**Pairwise distances.** Each matrix reports pairwise distance calculation for each mitochondrial gene.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| COI | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.02 | 0.03 | 0.03 | 0.09 | 0.09 | 0.12 | 0.14 | 0.13 | 0.17 |
| A3\_Finland | 0.02 | 0.00 | 0.03 | 0.04 | 0.10 | 0.10 | 0.12 | 0.13 | 0.13 | 0.17 |
| A1\_UK | 0.03 | 0.03 | 0.00 | 0.02 | 0.09 | 0.09 | 0.12 | 0.14 | 0.13 | 0.17 |
| A1\_Hungary | 0.03 | 0.04 | 0.02 | 0.00 | 0.09 | 0.10 | 0.12 | 0.14 | 0.13 | 0.17 |
| A4\_Serbia | 0.09 | 0.10 | 0.09 | 0.09 | 0.00 | 0.09 | 0.11 | 0.13 | 0.13 | 0.17 |
| A5\_Hungary | 0.09 | 0.10 | 0.09 | 0.10 | 0.09 | 0.00 | 0.12 | 0.14 | 0.14 | 0.17 |
| C\_Spain | 0.12 | 0.12 | 0.12 | 0.12 | 0.11 | 0.12 | 0.00 | 0.12 | 0.12 | 0.17 |
| S20\_B | 0.14 | 0.13 | 0.14 | 0.14 | 0.13 | 0.14 | 0.12 | 0.00 | 0.01 | 0.15 |
| ORI\_B | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.14 | 0.12 | 0.01 | 0.00 | 0.16 |
| L\_terrestris | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.15 | 0.16 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| COII | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.03 | 0.08 | 0.09 | 0.10 | 0.11 | 0.11 | 0.15 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.03 | 0.08 | 0.09 | 0.11 | 0.10 | 0.10 | 0.15 |
| A1\_UK | 0.04 | 0.04 | 0.00 | 0.01 | 0.09 | 0.09 | 0.11 | 0.11 | 0.11 | 0.15 |
| A1\_Hungary | 0.03 | 0.03 | 0.01 | 0.00 | 0.08 | 0.09 | 0.11 | 0.10 | 0.10 | 0.15 |
| A4\_Serbia | 0.08 | 0.08 | 0.09 | 0.08 | 0.00 | 0.09 | 0.10 | 0.11 | 0.11 | 0.15 |
| A5\_Hungary | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.00 | 0.10 | 0.13 | 0.13 | 0.15 |
| C\_Spain | 0.10 | 0.11 | 0.11 | 0.11 | 0.10 | 0.10 | 0.00 | 0.13 | 0.13 | 0.15 |
| S20\_B | 0.11 | 0.10 | 0.11 | 0.10 | 0.11 | 0.13 | 0.13 | 0.00 | 0.00 | 0.14 |
| ORI\_B | 0.11 | 0.10 | 0.11 | 0.10 | 0.11 | 0.13 | 0.13 | 0.00 | 0.00 | 0.14 |
| L\_terrestris | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.14 | 0.14 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ATP8 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.04 | 0.02 | 0.02 | 0.08 | 0.08 | 0.11 | 0.16 | 0.16 | 0.24 |
| A3\_Finland | 0.04 | 0.00 | 0.06 | 0.06 | 0.11 | 0.08 | 0.13 | 0.16 | 0.16 | 0.24 |
| A1\_UK | 0.02 | 0.06 | 0.00 | 0.03 | 0.09 | 0.08 | 0.13 | 0.18 | 0.18 | 0.24 |
| A1\_Hungary | 0.02 | 0.06 | 0.03 | 0.00 | 0.10 | 0.09 | 0.12 | 0.17 | 0.17 | 0.23 |
| A4\_Serbia | 0.08 | 0.11 | 0.09 | 0.10 | 0.00 | 0.09 | 0.14 | 0.16 | 0.16 | 0.25 |
| A5\_Hungary | 0.08 | 0.08 | 0.08 | 0.09 | 0.09 | 0.00 | 0.13 | 0.15 | 0.15 | 0.23 |
| C\_Spain | 0.11 | 0.13 | 0.13 | 0.12 | 0.14 | 0.13 | 0.00 | 0.16 | 0.16 | 0.24 |
| S20\_B | 0.16 | 0.16 | 0.18 | 0.17 | 0.16 | 0.15 | 0.16 | 0.00 | 0.00 | 0.23 |
| ORI\_B | 0.16 | 0.16 | 0.18 | 0.17 | 0.16 | 0.15 | 0.16 | 0.00 | 0.00 | 0.23 |
| L\_terrestris | 0.24 | 0.24 | 0.24 | 0.23 | 0.25 | 0.23 | 0.24 | 0.23 | 0.23 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| COIII | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.03 | 0.08 | 0.10 | 0.13 | 0.14 | 0.14 | 0.21 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.03 | 0.08 | 0.10 | 0.13 | 0.14 | 0.14 | 0.21 |
| A1\_UK | 0.04 | 0.04 | 0.00 | 0.01 | 0.09 | 0.10 | 0.14 | 0.15 | 0.15 | 0.23 |
| A1\_Hungary | 0.03 | 0.03 | 0.01 | 0.00 | 0.08 | 0.10 | 0.14 | 0.14 | 0.14 | 0.22 |
| A4\_Serbia | 0.08 | 0.08 | 0.09 | 0.08 | 0.00 | 0.07 | 0.13 | 0.13 | 0.13 | 0.22 |
| A5\_Hungary | 0.10 | 0.10 | 0.10 | 0.10 | 0.07 | 0.00 | 0.13 | 0.14 | 0.14 | 0.23 |
| C\_Spain | 0.13 | 0.13 | 0.14 | 0.14 | 0.13 | 0.13 | 0.00 | 0.15 | 0.15 | 0.22 |
| S20\_B | 0.14 | 0.14 | 0.15 | 0.14 | 0.13 | 0.14 | 0.15 | 0.00 | 0.00 | 0.22 |
| ORI\_B | 0.14 | 0.14 | 0.15 | 0.14 | 0.13 | 0.14 | 0.15 | 0.00 | 0.00 | 0.22 |
| L\_terrestris | 0.21 | 0.21 | 0.23 | 0.22 | 0.22 | 0.23 | 0.22 | 0.22 | 0.22 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND6 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.05 | 0.06 | 0.06 | 0.14 | 0.13 | 0.18 | 0.16 | 0.17 | 0.25 |
| A3\_Finland | 0.05 | 0.00 | 0.06 | 0.06 | 0.13 | 0.11 | 0.15 | 0.15 | 0.16 | 0.25 |
| A1\_UK | 0.06 | 0.06 | 0.00 | 0.02 | 0.12 | 0.12 | 0.15 | 0.16 | 0.16 | 0.25 |
| A1\_Hungary | 0.06 | 0.06 | 0.02 | 0.00 | 0.12 | 0.12 | 0.15 | 0.15 | 0.15 | 0.24 |
| A4\_Serbia | 0.14 | 0.13 | 0.12 | 0.12 | 0.00 | 0.09 | 0.15 | 0.16 | 0.16 | 0.24 |
| A5\_Hungary | 0.13 | 0.11 | 0.12 | 0.12 | 0.09 | 0.00 | 0.15 | 0.16 | 0.16 | 0.25 |
| C\_Spain | 0.18 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 | 0.00 | 0.18 | 0.18 | 0.25 |
| S20\_B | 0.16 | 0.15 | 0.16 | 0.15 | 0.16 | 0.16 | 0.18 | 0.00 | 0.00 | 0.26 |
| ORI\_B | 0.17 | 0.16 | 0.16 | 0.15 | 0.16 | 0.16 | 0.18 | 0.00 | 0.00 | 0.26 |
| L\_terrestris | 0.25 | 0.25 | 0.25 | 0.24 | 0.24 | 0.25 | 0.25 | 0.26 | 0.26 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| CytB | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.05 | 0.05 | 0.11 | 0.11 | 0.13 | 0.14 | 0.14 | 0.18 |
| A3\_Finland | 0.03 | 0.00 | 0.05 | 0.05 | 0.12 | 0.11 | 0.13 | 0.14 | 0.14 | 0.18 |
| A1\_UK | 0.05 | 0.05 | 0.00 | 0.03 | 0.12 | 0.11 | 0.13 | 0.15 | 0.15 | 0.19 |
| A1\_Hungary | 0.05 | 0.05 | 0.03 | 0.00 | 0.12 | 0.12 | 0.13 | 0.15 | 0.15 | 0.19 |
| A4\_Serbia | 0.11 | 0.12 | 0.12 | 0.12 | 0.00 | 0.11 | 0.13 | 0.15 | 0.15 | 0.18 |
| A5\_Hungary | 0.11 | 0.11 | 0.11 | 0.12 | 0.11 | 0.00 | 0.14 | 0.16 | 0.16 | 0.18 |
| C\_Spain | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.14 | 0.00 | 0.16 | 0.16 | 0.19 |
| S20\_B | 0.14 | 0.14 | 0.15 | 0.15 | 0.15 | 0.16 | 0.16 | 0.00 | 0.00 | 0.19 |
| ORI\_B | 0.14 | 0.14 | 0.15 | 0.15 | 0.15 | 0.16 | 0.16 | 0.00 | 0.00 | 0.19 |
| L\_terrestris | 0.18 | 0.18 | 0.19 | 0.19 | 0.18 | 0.18 | 0.19 | 0.19 | 0.19 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Atp6 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.04 | 0.05 | 0.05 | 0.12 | 0.11 | 0.13 | 0.15 | 0.15 | 0.21 |
| A3\_Finland | 0.04 | 0.00 | 0.05 | 0.05 | 0.12 | 0.11 | 0.12 | 0.15 | 0.15 | 0.20 |
| A1\_UK | 0.05 | 0.05 | 0.00 | 0.03 | 0.13 | 0.12 | 0.13 | 0.15 | 0.15 | 0.21 |
| A1\_Hungary | 0.05 | 0.05 | 0.03 | 0.00 | 0.13 | 0.13 | 0.14 | 0.16 | 0.16 | 0.22 |
| A4\_Serbia | 0.12 | 0.12 | 0.13 | 0.13 | 0.00 | 0.09 | 0.14 | 0.17 | 0.17 | 0.20 |
| A5\_Hungary | 0.11 | 0.11 | 0.12 | 0.13 | 0.09 | 0.00 | 0.14 | 0.16 | 0.16 | 0.20 |
| C\_Spain | 0.13 | 0.12 | 0.13 | 0.14 | 0.14 | 0.14 | 0.00 | 0.19 | 0.19 | 0.23 |
| S20\_B | 0.15 | 0.15 | 0.15 | 0.16 | 0.17 | 0.16 | 0.19 | 0.00 | 0.00 | 0.21 |
| ORI\_B | 0.15 | 0.15 | 0.15 | 0.16 | 0.17 | 0.16 | 0.19 | 0.00 | 0.00 | 0.21 |
| L\_terrestris | 0.21 | 0.20 | 0.21 | 0.22 | 0.20 | 0.20 | 0.23 | 0.21 | 0.21 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND5 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.04 | 0.10 | 0.11 | 0.15 | 0.16 | 0.16 | 0.25 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.04 | 0.11 | 0.11 | 0.14 | 0.16 | 0.16 | 0.25 |
| A1\_UK | 0.04 | 0.04 | 0.00 | 0.02 | 0.10 | 0.10 | 0.14 | 0.16 | 0.16 | 0.25 |
| A1\_Hungary | 0.04 | 0.04 | 0.02 | 0.00 | 0.10 | 0.11 | 0.14 | 0.16 | 0.16 | 0.25 |
| A4\_Serbia | 0.10 | 0.11 | 0.10 | 0.10 | 0.00 | 0.09 | 0.14 | 0.17 | 0.17 | 0.24 |
| A5\_Hungary | 0.11 | 0.11 | 0.10 | 0.11 | 0.09 | 0.00 | 0.14 | 0.17 | 0.17 | 0.25 |
| C\_Spain | 0.15 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.00 | 0.17 | 0.17 | 0.26 |
| S20\_B | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.00 | 0.00 | 0.25 |
| ORI\_B | 0.16 | 0.16 | 0.16 | 0.16 | 0.17 | 0.17 | 0.17 | 0.00 | 0.00 | 0.25 |
| L\_terrestris | 0.25 | 0.25 | 0.25 | 0.25 | 0.24 | 0.25 | 0.26 | 0.25 | 0.25 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND4L | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.04 | 0.09 | 0.10 | 0.16 | 0.18 | 0.18 | 0.24 |
| A3\_Finland | 0.03 | 0.00 | 0.03 | 0.04 | 0.08 | 0.10 | 0.15 | 0.18 | 0.18 | 0.23 |
| A1\_UK | 0.04 | 0.03 | 0.00 | 0.01 | 0.08 | 0.09 | 0.13 | 0.17 | 0.17 | 0.23 |
| A1\_Hungary | 0.04 | 0.04 | 0.01 | 0.00 | 0.08 | 0.09 | 0.13 | 0.17 | 0.17 | 0.22 |
| A4\_Serbia | 0.09 | 0.08 | 0.08 | 0.08 | 0.00 | 0.06 | 0.14 | 0.19 | 0.19 | 0.22 |
| A5\_Hungary | 0.10 | 0.10 | 0.09 | 0.09 | 0.06 | 0.00 | 0.11 | 0.17 | 0.17 | 0.24 |
| C\_Spain | 0.16 | 0.15 | 0.13 | 0.13 | 0.14 | 0.11 | 0.00 | 0.17 | 0.18 | 0.23 |
| S20\_B | 0.18 | 0.18 | 0.17 | 0.17 | 0.19 | 0.17 | 0.17 | 0.00 | 0.00 | 0.24 |
| ORI\_B | 0.18 | 0.18 | 0.17 | 0.17 | 0.19 | 0.17 | 0.18 | 0.00 | 0.00 | 0.25 |
| L\_terrestris | 0.24 | 0.23 | 0.23 | 0.22 | 0.22 | 0.24 | 0.23 | 0.24 | 0.25 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND4 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.05 | 0.12 | 0.11 | 0.14 | 0.16 | 0.16 | 0.20 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.05 | 0.11 | 0.10 | 0.14 | 0.15 | 0.15 | 0.20 |
| A1\_UK | 0.04 | 0.04 | 0.00 | 0.02 | 0.12 | 0.10 | 0.14 | 0.15 | 0.15 | 0.20 |
| A1\_Hungary | 0.05 | 0.05 | 0.02 | 0.00 | 0.12 | 0.11 | 0.14 | 0.16 | 0.16 | 0.20 |
| A4\_Serbia | 0.12 | 0.11 | 0.12 | 0.12 | 0.00 | 0.08 | 0.14 | 0.15 | 0.15 | 0.19 |
| A5\_Hungary | 0.11 | 0.10 | 0.10 | 0.11 | 0.08 | 0.00 | 0.13 | 0.14 | 0.14 | 0.20 |
| C\_Spain | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.13 | 0.00 | 0.16 | 0.16 | 0.20 |
| S20\_B | 0.16 | 0.15 | 0.15 | 0.16 | 0.15 | 0.14 | 0.16 | 0.00 | 0.00 | 0.20 |
| ORI\_B | 0.16 | 0.15 | 0.15 | 0.16 | 0.15 | 0.14 | 0.16 | 0.00 | 0.00 | 0.20 |
| L\_terrestris | 0.20 | 0.20 | 0.20 | 0.20 | 0.19 | 0.20 | 0.20 | 0.20 | 0.20 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| s-rRNA | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.01 | 0.01 | 0.01 | 0.04 | 0.03 | 0.03 | 0.04 | 0.04 | 0.13 |
| A3\_Finland | 0.01 | 0.00 | 0.01 | 0.01 | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.14 |
| A1\_UK | 0.01 | 0.01 | 0.00 | 0.01 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.14 |
| A1\_Hungary | 0.01 | 0.01 | 0.01 | 0.00 | 0.04 | 0.04 | 0.03 | 0.04 | 0.04 | 0.14 |
| A4\_Serbia | 0.04 | 0.03 | 0.04 | 0.04 | 0.00 | 0.04 | 0.05 | 0.05 | 0.05 | 0.14 |
| A5\_Hungary | 0.03 | 0.03 | 0.04 | 0.04 | 0.04 | 0.00 | 0.04 | 0.05 | 0.05 | 0.13 |
| C\_Spain | 0.03 | 0.04 | 0.03 | 0.03 | 0.05 | 0.04 | 0.00 | 0.05 | 0.05 | 0.13 |
| S20\_B | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.00 | 0.00 | 0.13 |
| ORI\_B | 0.04 | 0.04 | 0.04 | 0.04 | 0.05 | 0.05 | 0.05 | 0.00 | 0.00 | 0.13 |
| L\_terrestris | 0.13 | 0.14 | 0.14 | 0.14 | 0.14 | 0.13 | 0.13 | 0.13 | 0.13 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| l-rRNA | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.01 | 0.02 | 0.02 | 0.05 | 0.04 | 0.07 | 0.09 | 0.09 | 0.14 |
| A3\_Finland | 0.01 | 0.00 | 0.02 | 0.02 | 0.05 | 0.04 | 0.07 | 0.09 | 0.09 | 0.14 |
| A1\_UK | 0.02 | 0.02 | 0.00 | 0.01 | 0.05 | 0.05 | 0.07 | 0.09 | 0.09 | 0.14 |
| A1\_Hungary | 0.02 | 0.02 | 0.01 | 0.00 | 0.05 | 0.04 | 0.07 | 0.09 | 0.09 | 0.15 |
| A4\_Serbia | 0.05 | 0.05 | 0.05 | 0.05 | 0.00 | 0.04 | 0.07 | 0.09 | 0.09 | 0.15 |
| A5\_Hungary | 0.04 | 0.04 | 0.05 | 0.04 | 0.04 | 0.00 | 0.07 | 0.09 | 0.09 | 0.14 |
| C\_Spain | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.00 | 0.10 | 0.10 | 0.15 |
| S20\_B | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 | 0.00 | 0.00 | 0.14 |
| ORI\_B | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.09 | 0.10 | 0.00 | 0.00 | 0.14 |
| L\_terrestris | 0.14 | 0.14 | 0.14 | 0.15 | 0.15 | 0.14 | 0.15 | 0.14 | 0.14 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND1 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.03 | 0.03 | 0.11 | 0.10 | 0.12 | 0.13 | 0.13 | 0.20 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.04 | 0.12 | 0.10 | 0.12 | 0.14 | 0.13 | 0.20 |
| A1\_UK | 0.03 | 0.04 | 0.00 | 0.02 | 0.12 | 0.10 | 0.12 | 0.13 | 0.13 | 0.19 |
| A1\_Hungary | 0.03 | 0.04 | 0.02 | 0.00 | 0.12 | 0.10 | 0.12 | 0.14 | 0.13 | 0.20 |
| A4\_Serbia | 0.11 | 0.12 | 0.12 | 0.12 | 0.00 | 0.10 | 0.15 | 0.15 | 0.15 | 0.21 |
| A5\_Hungary | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.00 | 0.13 | 0.14 | 0.13 | 0.21 |
| C\_Spain | 0.12 | 0.12 | 0.12 | 0.12 | 0.15 | 0.13 | 0.00 | 0.16 | 0.16 | 0.21 |
| S20\_B | 0.13 | 0.14 | 0.13 | 0.14 | 0.15 | 0.14 | 0.16 | 0.00 | 0.00 | 0.19 |
| ORI\_B | 0.13 | 0.13 | 0.13 | 0.13 | 0.15 | 0.13 | 0.16 | 0.00 | 0.00 | 0.19 |
| L\_terrestris | 0.20 | 0.20 | 0.19 | 0.20 | 0.21 | 0.21 | 0.21 | 0.19 | 0.19 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND3 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.02 | 0.05 | 0.06 | 0.10 | 0.12 | 0.15 | 0.19 | 0.19 | 0.24 |
| A3\_Finland | 0.02 | 0.00 | 0.03 | 0.04 | 0.10 | 0.10 | 0.15 | 0.19 | 0.18 | 0.25 |
| A1\_UK | 0.05 | 0.03 | 0.00 | 0.03 | 0.13 | 0.12 | 0.16 | 0.18 | 0.18 | 0.25 |
| A1\_Hungary | 0.06 | 0.04 | 0.03 | 0.00 | 0.13 | 0.13 | 0.14 | 0.19 | 0.18 | 0.25 |
| A4\_Serbia | 0.10 | 0.10 | 0.13 | 0.13 | 0.00 | 0.09 | 0.15 | 0.21 | 0.21 | 0.26 |
| A5\_Hungary | 0.12 | 0.10 | 0.12 | 0.13 | 0.09 | 0.00 | 0.12 | 0.21 | 0.20 | 0.26 |
| C\_Spain | 0.15 | 0.15 | 0.16 | 0.14 | 0.15 | 0.12 | 0.00 | 0.21 | 0.21 | 0.27 |
| S20\_B | 0.19 | 0.19 | 0.18 | 0.19 | 0.21 | 0.21 | 0.21 | 0.00 | 0.01 | 0.25 |
| ORI\_B | 0.19 | 0.18 | 0.18 | 0.18 | 0.21 | 0.20 | 0.21 | 0.01 | 0.00 | 0.25 |
| L\_terrestris | 0.24 | 0.25 | 0.25 | 0.25 | 0.26 | 0.26 | 0.27 | 0.25 | 0.25 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ND2 | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.05 | 0.10 | 0.10 | 0.13 | 0.17 | 0.17 | 0.25 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.04 | 0.09 | 0.09 | 0.13 | 0.17 | 0.17 | 0.25 |
| A1\_UK | 0.04 | 0.04 | 0.00 | 0.02 | 0.10 | 0.10 | 0.14 | 0.17 | 0.17 | 0.25 |
| A1\_Hungary | 0.05 | 0.04 | 0.02 | 0.00 | 0.10 | 0.09 | 0.14 | 0.17 | 0.17 | 0.26 |
| A4\_Serbia | 0.10 | 0.09 | 0.10 | 0.10 | 0.00 | 0.08 | 0.13 | 0.17 | 0.17 | 0.25 |
| A5\_Hungary | 0.10 | 0.09 | 0.10 | 0.09 | 0.08 | 0.00 | 0.14 | 0.17 | 0.17 | 0.26 |
| C\_Spain | 0.13 | 0.13 | 0.14 | 0.14 | 0.13 | 0.14 | 0.00 | 0.18 | 0.18 | 0.26 |
| S20\_B | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.18 | 0.00 | 0.00 | 0.26 |
| ORI\_B | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.17 | 0.18 | 0.00 | 0.00 | 0.26 |
| L\_terrestris | 0.25 | 0.25 | 0.25 | 0.26 | 0.25 | 0.26 | 0.26 | 0.26 | 0.26 | 0.00 |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| ConcatGenes | A2\_France | A3\_Finland | A1\_UK | A1\_Hungary | A4\_Serbia | A5\_Hungary | C\_Spain | S20\_B | ORI\_B | L\_terrestris |
| A2\_France | 0.00 | 0.03 | 0.04 | 0.04 | 0.10 | 0.09 | 0.12 | 0.14 | 0.14 | 0.20 |
| A3\_Finland | 0.03 | 0.00 | 0.04 | 0.04 | 0.09 | 0.09 | 0.12 | 0.14 | 0.13 | 0.20 |
| A1\_UK | 0.04 | 0.04 | 0.00 | 0.02 | 0.10 | 0.09 | 0.12 | 0.14 | 0.14 | 0.20 |
| A1\_Hungary | 0.04 | 0.04 | 0.02 | 0.00 | 0.10 | 0.09 | 0.12 | 0.14 | 0.14 | 0.20 |
| A4\_Serbia | 0.10 | 0.09 | 0.10 | 0.10 | 0.00 | 0.08 | 0.12 | 0.14 | 0.14 | 0.20 |
| A5\_Hungary | 0.09 | 0.09 | 0.09 | 0.09 | 0.08 | 0.00 | 0.12 | 0.14 | 0.14 | 0.20 |
| C\_Spain | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.12 | 0.00 | 0.15 | 0.15 | 0.20 |
| S20\_B | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.14 | 0.15 | 0.00 | 0.00 | 0.20 |
| ORI\_B | 0.14 | 0.13 | 0.14 | 0.14 | 0.14 | 0.14 | 0.15 | 0.00 | 0.00 | 0.20 |
| L\_terrestris | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.00 |

**Variable matrices**

**Differences in length**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Length | COI | COII | ATP8 | COIII | ND6 | CYTB | ATP6 | ND5 | ND4L | ND4 | srRNA | lrRNA | ND1 | ND3 | ND2 |
| COI | 0 | 855 | 1380 | 762 | 1066 | 402 | 846 | 186 | 1243 | 183 | 747 | 283 | 615 | 1188 | 534 |
| COII | 855 | 0 | 525 | 93 | 211 | 453 | 9 | 1041 | 388 | 672 | 108 | 572 | 240 | 333 | 321 |
| ATP8 | 1380 | 525 | 0 | 618 | 314 | 978 | 534 | 1566 | 137 | 1197 | 633 | 1097 | 765 | 192 | 846 |
| COIII | 762 | 93 | 618 | 0 | 304 | 360 | 84 | 948 | 481 | 579 | 15 | 479 | 147 | 426 | 228 |
| ND6 | 1066 | 211 | 314 | 304 | 0 | 664 | 220 | 1252 | 177 | 883 | 319 | 783 | 451 | 122 | 532 |
| CYTB | 402 | 453 | 978 | 360 | 664 | 0 | 444 | 588 | 841 | 219 | 345 | 119 | 213 | 786 | 132 |
| ATP6 | 846 | 9 | 534 | 84 | 220 | 444 | 0 | 1032 | 397 | 663 | 99 | 563 | 231 | 342 | 312 |
| ND5 | 186 | 1041 | 1566 | 948 | 1252 | 588 | 1032 | 0 | 1429 | 369 | 933 | 469 | 801 | 1374 | 720 |
| ND4L | 1243 | 388 | 137 | 481 | 177 | 841 | 397 | 1429 | 0 | 1060 | 496 | 960 | 628 | 55 | 709 |
| ND4 | 183 | 672 | 1197 | 579 | 883 | 219 | 663 | 369 | 1060 | 0 | 564 | 100 | 432 | 1005 | 351 |
| srRNA | 747 | 108 | 633 | 15 | 319 | 345 | 99 | 933 | 496 | 564 | 0 | 464 | 132 | 441 | 213 |
| lrRNA | 283 | 572 | 1097 | 479 | 783 | 119 | 563 | 469 | 960 | 100 | 464 | 0 | 332 | 905 | 251 |
| ND1 | 615 | 240 | 765 | 147 | 451 | 213 | 231 | 801 | 628 | 432 | 132 | 332 | 0 | 573 | 81 |
| ND3 | 1188 | 333 | 192 | 426 | 122 | 786 | 342 | 1374 | 55 | 1005 | 441 | 905 | 573 | 0 | 654 |
| ND2 | 534 | 321 | 846 | 228 | 532 | 132 | 312 | 720 | 709 | 351 | 213 | 251 | 81 | 654 | 0 |

**Differences in number of polymorphic sites**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Pol. sites | COI | COII | ATP8 | COIII | ND6 | CYTB | ATP6 | ND5 | ND4L | ND4 | srRNA | lrRNA | ND1 | ND3 | ND2 |
| COI | 0 | 248 | 359 | 163 | 230 | 63 | 185 | 226 | 314 | 30 | 278 | 146 | 126 | 279 | 30 |
| COII | 248 | 0 | 111 | 85 | 18 | 185 | 63 | 474 | 66 | 278 | 30 | 102 | 122 | 31 | 218 |
| ATP8 | 359 | 111 | 0 | 196 | 129 | 296 | 174 | 585 | 45 | 389 | 81 | 213 | 233 | 80 | 329 |
| COIII | 163 | 85 | 196 | 0 | 67 | 100 | 22 | 389 | 151 | 193 | 115 | 17 | 37 | 116 | 133 |
| ND6 | 230 | 18 | 129 | 67 | 0 | 167 | 45 | 456 | 84 | 260 | 48 | 84 | 104 | 49 | 200 |
| CYTB | 63 | 185 | 296 | 100 | 167 | 0 | 122 | 289 | 251 | 93 | 215 | 83 | 63 | 216 | 33 |
| ATP6 | 185 | 63 | 174 | 22 | 45 | 122 | 0 | 411 | 129 | 215 | 93 | 39 | 59 | 94 | 155 |
| ND5 | 226 | 474 | 585 | 389 | 456 | 289 | 411 | 0 | 540 | 196 | 504 | 372 | 352 | 505 | 256 |
| ND4L | 314 | 66 | 45 | 151 | 84 | 251 | 129 | 540 | 0 | 344 | 36 | 168 | 188 | 35 | 284 |
| ND4 | 30 | 278 | 389 | 193 | 260 | 93 | 215 | 196 | 344 | 0 | 308 | 176 | 156 | 309 | 60 |
| srRNA | 278 | 30 | 81 | 115 | 48 | 215 | 93 | 504 | 36 | 308 | 0 | 132 | 152 | 1 | 248 |
| lrRNA | 146 | 102 | 213 | 17 | 84 | 83 | 39 | 372 | 168 | 176 | 132 | 0 | 20 | 133 | 116 |
| ND1 | 126 | 122 | 233 | 37 | 104 | 63 | 59 | 352 | 188 | 156 | 152 | 20 | 0 | 153 | 96 |
| ND3 | 279 | 31 | 80 | 116 | 49 | 216 | 94 | 505 | 35 | 309 | 1 | 133 | 153 | 0 | 249 |
| ND2 | 30 | 218 | 329 | 133 | 200 | 33 | 155 | 256 | 284 | 60 | 248 | 116 | 96 | 249 | 0 |

**Differences in Symmetric distance**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| RF\_distance | COI | COII | Atp8 | COIII | ND6 | CYTB | ATP6 | ND5 | ND4L | ND4 | srRNA | lrRNA | ND1 | ND3 | ND2 |
| COI | 0 | 2 | 4 | 2 | 6 | 2 | 2 | 0 | 4 | 2 | 2 | 0 | 0 | 2 | 2 |
| COII | 2 | 0 | 4 | 4 | 8 | 0 | 4 | 2 | 6 | 4 | 4 | 2 | 2 | 2 | 4 |
| Atp8 | 4 | 4 | 0 | 4 | 10 | 4 | 6 | 4 | 8 | 2 | 4 | 4 | 4 | 2 | 6 |
| COIII | 2 | 4 | 4 | 0 | 8 | 4 | 4 | 2 | 6 | 2 | 0 | 2 | 2 | 4 | 4 |
| ND6 | 6 | 8 | 10 | 8 | 0 | 8 | 6 | 6 | 4 | 8 | 8 | 6 | 6 | 8 | 6 |
| CYTB | 2 | 0 | 4 | 4 | 8 | 0 | 4 | 2 | 6 | 4 | 4 | 2 | 2 | 2 | 4 |
| ATP6 | 2 | 4 | 6 | 4 | 6 | 4 | 0 | 2 | 4 | 4 | 4 | 2 | 2 | 4 | 4 |
| ND5 | 0 | 2 | 4 | 2 | 6 | 2 | 2 | 0 | 4 | 2 | 2 | 0 | 0 | 2 | 2 |
| ND4L | 4 | 6 | 8 | 6 | 4 | 6 | 4 | 4 | 0 | 6 | 6 | 4 | 4 | 6 | 4 |
| ND4 | 2 | 4 | 2 | 2 | 8 | 4 | 4 | 2 | 6 | 0 | 2 | 2 | 2 | 4 | 4 |
| srRNA | 2 | 4 | 4 | 0 | 8 | 4 | 4 | 2 | 6 | 2 | 0 | 2 | 2 | 4 | 4 |
| lrRNA | 0 | 2 | 4 | 2 | 6 | 2 | 2 | 0 | 4 | 2 | 2 | 0 | 0 | 2 | 2 |
| ND1 | 0 | 2 | 4 | 2 | 6 | 2 | 2 | 0 | 4 | 2 | 2 | 0 | 0 | 2 | 2 |
| ND3 | 2 | 2 | 2 | 4 | 8 | 2 | 4 | 2 | 6 | 4 | 4 | 2 | 2 | 0 | 4 |
| ND2 | 2 | 4 | 6 | 4 | 6 | 4 | 4 | 2 | 4 | 4 | 4 | 2 | 2 | 4 | 0 |

**Differences in tajima’s D**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tajima's D | COI | COII | Atp8 | COIII | ND6 | CYTB | ATP6 | ND5 | ND4L | ND4 | srRNA | lrRNA | ND1 | ND3 | ND2 |
| COI | 0.000 | 0.199 | 0.595 | 0.355 | 0.440 | 0.044 | 0.009 | 0.358 | 0.157 | 0.186 | 1.498 | 0.747 | 0.187 | 0.169 | 0.507 |
| COII | 0.199 | 0.000 | 0.396 | 0.156 | 0.240 | 0.243 | 0.208 | 0.158 | 0.043 | 0.014 | 1.299 | 0.548 | 0.013 | 0.030 | 0.307 |
| Atp8 | 0.595 | 0.396 | 0.000 | 0.240 | 0.155 | 0.639 | 0.604 | 0.237 | 0.438 | 0.409 | 0.903 | 0.152 | 0.408 | 0.426 | 0.088 |
| COIII | 0.355 | 0.156 | 0.240 | 0.000 | 0.084 | 0.399 | 0.364 | 0.002 | 0.199 | 0.169 | 1.143 | 0.392 | 0.168 | 0.186 | 0.151 |
| ND6 | 0.440 | 0.240 | 0.155 | 0.084 | 0.000 | 0.483 | 0.449 | 0.082 | 0.283 | 0.254 | 1.059 | 0.307 | 0.253 | 0.270 | 0.067 |
| CYTB | 0.044 | 0.243 | 0.639 | 0.399 | 0.483 | 0.000 | 0.035 | 0.401 | 0.200 | 0.229 | 1.542 | 0.791 | 0.230 | 0.213 | 0.550 |
| ATP6 | 0.009 | 0.208 | 0.604 | 0.364 | 0.449 | 0.035 | 0.000 | 0.367 | 0.166 | 0.195 | 1.507 | 0.756 | 0.196 | 0.178 | 0.516 |
| ND5 | 0.358 | 0.158 | 0.237 | 0.002 | 0.082 | 0.401 | 0.367 | 0.000 | 0.201 | 0.172 | 1.141 | 0.389 | 0.171 | 0.188 | 0.149 |
| ND4L | 0.157 | 0.043 | 0.438 | 0.199 | 0.283 | 0.200 | 0.166 | 0.201 | 0.000 | 0.029 | 1.342 | 0.590 | 0.030 | 0.013 | 0.350 |
| ND4 | 0.186 | 0.014 | 0.409 | 0.169 | 0.254 | 0.229 | 0.195 | 0.172 | 0.029 | 0.000 | 1.313 | 0.561 | 0.001 | 0.016 | 0.321 |
| srRNA | 1.498 | 1.299 | 0.903 | 1.143 | 1.059 | 1.542 | 1.507 | 1.141 | 1.342 | 1.313 | 0.000 | 0.752 | 1.312 | 1.329 | 0.992 |
| lrRNA | 0.747 | 0.548 | 0.152 | 0.392 | 0.307 | 0.791 | 0.756 | 0.389 | 0.590 | 0.561 | 0.752 | 0.000 | 0.560 | 0.578 | 0.240 |
| ND1 | 0.187 | 0.013 | 0.408 | 0.168 | 0.253 | 0.230 | 0.196 | 0.171 | 0.030 | 0.001 | 1.312 | 0.560 | 0.000 | 0.017 | 0.320 |
| ND3 | 0.169 | 0.030 | 0.426 | 0.186 | 0.270 | 0.213 | 0.178 | 0.188 | 0.013 | 0.016 | 1.329 | 0.578 | 0.017 | 0.000 | 0.337 |
| ND2 | 0.507 | 0.307 | 0.088 | 0.151 | 0.067 | 0.550 | 0.516 | 0.149 | 0.350 | 0.321 | 0.992 | 0.240 | 0.320 | 0.337 | 0.000 |

**Differences in nucleotide diversity**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| π | COI | COII | Atp8 | COIII | ND6 | CYTB | ATP6 | ND5 | ND4L | ND4 | srRNA | lrRNA | ND1 | ND3 | ND2 |
| COI | 0.000 | 0.013 | 0.025 | 0.015 | 0.039 | 0.017 | 0.027 | 0.033 | 0.029 | 0.020 | 0.059 | 0.034 | 0.014 | 0.046 | 0.033 |
| COII | 0.013 | 0.000 | 0.038 | 0.028 | 0.052 | 0.031 | 0.040 | 0.046 | 0.042 | 0.033 | 0.046 | 0.021 | 0.027 | 0.059 | 0.046 |
| Atp8 | 0.025 | 0.038 | 0.000 | 0.010 | 0.015 | 0.007 | 0.002 | 0.008 | 0.004 | 0.005 | 0.083 | 0.059 | 0.011 | 0.022 | 0.009 |
| COIII | 0.015 | 0.028 | 0.010 | 0.000 | 0.024 | 0.003 | 0.012 | 0.018 | 0.014 | 0.005 | 0.074 | 0.049 | 0.001 | 0.031 | 0.018 |
| ND6 | 0.039 | 0.052 | 0.015 | 0.024 | 0.000 | 0.022 | 0.013 | 0.007 | 0.011 | 0.019 | 0.098 | 0.073 | 0.025 | 0.007 | 0.006 |
| CYTB | 0.017 | 0.031 | 0.007 | 0.003 | 0.022 | 0.000 | 0.009 | 0.015 | 0.011 | 0.002 | 0.076 | 0.052 | 0.004 | 0.029 | 0.016 |
| ATP6 | 0.027 | 0.040 | 0.002 | 0.012 | 0.013 | 0.009 | 0.000 | 0.006 | 0.002 | 0.007 | 0.085 | 0.061 | 0.013 | 0.020 | 0.007 |
| ND5 | 0.033 | 0.046 | 0.008 | 0.018 | 0.007 | 0.015 | 0.006 | 0.000 | 0.004 | 0.013 | 0.091 | 0.067 | 0.019 | 0.013 | 0.000 |
| ND4L | 0.029 | 0.042 | 0.004 | 0.014 | 0.011 | 0.011 | 0.002 | 0.004 | 0.000 | 0.009 | 0.087 | 0.063 | 0.015 | 0.018 | 0.005 |
| ND4 | 0.020 | 0.033 | 0.005 | 0.005 | 0.019 | 0.002 | 0.007 | 0.013 | 0.009 | 0.000 | 0.079 | 0.054 | 0.006 | 0.026 | 0.013 |
| srRNA | 0.059 | 0.046 | 0.083 | 0.074 | 0.098 | 0.076 | 0.085 | 0.091 | 0.087 | 0.079 | 0.000 | 0.025 | 0.073 | 0.105 | 0.092 |
| lrRNA | 0.034 | 0.021 | 0.059 | 0.049 | 0.073 | 0.052 | 0.061 | 0.067 | 0.063 | 0.054 | 0.025 | 0.000 | 0.048 | 0.080 | 0.067 |
| ND1 | 0.014 | 0.027 | 0.011 | 0.001 | 0.025 | 0.004 | 0.013 | 0.019 | 0.015 | 0.006 | 0.073 | 0.048 | 0.000 | 0.032 | 0.019 |
| ND3 | 0.046 | 0.059 | 0.022 | 0.031 | 0.007 | 0.029 | 0.020 | 0.013 | 0.018 | 0.026 | 0.105 | 0.080 | 0.032 | 0.000 | 0.013 |
| ND2 | 0.033 | 0.046 | 0.009 | 0.018 | 0.006 | 0.016 | 0.007 | 0.000 | 0.005 | 0.013 | 0.092 | 0.067 | 0.019 | 0.013 | 0.000 |