

Table S4. Avian species with shared barcode clusters. Sets and pairs identified in four large series (48,77,127,128) are shown.

No. species in cluster	Species name 1	Species name 2	resolvable by barcode (Y/N), single sequence overlap (S), proposed lump (L)	hybridization (H), introgression (I), young species (Y)	Comments	References
2	<i>Aechmophorus occidentalis</i>	<i>A. clarkii</i>	N	-	no other information	
2	<i>Anas discors</i>	<i>A. cyanoptera</i>	N	H,I	hybridization; introgression 70 Ka	96
2	<i>Anas flavirostris</i>	<i>A. sibilatrix</i>	N	H,I	hybridization; share divergent lineages with other <i>Anas</i> spp	
3	<i>Anas rubripes</i>	<i>A. platyrhynchos, fulvigula</i>	N	H,I	hybridization	97-99
3	<i>Anser brachyrhynchus</i>	<i>A. erythropus, A. fabalis</i>	N	H,I	hybridization	100
2	<i>Basileuterus culicivorus</i>	<i>B. hypoleucus</i>	N,L	-	lump with hypoleucus see ref	5
2	<i>Carduelis flammea</i>	<i>C. hornemanni</i>	N,L	-	no differentiation by other mtDNA, microsatellite	101
2	<i>Celeus elegans</i>	<i>C. lugubris</i>	N	I	introgression see ref	102
2	<i>Chen caerulescens</i>	<i>C. rossii</i>	N	H,I	hybridization; share divergent CR lineages	100,103
2	<i>Corvus brachyrhynchus</i>	<i>C. caurinus</i>	N,L	-	no differentiation by other mtDNA loci	104,105
2	<i>Gymnophis rufigula</i>	<i>G. leucaspis</i>	S	-	1 leucaspis in rufigula cluster	
2	<i>Herpsilochmus atricapillus</i>	<i>H. sellowi</i>	S	-	1 sellowi between 2 atricapillus clusters	
2	<i>Hylophilus ochraceiceps</i>	<i>H. semicinereus</i>	S	-	1 semicinereus matches 1 ochraceiceps; multiple ochraceiceps clusters	
2	<i>Junco hyemalis</i>	<i>J. phaeonotus</i>	N	Y	young species 10 Ka	106
8	<i>Larus argentatus</i>	<i>L. californicus, fuscus, glaucescens, glaucoides, hyperboreus, thayeri, occidentalis</i>	N	H,I	hybridization; introgression	31,32,107
2	<i>Leucophaeus atricilla</i>	<i>L. pipixcan</i>	S	-	1 atricilla paraphyletic; pipixcan cluster distinct	

2	<i>Loxia curvirostra</i>	<i>L. pytyopsittacus</i>	N	Y	young species 10 Ka	108,109
3	<i>Muscisaxicola flavinucha</i>	<i>M. cinereus, rufivertex</i>	Y	-	2 diagnostic sites rufivertex; 1 diagnostic site flavinucha vs cinereus	110
2	<i>Pica hudsonia</i>	<i>Pica nuttalli</i>	Y	-	1 diagnostic site	111
2	<i>Picumnus pygmaeus</i>	<i>P. temminckii</i>	S	-	1 pygmaeus, differs 1.4% vs temminckii	
2	<i>Plectrophenax nivalis</i>	<i>P. hyperboreus</i>	N	H,I	hybridization, documented by AFLP; speciation 18K-73 Ka	112
2	<i>Quiscalis mexicanus</i>	<i>Q. major</i>	Y	-	1 diagnostic site; major is distinct clade within mexicanus	113
2	<i>Setophaga occidentalis</i>	<i>S. townsendi</i>	N	H,I	hybridization, Townsend's replacing Hermit	114
2	<i>Somateria spectabilis</i>	<i>S. mollissima</i>	N	H,I	hybridization; CR 2 clusters, 1 mixed	100
2	<i>Sphyrapicus nuchalis</i>	<i>S. ruber</i>	N	H,I	hybridization	115
8	<i>Sporophila bouvreil</i>	<i>S. cinnamomea, hypochroma, hypoxantha, palustris, ruficollis, zelichi</i>	N	H,I	hybridization, introgression	116
2	<i>Synallaxis gujanensis</i>	<i>S. rutilans</i>	S	-	1 gujanensis in rutilans cluster; others distant	
2	<i>Tachyeres patachonicus</i>	<i>T. pteneres</i>	S	-	1 patachonicus close to 2 pteneres	
2	<i>Thraupis palmarum</i>	<i>T. sayaca</i>	S	-	1 palmarum matches sayaca, others distant	
2	<i>Turdus albicollis</i>	<i>T. leucomelas</i>	N	-	no other information	
3	<i>Tympanuchus phasianellus</i>	<i>T. cupido, pallidicinctus</i>	N	H,I	hybridization; also recent speciation 10-80 Ka	100,117
2	<i>Venilornis passerinus</i>	<i>V. frontalis</i>	Y	-	1 diagnostic site	
2	<i>Zonotricha atricapilla</i>	<i>Z. leucophrys</i>	N	I	introgression; differ by AFLP	118