**Genetic structure in neotropical birds with different tolerance to urbanization**

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Supplementary tables S1, S2, S3, S4 and supplementary figure S1.

Supplementary Table S1. Observed heterozygosity (Ho), Expected heterozygosity (He), inbreeding coefficient (FIS) and allele number (A) for polymorphic locus used in this study for white-eared ground-sparrow (*Melozone leucotis*)and house wren (*Troglodytes aedon*).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | Locus | Ho | He | FIS | A |
| *Melozone leucotis* | Mme2 | 0.514 | 0.397 | -0.294 | 3 |
| Mme7**†** | 0.601 | 0.530 | -0.134 | 5 |
| Mme8 | 0.562 | 0.503 | -0.117 | 4 |
| Asµ15 | 0.903 | 0.854 | -0.057 | 14 |
| Escµ6 | 0.616 | 0.565 | -0.090 | 5 |
| Gf05 | 0.347 | 0.368 | 0.057 | 7 |
| Gf01 | 0.892 | 0.891 | -0.001 | 21 |
| *Troglodytes aedon* | Th-PI14 | 0.904 | 0.870 | -0.039 | 16 |
| Ta-C6-7 | 0.384 | 0.550 | 0.302 | 7 |
| Ta-A5-15 | 0.351 | 0.335 | -0.048 | 3 |
| Ta-A5-2 | 0.558 | 0.628 | 0.111 | 7 |
| Ta-B4-2 | 0.610 | 0.605 | -0.008 | 9 |
| Th-Pl17 | 0.107 | 0.101 | -0.056 | 2 |
| Ta-C3(B)-2 | 0.320 | 0.302 | -0.059 | 5 |

**†** Z-linked locus.

Supplementary Table S2. Pairwise Weir and Cockerham FST [95% CI, 9999 bootstraps over loci] between populations for white-eared ground-sparrow (*Melozone leucotis*) (above diagonal) and house wren (*Troglodytes aedon*) (below diagonal).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|   | HDA | JBL | UCR | MTV |
| HDA |   | 0.059[0.008\_0.100] | 0.019[-0.004\_0.060] | 0.065[0.0140\_0.126] |
| JBL | 0.017[-0.009\_0.037] |   | 0.070[0.024\_0.108] | 0.161[0.080\_0.250] |
| UCR | 0.031[-0.017\_0.077] | 0.035[0.003\_0.055] |   | 0.123[0.014\_0.255] |
| MTV | 0.046[0.027\_0.070] | 0.057[0.023\_0.099] | 0.083[0.056\_0.110] |   |
| COR | 0.084[0.057\_0.111] | 0.086[0.030\_0.167] | 0.089[0.038\_0.125] | 0.098[0.027\_0.190] |

Supplementary Table S3. Primer mixes and PCR thermal conditions used for the study.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | Mix | Primer | Reference | Thermal profile |
| *Melozone leucotis* | 1 | Mme2 | 1 | 95 °C for 15 min; 33 cycles of 94 °C for 30 s, 58 °C for 1:30 min, 72 °C for 1:00 min; followed by 60 ° C for 30 min |
| Mme7 | 1 |
| Mme8 | 1 |
| 2 | Asµ15 | 2 | 95 °C for 15 min; 30 cycles of 94 °C for 30 s, 55 °C for 1:30 min, 72 °C for 1:00 min; followed by 60 °C for 30 min |
| Asµ18 | 2 |
| Escµ6 | 3 |
| Gf05 | 4 |
| - | Gf01 | 4 | 94 °C for 3 min; 33 cycles of 94 °C for 1:00 min, 50 °C for 1:30 min, 72 °C for 1:00 min; followed by 72 °C for 10:00 min |
| *Troglodytes aedon* | 3 | ThPl-01  | 5 | 95 °C 15 min; 25 cycles of 94 °C for 30 s, 60 °C for 1:30 min, 72 °C for 1:00 min; followed by 60 °C for 30 min |
| ThPl-14 | 5 |
| Ta-C6-7 | 6 |
| 4 | Ta-A5-15 | 6 |
| Ta-A5-2 | 6 |
| Ta-B4-2 | 6 |
| 5 | Ta-C3(B)-2 | 6 | 95 °C for 15 min; touchdown 13 cycles of 94 °C for 30 s, 63-51 °C for 1:30 min decreasing 1 °C per cycle, 72 °C for 1:00 min; followed by 12 cycles of 94 °C for 1:00 min, 50 °C for 1:00 min, 72 °C for 1:00 min; followed by 60° C for 30 min |
| ThPl-17 | 5 |

Supplementary Table S4. Resistance value of each category of land cover and altitude designated for white-eared ground-sparrow (*Melozone leucotis*)and house wren (*Troglodytes aedon*).

|  |  |  |  |
| --- | --- | --- | --- |
| Layer | Category | Resistance value for *M. leucotis* | Resistance value for *T. aedon* |
| Land Cover | Non Forestal | 20 | 20 |
|  | Water | 80 | 80 |
|  | Secondary forest | 1 | 1 |
|  | Forest | 20 | 20 |
|  | Mangrove swamp | 100 | 100 |
|  | Forestry | 20 | 20 |
|  | Non classified | 100 | 100 |
|  | Clouds | 20 | 20 |
|  | Agriculture | 40 | 40 |
|  | Páramo | 40 | 40 |
|  | Palm forest | 20 | 20 |
|  | Limits | 100 | 100 |
|  | Deforestation | 40 | 40 |
|  | Coffee | 1 | 1 |
|  | Urban use | 100 | 100 |
|  | Burned areas | 100 | 100 |
| Altitude (m.a.s.l) | 0-200 | 100 | 1 |
|  | 200-400 | 100 | 1 |
|  | 400-600 | 100 | 1 |
|  | 600-800 | 50 | 1 |
|  | 800-1000 | 1 | 1 |
|  | 1000-1200 | 1 | 1 |
|  | 1200-1400 | 1 | 1 |
|  | 1400-1600 | 1 | 1 |
|  | 1600-1800 | 1 | 1 |
|  | 1800-2000 | 50 | 1 |
|  | 2000-2200 | 100 | 1 |
|  | 2200-2400 | 100 | 1 |
|  | 2400-2600 | 100 | 1 |
|  | 2600-2800 | 100 | 1 |
|  | 2800-3000 | 100 | 50 |
|  | 3000-3200 | 100 | 100 |
|  | 3200-3400 | 100 | 100 |
|  | 3400-3600 | 100 | 100 |
|  | 3600-3818 | 100 | 100 |

Supplementary Figure S1. Structure Harvester results: mean L(K) (a and c) and Delta K (b and d) for both white-eared ground-sparrow (*Melozone leucotis*)(a and b) and house wren (*Troglodytes aedon*) (c and d). 

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