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Supplementary Information

Environmental and genetic effects on innovativeness in a natural population of birds

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Consisting of one Figure and 1 Table.

Figure S1

Table S1.

Figure S1. Innovative problem solving performance with respect to natal origin (whether birds were immigrants or Wytham born) and when the winter season assays were conducted. P values taken from post hoc tests of individual winter seasons with all main effects in the model Time of season, Age, Sex, EB and natal origin). Numbers in bars refer to percentages and sample sizes.

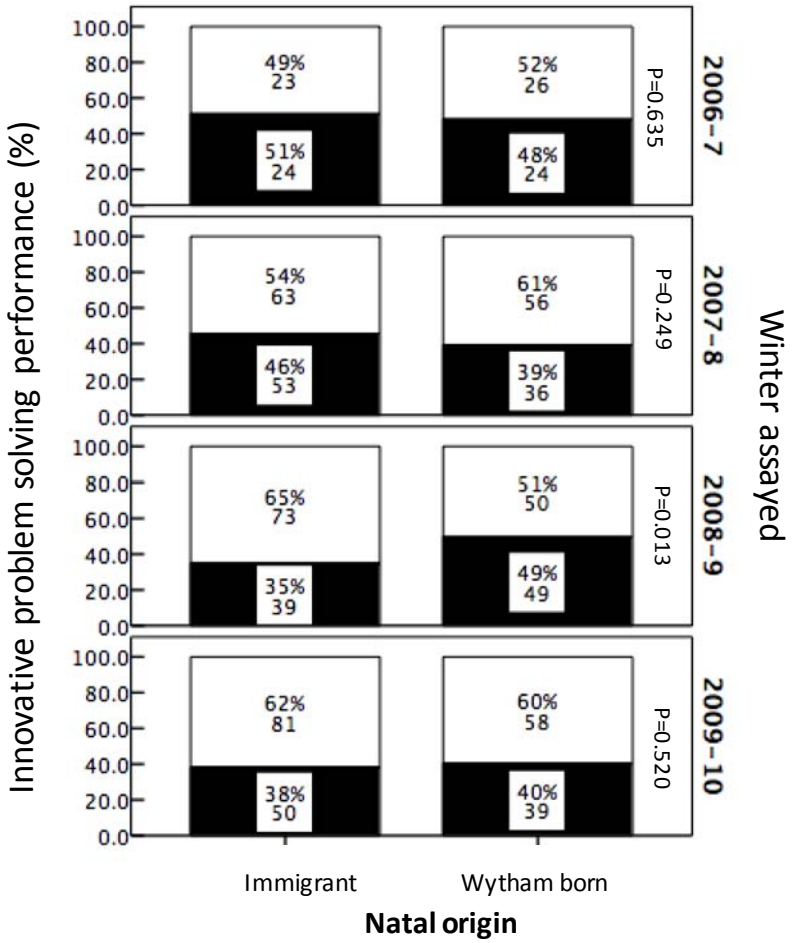

Table S1. Summary statistics for the pruned pedigree for the Wytham Woods study population. This refers to the reduced data set consisting only of those individuals that are informative with respect to the estimation of heritability of problem solving ability, given the phenotypic data collected as part of this study. Pairwise relatedness coefficients (*r*) refer to the probability that any two individuals share an allele due to recent common ancestry (e.g. $r = 0.5$ for full sibs, $r = 0.25$ for half sibs). The table gives mean *r* across all pairs of individuals and proportions of *r* equal to or greater than several thresholds. Note that the number of records is greater than the number of individuals innovativeness is measured for because close relatives are informative in the animal model analyses.

Quantity	**Value**
Records	3404
Maternities	1798
Paternities	1798
Full sibs	409
Maternal sibs	645
Maternal half-sibs	236
Paternal sibs	588
Paternal half-sibs	179
Maternal grandmothers	967
Maternal grandfathers	968
Paternal grandmothers	967
Paternal grandfathers	966
Maximum pedigree depth (generations)	35
Founders	1605
Mean maternal sibship size	1.34
Mean paternal sibship size	1.32
Nonzero *F*	202
$F > 0.125$	8
Mean pairwise relatedness	<0.001

Quantity	Value
Pairwise relatedness ≥ 0.125	0.003
Pairwise relatedness ≥ 0.25	0.002
Pairwise relatedness ≥ 0.5	0.001