	
Manacus vitellinus	*Manacus manacus*	Phylogeny				118,994	7,306,410	.051		
Manacus aurantiacus	*Manacus candei*	Phylogeny				29,625	283,505	.000		
Tyranneutes stolzmanni	*Tyranneutes virescens*	Taxonomy				5,292,570	1,189,031	.043		
Camptostoma imberbe	*Camptostoma obsoletum*	Taxonomy			1	1,448,502	14,428,569	.001		
Suiriri suiriri	*Suiriri affinis*	Taxonomy	1			1,993,228	3,847,095	.023		
Stigmatura napensis	*Stigmatura budytoides*	Taxonomy				619,607	1,325,510	.000		
Uromyias agilis	*Uromyias agraphia*	Taxonomy				53,642	44,426	.000		
Anairetes nigrocristatus	*Anairetes reguloides*	Phylogeny				48,668	103,729	.000	.01	.016
Anairetes parulus	*Anairetes fernandezianus*	Phylogeny		2		2,638,879	143	.000	.024	.024
Polystictus pectoralis	*Polystictus superciliaris*	Taxonomy				3,232,275	104,277	.008		
Euscarthmus meloryphus	*Euscarthmus rufomarginatus*	Taxonomy				5,965,480	2,187,467	.965		
Oncostoma cinereigulare	*Oncostoma olivaceum*	Taxonomy				582,265	226,354	.000		
Corythopis delalandi	*Corythopis torquata*	Taxonomy				2,463,949	6,636,499	.000	.082	
Hirundinea ferruginea	*Hirundinea bellicosa*	Taxonomy				1,413,340	4,876,822	.000		

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Lathrotriccus euleri	*Lathrotriccus griseipectus*	Taxonomy				10,220,529	81,403	.000		
Aphanotriccus capitalis	*Aphanotriccus audax*	Taxonomy				35,471	121,656	.000		
Xenotriccus callizonus	*Xenotriccus mexicanus*	Taxonomy				56,969	112,545	.000		
Mitrephanes phaeocercus	*Mitrephanes olivaceus*	Taxonomy			1	598,288	91,730	.000	.06	.078
Empidonax oberholseri	*Empidonax affinis*	Phylogeny			1	2,680,770	480,379	.000	.007	.04
Empidonax atriceps	*Empidonax fulvifrons*	Phylogeny			1	3,661	510,718	.000	.029	.038
Empidonax alnorum	*Empidonax traillii*	Phylogeny			1	7,110,750	7,301,810	.182	.049	.052
Empidonax difficilis	*Empidonax occidentalis*	Phylogeny			1	866,247	2,350,463	.278	.009	.006
Silvicultrix jelskii	*Silvicultrix diadema*	Phylogeny				73,829	131,603	.028		
Ochthoeca oenanthoides	*Ochthoeca leucophrys*	Phylogeny				624,236	781,737	.881		
Lessonia oreas	*Lessonia rufa*	Taxonomy				832,159	1,320,545	.000		
Alectrurus tricolor	*Alectrurus risora*	Taxonomy				1,900,301	841,330	.069		
Casiornis rufa	*Casiornis fusca*	Taxonomy	1			2,802,837	2,106,626	.021		
Atrichornis rufescens	*Atrichornis clamosus*	Taxonomy				66,373	29,045	.000		
Menura alberti	*Menura novaehollandiae*	Taxonomy				42,186	322,491	.729		
Xenicus longipes	*Xenicus gilviventris*	Taxonomy		1, 2		334	19,555	.000		
Pinarocorys erythropygia	*Pinarocorys nigricans*	Taxonomy			1	6,079,229	3,946,076	.000		
Alaemon alaudipes	*Alaemon hamertoni*	Taxonomy			1	9,613,958	123,108	.000		
Eremalauda dunni	*Eremalauda starki*	Taxonomy			1	2,532,120	1,025,874	.000		
Eremophila alpestris	*Eremophila bilopha*	Taxonomy	1		1	31,200,940	1,756,630	.029	.048	
Pseudochelidon eurystomina	*Pseudochelidon sirintarae*	Phylogeny				47,045	893,100	.000		.095
Progne cryptoleuca	*Progne dominicensis*	Phylogeny		1, 2		109,235	102,602	.000	.012	0
Tachycineta leucorrhoa	*Tachycineta meyeni*	Phylogeny	1			5,024,218	914,613	.000	.037	.023
Tachycineta thalassina	*Tachycineta euchrysea*	Phylogeny		2	1	6,104,475	11,688	.000	.074	.105
Tachycineta albilinea	*Tachycineta albiventer*	Phylogeny				43,491	11,742,545	.000	.057	.033
Notiochelidon pileata	*Neochelidon tibialis*	Phylogeny				75,271	4,176,096	.000	.061	.08
Notiochelidon cyanoleuca	*Atticora melanoleuca*	Phylogeny				10,389,142	2,062,444	.083		
Hirundo daurica	*Hirundo striolata*	Phylogeny			1	18,431,002	3,340,577	.082	.032	
Stelgidopteryx serripennis	*Stelgidopteryx ruficollis*	Phylogeny	1		1	9,824,382	13,831,445	.000	.053	.071
Cheramoeca leucosternus	*Hirundo griseopyga*	Phylogeny				3,351,655	5,137,532	.000	.083	.098
Riparia riparia	*Riparia paludicola*	Phylogeny			1	44,106,599	11,576,646	.108	.088	.109
Phedina borbonica	*Phedina brazzae*	Taxonomy				606,861	346,291	.000	.146	.156
Hirundo semirufa	*Hirundo abyssinica*	Phylogeny				9,253,931	13,435,657	.955	.074	.131
Hirundo andecola	*Notiochelidon murina*	Phylogeny				486,532	425,934	.377	.048	.052
Hirundo lucida	*Hirundo aethiopica*	Phylogeny			1	2,474,742	5,118,933	.224	.023	.015
Hirundo neoxena	*Hirundo tahitica*	Phylogeny				4,303,396	3,521,470	.000	.058	.059
Hirundo leucosoma	*Hirundo dimidiata*	Phylogeny				856,757	4,182,212	.000	.078	.169
Hirundo preussi	*Hirundo rufigula*	Phylogeny				1,749,716	1,296,875	.000	.093	
Hirundo fulva	*Hirundo rufocollaris*	Phylogeny			1	988,240	109,850	.000	.019	
Hirundo fuligula	*Hirundo concolor*	Phylogeny			1	12,012,135	1,695,617	.009		
Delichon dasypus	*Delichon nipalensis*	Phylogeny			1	7,355,607	747,653	.859	.041	.072
Motacilla clara	*Motacilla capensis*	Phylogeny				2,832,977	3,244,571	.292	.053	.065
Motacilla lugens	*Motacilla alba*	Phylogeny	1		1	8,130,160	31,077,700	.159	.002	.003
Anthus lineiventris	*Anthus crenatus*	Phylogeny				1,550,427	205,874	.000		
Anthus richardi	*Anthus rufulus*	Phylogeny	1		1	13,249,618	8,743,646	.000		
Anthus novaeseelandiae	*Anthus nyassae*	Phylogeny				6,383,348	3,111,370	.000		
Anthus berthelotii	*Anthus campestris*	Phylogeny		1	1	8,284	13,147,528	.000	.034	
Anthus hodgsoni	*Anthus trivialis*	Phylogeny			1	14,857,613	16,840,266	.355		
Anthus petrosus	*Anthus spinoletta*	Phylogeny	1		1	335,444	9,964,834	.000	.012	
Anthus spragueii	*Anthus lutescens*	Phylogeny			1	1,355,411	7,220,023	.000		

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Anthus hellmayri	*Anthus bogotensis*	Phylogeny				1,150,877	336,297	.094		
Anthus correndera	*Anthus antarcticus*	Phylogeny		2		3,091,164	3,904	.000		
Anthus brachyurus	*Anthus caffer*	Phylogeny				1,598,605	693,820	.270		
Hemipus picatus	*Hemipus hirundinaceus*	Taxonomy			1	4,828,133	1,331,335	.694		
Spizixos canifrons	*Spizixos semitorques*	Taxonomy			1	840,651	2,237,736	.179		
Baeopogon indicator	*Baeopogon clamans*	Taxonomy				3,200,773	355,150	.960		
Hemixos flavala	*Hemixos castanonotus*	Taxonomy			1	2,303,389	979,785	.000		
Regulus regulus	*Regulus satrapa*	Phylogeny			1	11,684,880	6,273,672	.000	.096	
Ptilogonys cinereus	*Ptilogonys caudatus*	Taxonomy			1	524,026	9,545	.000		
Cinclus pallasii	*Cinclus cinclus*	Phylogeny			1	9,027,370	10,723,300	.275		
Cinclus schulzi	*Cinclus leucocephalus*	Phylogeny				58,658	620,553	.000		
Odontorchilus branickii	*Odontorchilus cinereus*	Taxonomy				131,818	1,047,805	.000		
Cinnycerthia unirufa	*Cinnycerthia peruana*	Taxonomy				153,809	204,046	.332		
Thryothorus sclateri	*Thryothorus felix*	Phylogeny				62,195	296,037	.000	.061	
Thryothorus maculipectus	*Thryothorus rutilus*	Phylogeny			1	582,109	206,227	.000	.059	
Thryothorus mystacalis	*Thryothorus euophrys*	Phylogeny				245,231	50,458	.000	.081	
Thryothorus genibarbis	*Thryothorus coraya*	Phylogeny				5,958,620	3,793,680	.188	.088	
Thryothorus sinaloa	*Thryothorus pleurostictus*	Phylogeny			1	304,632	185,458	.252	.08	
Thryothorus thoracicus	*Thryothorus leucopogon*	Phylogeny				74,103	140,141	.000	.047	
Thryothorus nigricapillus	*Thryothorus semibadius*	Phylogeny				300,570	12,872	.000	.068	
Troglodytes aedon	*Thryomanes sissonii*	Phylogeny			1	25,123,600	135	.000		.047
Troglodytes ochraceus	*Troglodytes solstitialis*	Phylogeny				17,335	553,720	.000		
Toxostoma bendirei	*Toxostoma cinereum*	Phylogeny			1	884,084	99,296	.000	.014	.012
Melanotis caerulescens	*Melanotis hypoleucus*	Taxonomy			1	483,575	92,799	.000		
Cinclocerthia gutturalis	*Cinclocerthia ruficauda*	Taxonomy		1, 2		1,757	5,214	.000		
Entomodestes leucotis	*Entomodestes coracinus*	Taxonomy				110,784	21,019	.000	.019	.028
Catharus dryas	*Catharus aurantiirostris*	Phylogeny			1	467,274	645,572	.206	.087	.126
Catharus fuscater	*Catharus mexicanus*	Phylogeny			1	260,887	125,449	.008	.085	.13
Catharus guttatus	*Catharus occidentalis*	Phylogeny			1	8,383,820	413,583	.000	.057	.069
Catharus fuscescens	*Catharus minimus*	Phylogeny	1		1	3,681,880	5,042,080	.044	.012	.026
Turdus albicollis	*Turdus assimilis*	Phylogeny			1	7,733,980	645,546	.000		
Turdus chiguanco	*Turdus serranus*	Phylogeny				1,430,370	409,627	.248		
Turdus ignobilis	*Turdus maranonicus*	Phylogeny				3,471,600	39,622	.000		
Turdus hauxwelli	*Turdus fumigatus*	Phylogeny	1			2,612,410	4,070,880	.019		
Turdus haplochrous	*Turdus nudigenis*	Phylogeny				191,947	1,520,510	.000		
Turdus pelios	*Platycichla leucops*	Phylogeny				8,146,310	414,580	.000		.094
Turdus hortulorum	*Turdus cardis*	Phylogeny			1	1,472,820	700,745	.000		
Turdus dissimilis	*Turdus unicolor*	Phylogeny			1	873,802	360,755	.000		
Turdus feae	*Turdus pallidus*	Phylogeny			1	256,222	5,987,110	.000		
Turdus naumanni	*Turdus ruficollis*	Phylogeny			1	7,031,670	5,954,880	.215		
Turdus plumbeus	*Turdus aurantius*	Phylogeny		1, 2		84,697	11,022	.000		
Turdus nigrescens	*Turdus infuscatus*	Phylogeny			1	2,073	170,763	.000		
Turdus migratorius	*Turdus rufitorques*	Phylogeny			1	16,450,600	61,304	.000		
Turdus jamaicensis	*Turdus swalesi*	Phylogeny		1, 2		11,022	7,445	.000		
Turdus bewsheri	*Turdus libonyanus*	Phylogeny		1		1,671	4,231,120	.000		.053
Turdus mupinensis	*Turdus philomelos*	Phylogeny			1	1,305,250	13,392,500	.000	.132	
Turdus albocinctus	*Turdus rubrocanus*	Phylogeny			1	687,656	2,194,370	.811		
Bathmocercus cerviniventris	*Bathmocercus rufus*	Taxonomy				284,264	424,475	.000		
Locustella fluviatilis	*Locustella luscinioides*	Phylogeny			1	5,425,698	6,069,505	.509	.089	.094
Locustella certhiola	*Locustella ochotensis*	Phylogeny	1		1	11,854,239	839,441	.832		.066

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Acrocephalus newtoni	*Bebrornis sechellensis*	Phylogeny		2		590,836	2	.000	.045	
Leptopoecile sophiae	*Leptopoecile elegans*	Taxonomy			1	1,500,351	3,518,755	.906		
Cincloramphus cruralis	*Cincloramphus mathewsi*	Taxonomy				4,666,157	5,604,183	.886		
Schoenicola platyura	*Schoenicola brevirostris*	Taxonomy				155,072	2,984,181	.000		
Sylvia buryi	*Sylvia lugens*	Phylogeny			1	99,257	404,067	.000	.039	
Sylvia atricapilla	*Sylvia borin*	Phylogeny			1	10,428,084	7,285,694	.754	.125	.163
Sylvia undata	*Sylvia deserticola*	Phylogeny			1	1,588,850	258,917	.003	.026	
Sylvia mystacea	*Sylvia melanocephala*	Phylogeny			1	1,882,797	1,719,942	.017	.056	
Microbates collaris	*Microbates cinereiventris*	Taxonomy				2,079,177	551,908	.006		
Fraseria ocreata	*Fraseria cinerascens*	Taxonomy				3,160,245	3,059,861	.793		
Myioparus griseigularis	*Myioparus plumbeus*	Taxonomy				1,734,546	7,893,397	.913		
Ficedula westermanni	*Ficedula rufigula*	Phylogeny		2	1	3,422,680	169,360	.000	.003	.071
Ficedula bonthaina	*Ficedula buruensis*	Phylogeny		1, 2		14,638	27,245	.000		.026
Ficedula subrubra	*Ficedula albicilla*	Phylogeny			1	111,818	14,503,000	.000	.074	.07
Ficedula albicollis	*Ficedula hypoleuca*	Phylogeny	1		1	2,246,070	7,711,750	.650	.036	.066
Ficedula hodgsonii	*Ficedula sapphira*	Phylogeny			1	2,036,160	1,300,210	.769	.064	
Ficedula nigrorufa	*Ficedula tricolor*	Phylogeny			1	72,368	2,431,020	.000		.146
Ficedula timorensis	*Ficedula harterti*	Phylogeny		1, 2		28,815	10,702	.000		.114
Ficedula zanthopygia	*Ficedula narcissina*	Phylogeny	1		1	4,056,490	1,098,800	.523	.004	.015
Culicicapa helianthea	*Culicicapa ceylonensis*	Taxonomy		1	1	458,180	6,463,921	.000	.065	
Sheppardia montana	*Sheppardia lowei*	Phylogeny				4,779	42,623	.000	.076	.103
Rhyacornis fuliginosus	*Rhyacornis bicolor*	Taxonomy		2	1	5,578,498	36,569	.000		
Bias flammulatus	*Bias musicus*	Taxonomy				2,121,564	3,722,865	.924		
Elminia longicauda	*Elminia albicauda*	Taxonomy				3,880,355	1,756,846	.020		
Machaerirhynchus nigripectus	*Machaerirhynchus flaviventer*	Taxonomy				201,335	415,872	.121		
Amalocichla sclateriana	*Amalocichla incerta*	Taxonomy				2,666	104,751	1.000		
Melanodryas cucullata	*Melanodryas vittata*	Taxonomy				4,334,131	68,051	.000		
Tregellasia leucops	*Tregellasia capito*	Taxonomy				187,759	144,023	.000		
Heteromyias albispecularis	*Heteromyias cinereifrons*	Taxonomy				74,304	58,472	.000		
Pachycephalopsis hattamensis	*Pachycephalopsis poliosoma*	Taxonomy				8,002	138,247	.941		
Drymodes superciliaris	*Drymodes brunneopygia*	Taxonomy				290,572	641,881	.000		
Picathartes gymnocephalus	*Picathartes oreas*	Taxonomy				406,462	320,575	.000		
Chaetops frenatus	*Chaetops aurantius*	Taxonomy				63,281	71,630	.000		
Leiothrix argentauris	*Leiothrix lutea*	Taxonomy			1	3,011,126	3,709,514	.407	.076	
Crocias langbianis	*Crocias albonotatus*	Taxonomy				28,499	55,188	.000		
Orthonyx temminckii	*Orthonyx spaldingii*	Taxonomy				158,198	47,382	.000		
Calamanthus campestris	*Calamanthus fuliginosus*	Taxonomy	1			823,714	176,412	.000		
Hylacola pyrrhopygia	*Hylacola cautus*	Taxonomy				486,712	645,403	.184		
Daphoenositta miranda	*Daphoenositta chrysoptera*	Taxonomy				23,826	4,193,420	.985		
Cormobates placens	*Cormobates leucophaeus*	Taxonomy				180,992	1,013,563	.000		
Parus caeruleus	*Parus cyanus*	Phylogeny	1		1	9,644,884	7,846,515	.184	.033	
Parus fasciiventer	*Parus afer*	Phylogeny				49,856	427,817	.000	.091	
Parus niger	*Parus albiventris*	Phylogeny				2,533,954	408,840	.000	.052	
Parus spilonotus	*Parus xanthogenys*	Phylogeny			1	1,670,464	1,055,129	.004	.052	
Parus major	*Parus monticolus*	Phylogeny			1	32,598,477	1,467,496	.951	.08	
Parus inornatus	*Parus bicolor*	Phylogeny			1	1,234,719	2,969,779	.000	.068	
Parus cristatus	*Parus dichrous*	Phylogeny			1	6,008,022	855,336	.000	.078	
Parus elegans	*Parus amabilis*	Phylogeny		1, 2		274,705	13,485	.000	.033	

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Parus rubidiventris	*Parus rufonuchalis*	Phylogeny			1	1,019,245	1,069,540	.077	.065	
Parus lugubris	*Parus varius*	Phylogeny			1	1,302,084	600,286	.000	.083	
Parus palustris	*Parus montanus*	Phylogeny	1		1	9,042,027	18,002,895	.720	.089	
Parus carolinensis	*Parus sclateri*	Phylogeny			1	2,237,774	201,697	.000	.055	
Parus atricapillus	*Parus gambeli*	Phylogeny	1		1	8,818,971	2,695,728	.696	.053	
Certhia americana	*Certhia brachydactyla*	Phylogeny			1	6,541,510	3,200,250	.000		
Nectarinia sovimanga	*Nectarinia coquerellii*	Phylogeny		2		591,000	371	.000	.069	
Rukia ruki	*Rukia longirostra*	Taxonomy		1, 2		104	361	.000		
Heleia crassirostris	*Heleia muelleri*	Taxonomy		1, 2		31,274	28,799	.000		
Woodfordia superciliosa	*Woodfordia lacertosa*	Taxonomy		1, 2		676	863	.000		
Promerops gurneyi	*Promerops cafer*	Taxonomy	1			103,706	113,586	.000		
Timeliopsis griseigula	*Timeliopsis fulvigula*	Taxonomy				132,049	96,497	.004	.117	.145
Meliphaga reticulata	*Meliphaga albilineata*	Phylogeny		1		28,799	110,094	.000		.09
Meliphaga mimikae	*Meliphaga montana*	Phylogeny				53,488	70,062	.104		
Meliphaga orientalis	*Meliphaga analoga*	Phylogeny				98,502	98,502	.989		.065
Meliphaga lewinii	*Meliphaga notata*	Phylogeny				710,363	175,552	.491		.099
Myza celebensis	*Myza sarasinorum*	Taxonomy		2		163,256	163,762	.997		
Ramsayornis fasciatus	*Ramsayornis modestus*	Taxonomy				766,017	234,330	.399	.08	.105
Acanthorhynchus tenuirostris	*Acanthorhynchus superciliosus*	Taxonomy				856,069	189,502	.000	.108	.137
Sphecotheres hypoleucus	*Sphecotheres viridis*	Taxonomy				2,638	1,094,555	.000		
Irena puella	*Irena cyanogaster*	Taxonomy		2	1	3,909,019	223,695	.000		
Corvinella corvina	*Corvinella melanoleuca*	Taxonomy			1	3,469,633	1,707,362	.000		
Eurocephalus rueppelli	*Eurocephalus anguitimens*	Taxonomy				1,532,376	1,537,373	.000		
Tephrodornis gularis	*Tephrodornis pondicerianus*	Taxonomy			1	5,125,187	4,721,049	.365		
Philentoma pyrhopterum	*Philentoma velatum*	Taxonomy				1,402,914	1,628,817	1.000		
Grallina cyanoleuca	*Grallina bruijni*	Taxonomy				6,627,702	158,749	.000		
Peltops montanus	*Peltops blainvillii*	Taxonomy				139,367	524,159	.116		
Cnemophilus loriae	*Cnemophilus macgregorii*	Taxonomy				72,781	37,198	.937		
Paradigalla carunculata	*Paradigalla brevicauda*	Taxonomy				42,534	135,840	.483		
Melampitta gigantea	*Melampitta lugubris*	Taxonomy				6,775	47,903	.082	.114	
Archboldia papuensis	*Archboldia sanfordi*	Taxonomy				17,655	1,716	.341		
Cyanocitta stelleri	*Cyanocitta cristata*	Phylogeny	1		1	3,104,770	6,665,391	.022	.099	
Calocitta colliei	*Calocitta formosa*	Taxonomy	1		1	156,182	293,237	.043		
Crypsirina temia	*Crypsirina cucullata*	Taxonomy			1	1,725,722	271,466	.272		
Nucifraga columbiana	*Nucifraga caryocatactes*	Taxonomy			1	2,253,928	17,859,494	.000		
Pyrrhocorax pyrrhocorax	*Pyrrhocorax graculus*	Taxonomy	1		1	13,393,973	5,548,047	.948	.104	
Mino dumontii	*Mino anais*	Taxonomy	1			600,504	138,759	.997		
Streptocitta albicollis	*Streptocitta albertinae*	Taxonomy				170,064	1,484	.000		
Saroglossa spiloptera	*Saroglossa aurata*	Taxonomy			1	209,832	398,669	.000		
Gracula religiosa	*Gracula ptilogenys*	Taxonomy		2	1	3,883,844	31,935	.000		
Cosmopsarus regius	*Cosmopsarus unicolor*	Taxonomy				680,086	144,672	.000		
Buphagus erythrorhynchus	*Buphagus africanus*	Taxonomy	1		1	2,502,439	3,610,860	.186		
Montifringilla blanfordi	*Montifringilla davidiana*	Phylogeny			1	3,211,969	3,187,532	.096		
Montifringilla adamsi	*Montifringilla nivalis*	Phylogeny			1	2,847,439	5,536,738	.996		
Bubalornis albirostris	*Bubalornis niger*	Taxonomy				2,317,205	2,508,611	.017		.064
Sporopipes frontalis	*Sporopipes squamifrons*	Taxonomy			1	3,000,351	1,945,507	.000		
Pseudonigrita arnaudi	*Pseudonigrita cabanisi*	Taxonomy				493,094	249,870	.168		
Parmoptila rubrifrons	*Parmoptila woodhousei*	Taxonomy				365,733	186,682	.019		
Pytilia hypogrammica	*Pytilia phoenicoptera*	Phylogeny				247,705	365,566	.128		.002

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Hypargos niveoguttatus	*Hypargos margaritatus*	Taxonomy				1,995,374	156,262	.051		.082
Euschistospiza cinereovinacea	*Euschistospiza dybowskii*	Taxonomy				132,908	450,763	.000		.1
Taeniopygia guttata	*Taeniopygia bichenovii*	Taxonomy				6,095,541	2,680,081	.712		
Padda oryzivora	*Padda fuscata*	Taxonomy				133,033	41,115	.000		
Amadina fasciata	*Amadina erythrocephala*	Taxonomy			1	3,347,382	1,615,807	.151		.046
Vidua obtusa	*Vidua paradisaea*	Phylogeny				3,160,720	4,621,820	.443		.017
Vidua orientalis	*Vidua interjecta*	Phylogeny	1		1	2,578,370	2,207,640	.072		.007
Vidua fischeri	*Vidua regia*	Phylogeny				1,258,310	1,922,960	.000		.043
Cyclarhis gujanensis	*Cyclarhis nigrirostris*	Taxonomy			1	13,485,622	83,689	.083		
Pinicola enucleator	*Pinicola subhimachalus*	Taxonomy			1	17,861,438	987,872	.000		
Hesperiphona vespertina	*Hesperiphona abeillei*	Taxonomy			1	3,943,022	250,877	.460		
Eophona migratoria	*Eophona personata*	Taxonomy			1	3,539,087	1,032,342	.647	.051	
Telespiza cantans	*Telespiza ultima*	Taxonomy		1, 2		4	2	.000		
Viridonia stejnegeri	*Viridonia parva*	Phylogeny		1, 2		1,433	1,433	1.000		
Oreomystis bairdi	*Oreomystis mana*	Taxonomy		1, 2		1,433	10,443	.000	.077	
Paroreomyza maculata	*Paroreomyza montana*	Taxonomy		1, 2		1,560	1,916	.000		
Loxops caeruleirostris	*Loxops coccineus*	Taxonomy		1, 2		1,433	13,793	.000		
Dendroica petechia	*Dendroica striata*	Phylogeny			1	15,250,634	6,336,016	.923	.051	.04
Dendroica castanea	*Dendroica fusca*	Phylogeny	1		1	2,644,809	2,026,721	.666	.051	.069
Teretistris fernandinae	*Teretistris fornsi*	Taxonomy		1, 2		34,727	32,274	.000		
Ergaticus ruber	*Ergaticus versicolor*	Taxonomy			1	232,337	59,775	.000		
Myioborus castaneocapillus	*Myioborus cardonai*	Phylogeny				95,698	329	.000	.019	.023
Myioborus ornatus	*Myioborus melanocephalus*	Phylogeny				91,218	187,221	.000	.011	.008
Schistochlamys ruficapillus	*Schistochlamys melanopis*	Taxonomy				1,861,082	6,179,171	.543		
Conothraupis speculigera	*Conothraupis mesoleuca*	Taxonomy				47,761	3,184	.000		
Hemispingus verticalis	*Hemispingus xanthophthalmus*	Phylogeny				46,297	80,663	.000		.081
Chrysothlypis chrysomelas	*Chrysothlypis salmoni*	Taxonomy				15,703	75,440	.000		
Nemosia pileata	*Nemosia rourei*	Taxonomy				8,701,413	16,526	.707		
Phaenicophilus palmarum	*Phaenicophilus poliocephalus*	Taxonomy	1	1, 2		74,227	11,305	.000		
Mitrospingus cassinii	*Mitrospingus oleagineus*	Taxonomy				167,682	38,835	.000		
Creurgops dentata	*Creurgops verticalis*	Taxonomy				46,130	94,342	.000	.08	
Heterospingus rubrifrons	*Heterospingus xanthopygius*	Taxonomy				21,489	153,049	.000		
Piranga rubriceps	*Piranga leucoptera*	Phylogeny			1	80,489	566,152	.393	.075	
Tangara gyrola	*Tangara lavinia*	Phylogeny				3,988,873	134,434	.191	.047	.081
Tangara desmaresti	*Tangara cyanocephala*	Phylogeny				220,070	444,959	.371	.039	.036
Tangara fastuosa	*Tangara seledon*	Phylogeny				38,311	672,718	.000	.026	.032
Tangara florida	*Tangara icterocephala*	Phylogeny				38,589	74,862	.610	.04	.064
Tangara velia	*Tangara callophrys*	Phylogeny				5,136,011	1,481,551	.956	.026	.036
Tangara mexicana	*Tangara inornata*	Phylogeny				7,156,542	180,638	.000	.043	.047
Tangara fucosa	*Tangara dowii*	Phylogeny				3,038	12,084	.000	.065	.082
Tangara punctata	*Tangara xanthogastra*	Phylogeny				2,552,958	2,786,196	.193	.066	.071
Tangara cyanicollis	*Tangara larvata*	Phylogeny				1,244,197	480,464	.068	.035	.052
Tangara cucullata	*Tangara vitriolina*	Phylogeny		1		669	124,071	.000	.017	.022
Tangara heinei	*Tangara argyrofenges*	Phylogeny				131,672	35,902	.000	.004	.003
Coryphospingus pileatus	*Coryphospingus cucullatus*	Taxonomy	1			2,757,920	4,042,904	.068		
Melanodera melanodera	*Melanodera xanthogramma*	Taxonomy				145,633	353,646	.025		
Lophospingus pusillus	*Lophospingus griseocristatus*	Taxonomy				559,377	84,951	.000		
Nesospiza acunhae	*Nesospiza wilkinsi*	Taxonomy	1	1, 2		110	109	1.000		

Table A2 (*Continued*)

Species 1	Species 2	Information source[a]	Hybridize[b]	Island endemics[c]	Holarctic species[d]	Range 1[e] (km^2)	Range 2[e] (km^2)	Range overlap[f]	Cyt *b* PD[g]	ND2 PD[g]
Diuca speculifera	*Diuca diuca*	Taxonomy				208,447	1,568,013	.000		
Amaurospiza moesta	*Amaurospiza concolor*	Taxonomy				605,418	201,659	.000		
Haplospiza rustica	*Haplospiza unicolor*	Taxonomy			1	478,238	977,457	.000		
Embernagra longicauda	*Embernagra platensis*	Taxonomy				145,001	2,736,220	.120		
Lysurus crassirostris	*Lysurus castaneiceps*	Taxonomy				9,554	69,468	.000		
Pselliophorus tibialis	*Pselliophorus luteoviridis*	Taxonomy				6,559	1,740	.000		
Pipilo fuscus	*Pipilo albicollis*	Phylogeny			1	1,638,343	64,652	.115	.049	.068
Pipilo crissalis	*Pipilo aberti*	Phylogeny			1	391,342	170,221	.000	.025	.015
Amphispiza bilineata	*Amphispiza belli*	Taxonomy			1	2,838,472	1,089,409	.778		
Melospiza georgiana	*Melospiza lincolnii*	Phylogeny			1	6,032,770	7,559,449	.686	.026	
Zonotrichia albicollis	*Zonotrichia querula*	Phylogeny			1	5,662,707	1,699,163	.240	.029	
Plectrophenax nivalis	*Plectrophenax hyperboreus*	Taxonomy	1	1	1	7,651,271	5,375	.975		
Pitylus grossus	*Pitylus fuliginosus*	Taxonomy				6,242,998	760,330	.000		
Cyanocompsa brissonii	*Cyanocompsa cyanoides*	Phylogeny				5,851,939	7,475,874	.041	.06	
Passerina amoena	*Guiraca caerulea*	Phylogeny			1	2,824,044	5,296,610	.214	.049	
Passerina versicolor	*Passerina ciris*	Phylogeny	1		1	1,374,268	1,409,527	.228	.029	
Agelaius xanthophthalmus	*Agelaius cyanopus*	Phylogeny				761	2,666,660	.000	.005	.005
Agelaius icterocephalus	*Agelaius ruficapillus*	Phylogeny				1,580,880	5,568,820	.066	.047	.027
Agelaius humeralis	*Agelaius xanthomus*	Phylogeny		2		109,336	8,838	.000	.018	.012
Agelaius phoeniceus	*Agelaius tricolor*	Phylogeny			1	13,659,700	113,072	.983	.069	.073
Euphagus cyanocephalus	*Euphagus carolinus*	Phylogeny			1	5,280,450	7,275,982	.223	.041	.073
Quiscalus mexicanus	*Quiscalus major*	Phylogeny	1		1	5,005,130	202,744	.087	.028	.022
Molothrus badius	*Oreopsar bolivianus*	Phylogeny				4,291,630	77,392	.822	.064	.065
Molothrus bonariensis	*Molothrus ater*	Phylogeny			1	13,410,900	11,244,400	.000	.015	.031
Icterus graceannae	*Icterus pectoralis*	Phylogeny			1	77,584	195,630	.000	.069	.058
Icterus gularis	*Icterus nigrogularis*	Phylogeny			1	559,765	1,367,041	.000	.03	.032
Icterus chrysater	*Icterus graduacauda*	Phylogeny			1	777,584	265,579	.000	.015	.021
Psarocolius angustifrons	*Psarocolius atrovirens*	Phylogeny				2,231,663	97,092	.164	.047	
Pseudoleistes guirahuro	*Pseudoleistes virescens*	Phylogeny				2,177,843	890,486	.334	.033	.027
Curaeus curaeus	*Curaeus forbesi*	Taxonomy				620,931	37,692	.000		
Macroagelaius imthurni	*Macroagelaius subalaris*	Taxonomy				59,129	46,895	.000		

[a] Species pairs were identified either on the basis of being phylogenetic sisters or from taxonomy (Sibley and Monroe 1990, 1993).

[b] The presence of hybridization between sister species was obtained from a publication detailing all known avian hybridizations; 1 indicates hybridization reported (McCarthy 2006).

[c] The values indicate whether species 1 and/or 2 are island endemics (for details, see "Methods").

[d] If either of the species have ranges that overlap the Holarctic, they are indicated by 1.

[e] Range sizes were calculated directly from ArcGIS shapefiles (Orme et al. 2005).

[f] Proportion of range overlap was quantified as the shared area divided by the area of the smaller range (Lynch 1989).

[g] PD = proportional distance.