

1 **Electronic Supplementary Material Table S1.** Summary information on PHA immune response in nestlings  
 2 (log-transformed), difference in breeding population density between urban and nearby rural habitats, introduction  
 3 success, log Body mass, log Release effort, log No. releases and sexual dichromatism (0 – monochromatic, 1 –  
 4 dichromatic), brood value, habitat specialization index, log Migration distance and relative brain size. See  
 5 Materials and methods for further details.

Species	PHA response	log Urban density – log Rural density	Introduction success	log Body mass	log Release effort	log No. releases	Sexual dichromatism	Brood value	log Migration distance	Habitat specialization index	Relative brain size
<i>Alauda arvensis</i>	-0.39	-0.65	0.64	1.56	2.44	1.15	0	-1.00	1.15	0.06	-0.42
<i>Alectoris rufa</i>		-0.57	0.09	2.68	1.60	1.04	1	-0.79	0.00	0.04	-2.25
<i>Anas platyrhynchos</i>		0.32	0.33	3.05	2.33	0.60	1	-1.49	0.96		-0.85
<i>Athene noctua</i>	0.24	-0.30	1.00	2.23	2.50	0.30	0	-1.19	0.00		1.10
<i>Carduelis cannabina</i>		-0.13	0.00	1.28	2.25	0.60	1	-1.27	0.71	-0.16	-0.27
<i>Carduelis carduelis</i>		-0.13	0.25	1.19	2.20	0.90	1	-1.10	0.33	-0.15	-0.27
<i>Carduelis chloris</i>	-0.08	0.20	0.50	1.44	2.00	0.78	1	-1.41	0.37	-0.18	-0.03

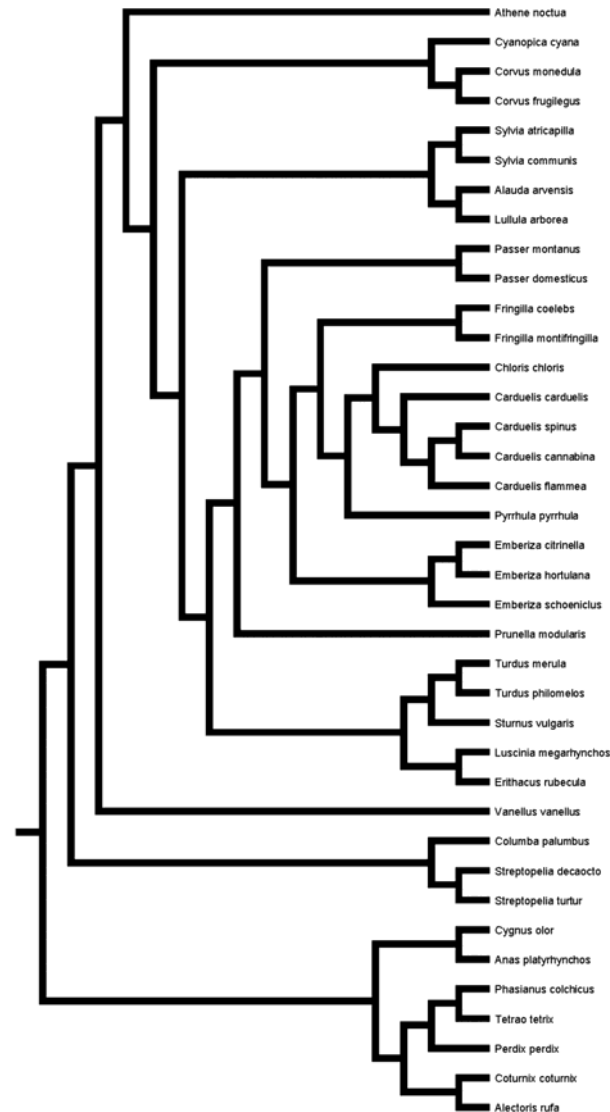
<i>Carduelis flammea</i>		-0.09	1.00	1.12	3.00	0.30	1	-1.33	1.02		0.09
<i>Carduelis spinus</i>		-0.46	0.00	1.14	1.67	0.60	1	-1.43	0.89		-0.08
<i>Columba palumbus</i>	0.35	-0.46	0.00	2.69	2.00	0.00	0	-1.51	0.48	-0.52	-1.80
<i>Corvus frugilegus</i>	0.43	0.51	0.75	2.66	2.50	0.60	0	-1.31	0.52	-0.07	1.40
<i>Corvus monedula</i>	0.20	0.66	0.00	2.40	1.00	0.00	0	-1.30	0.11	-0.02	1.26
<i>Coturnix coturnix</i>	0.11	-0.15	0.00	2.00	3.00	1.00	1	-1.04	1.01	0.18	-1.74
<i>Cyanopica cyanus</i>	-0.03	-1.38	0.00	1.85	1.00	0.00	0		0.00		1.69
<i>Cygnus olor</i>		-0.27	0.40	4.03	1.43	1.00	1	-1.44	0.32		-1.53
<i>Emberiza citrinella</i>	-0.19	-1.03	0.25	1.43	2.33	0.60	1	-1.41	0.76	-0.15	-0.37
<i>Emberiza hortulana</i>		-0.24	0.00	1.31	1.50	0.30	1		1.57		-0.42
<i>Emberiza schoeniclus</i>	-0.31	-0.54	0.00	1.27	2.00	0.00	1	-1.35	1.06		-0.37
<i>Erithacus rubecula</i>	0.00	-0.22	0.00	1.21	1.75	0.70	0	-1.54	0.78	-0.32	-0.14
<i>Fringilla coelebs</i>	-0.09	-0.10	0.17	1.38	2.60	0.78	1	-1.76	0.82	-0.57	-0.29
<i>Fringilla montifringilla</i>		-0.45	0.00	1.36	1.67	0.48	1	-1.17	1.17		-0.29
<i>Lullula arborea</i>		-0.72	0.00	1.48	1.00	0.00	0		0.68	-0.04	
<i>Luscinia megarhynchos</i>		-0.70	0.00	1.30	1.75	0.70	0	-1.04	1.52	-0.33	-0.11
<i>Passer domesticus</i>	0.12	0.69	0.80	1.48	2.00	1.18	1	-1.84	0.00	0.10	-0.06

<i>Passer montanus</i>	0.45	-0.12	0.60	1.34	1.80	0.70	0	-1.42	0.66	0.10	-0.03
<i>Perdix perdix</i>		-0.25	0.48	2.58	2.36	1.40	1	-0.84	0.00	0.32	-2.09
<i>Phasianus colchicus</i>		-0.44	0.60	3.15	2.20	1.48	1	-1.24	0.00		-1.97
<i>Prunella modularis</i>	0.25	-0.11	1.00	1.28	3.00	0.30	0	-1.47	1.01	-0.31	-0.24
<i>Pyrrhula pyrrhula</i>		-0.97	0.00	1.49	2.00	0.30	1	-1.42	0.00	0.02	0.49
<i>Streptopelia decaocto</i>	0.39	0.77	1.00	2.30	2.00	0.00	0	-1.80	0.00	-0.00	-1.34
<i>Streptopelia turtur</i>		-0.15	0.00	2.14	1.00	0.00	0	-1.42	1.43	-0.40	-1.31
<i>Sturnus vulgaris</i>	0.12	-0.24	0.64	1.91	2.11	1.04	1	-1.36	0.56	-0.24	0.29
<i>Sylvia atricapilla</i>	-0.11	-0.26	0.00	1.28	1.00	0.00	1	-1.37	1.31	-0.50	-0.32
<i>Sylvia communis</i>	-0.29	-0.40	0.00	1.16	1.00	0.00	1	-1.24	1.73	-0.18	-0.32
<i>Tetrao tetrix</i>		-0.30	0.00	3.04	2.00	0.78	1	-0.95	0.00		-1.92
<i>Turdus merula</i>	0.13	0.22	0.57	1.98	2.40	0.85	1	-1.82	0.70	-0.63	0.04
<i>Turdus philomelos</i>	0.13	-0.57	0.38	1.85	2.00	0.90	0	-1.73	1.19	-0.40	0.05
<i>Vanellus vanellus</i>		-0.77	0.00	2.34	2.00	0.30	1	-1.37	1.12	0.35	-0.84

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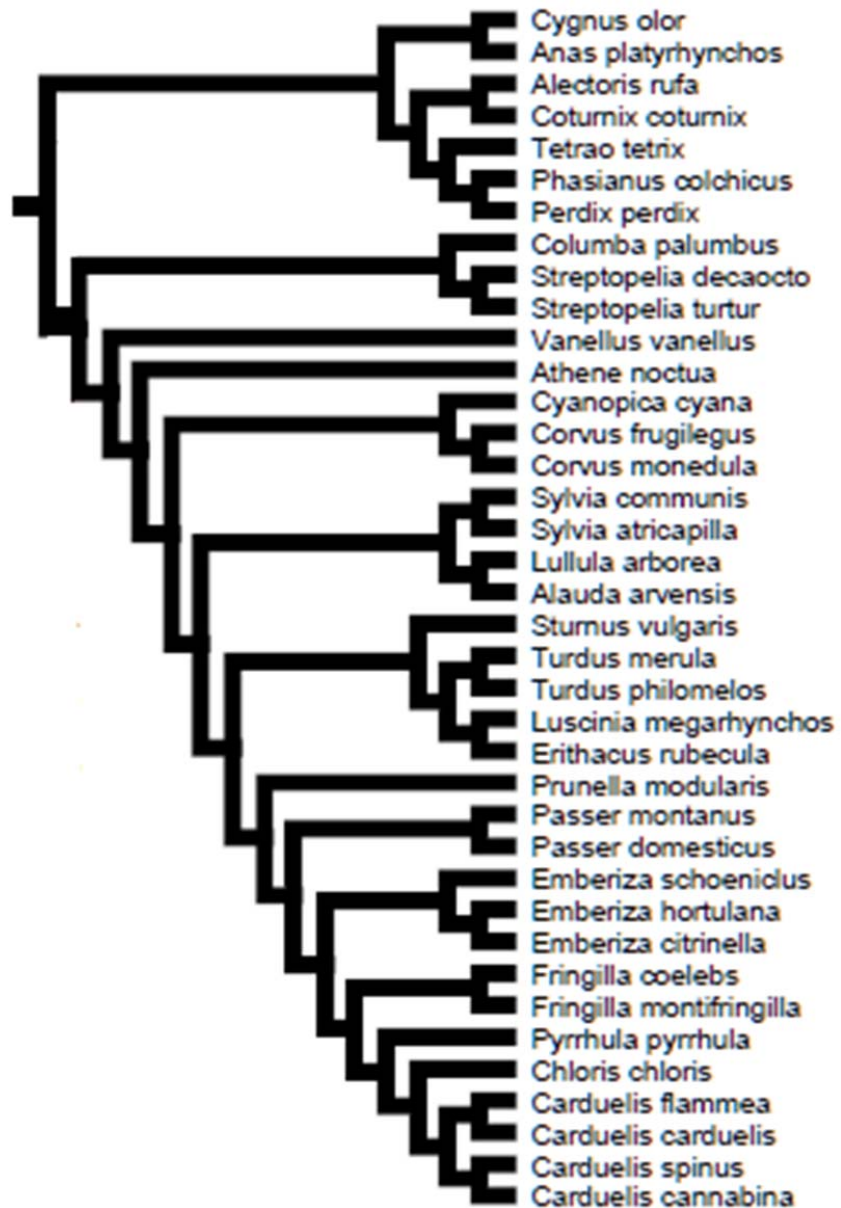
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8 **Electronic supplementary Material Fig. S1.** Phylogenetic relationships among the introduced species of birds.



9 Hypotesis 1: Thuiller et al. (2011)

(((Athene\_noctua:0.306356423837,((Cyanopica\_cyana:0.1144044241,(Corvus\_monedula:0.01030648059,Corvus\_frugilegus:0.010472602453):0.09454128875699999):0.11515283271000001,(((Sylvia\_atricapilla:0.033901314651,Sylvia\_communis:0.029297698462):0.098132769467,(Alauda\_arvensis:0.060882020918000004,Lullula\_arborea:0.07667118973):0.079440160308):0.0231891945199999998,(((Passer\_montanus:0.02215067647,Passer\_domesticus:0.031500583417):0.09587091783,(((Fringilla\_coelebs:0.02828812038,Fringilla\_montifringilla:0.02345342265):0.07685740107,((Chloris\_chloris:0.06946376369,Carduelis\_carduelis:0.01947317634,((Carduelis\_spinus:0.01676538787,Carduelis\_cannabina:0.02369511456):0.006088114892,Carduelis\_flammea:0.026310463757706997):0.00319161388):0.021072784791999997):0.03158203048,Pyrrhula\_pyrrhula:0.09251505111):0.027578487999999998):0.01429137129,((Emberiza\_citrinella:0.045627249556000005,Emberiza\_hortulana:0.06644341124):0.02393970267,Emberiza\_schoeniclus:0.063520730288):0.051682141870000003):0.018132832188):0.01479819123,Prunella\_modularis:0.12695124811):0.03364948412,(((Turdus\_merula:0.04964404928,Turdus\_philomelos:0.0505294965):0.103346216358,Sturnus\_vulgaris:0.1293460245271):0.00513222745,(Luscinia\_megarhynchos:0.106473769304,Eri-thacus\_rubecula:0.070727566277707):0.039481518189999995):0.0448717516):0.005038614934):0.02902980694):0.16903319532):0.006400257462,Vanellus\_vanellus:0.17534140350470698):0.009099164521,(Columba\_palumbus:0.07767910919,(Streptopelia\_decaocto:0.04125651577,Streptopelia\_turtur:0.04322229663):0.02200637514):0.131782968173):0.03925055616,((Cygnus\_olor:0.10510497176,Anas\_platyrhynchos:0.130738974683):0.1465830555,(((Phasianus\_colchicus:0.12755366855,Tetrao\_tetrix:0.1233016263):0.009970418452,Perdix\_perdix:0.1260455765):0.02403954465,(Coturnix\_coturnix:0.09321460058,Aleoctoris\_rufa:0.093680242175):0.02477497108199997):0.13717507493):0.04368984637):0.3265207821))))))



## Hypothesis 2: Jetz et al. (2012)

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