*Table S4.*Factor loadings of the measured variables for **a.** the 5 LDFs that allow distinguishing the three Spanish sand racer species and **b.** for the LDFs distinguishing between northern and southern populations of *P. edwardsianus.*

|  |  |  |
| --- | --- | --- |
|   | a. between species | b. between northern & southern populations |
| Variable | LDF 1 | LDF 2 | LDF 3 | LDF 4 | LDF 5 | LDF 1 | LDF 2 | LDF 3 |
| SVL | 3.07 | 3.35 | 0.46 | 0.44 | 0.12 | 3.45 | - 0.58 | 0.24 |
| SVL ratio  | - 3.06 | - 2.26 | - 0.25 | - 0.44 | 0.22 | - 2.82 | 0.29 | 0.23 |
| Body mass | 1.63 | 2.54 | 0.79 | 0.21 | 0.06 | 1.53 | - 0.10 | 0.26 |
| Snout shape | - 0.87 | - 2.11 | 0.74 | 0.48 | - 1.00 | - 1.47 | 0.15 | 0.17 |
| Head shape | 1.85 | - 1.00 | 0.13 | - 0.22 | - 0.44 | - 1.11 | 0.30 | - 0.58 |
| Relative anal scale width | - 0.70 | - 2.99 | - 0.34 | 0.10 | 0.72 | - 2.44 | 0.72 | 0.77 |
| Femoral pores | - 5.90 | - 1.90 | 0.14 | 0.23 | - 0.22 | - 2.22 | 0.91 | 0.93 |
| Ventral scale | 1.97 | 4.16 | 0.89 | 0.29 | 0.29 | 4.05 | - 0.35 | - 0.47 |
| Throat scales | - 4.58 | 0.17 | 0.23 | 0.11 | 0.25 | - 1.14 | - 2.08 | - 0.56 |
| Collar scales | 3.14 | 0.38 | - 0.07 | - 0.51 | - 0.31 | - 1.14 | - 0.83 | 1.12 |
| Ventral colouration PC1 | - 1.96 | 1.47 | - 0.35 | 0.73 | - 0.04 | 2.28 | 0.37 | - 0.52 |
| Ventral colouration PC2 | 1.74 | 0.52 | 0.33 | - 0.08 | - 1.79 | - 0.22 | - 0.63 | - 0.54 |
| Ventral colouration PC3 | 0.74 | - 3.29 | - 0.13 | - 0.12 | - 0.21 | - 2.51 | - 0.45 | - 1.10 |
| Neck H | 6.20 | - 1.13 | - 0.65 | - 0.17 | 0.03 | - 0.43 | 0.95 | - 0.47 |
| Neck S | 5.05 | 0.69 | 0.34 | 0.03 | - 0.58 | 1.60 | 1.35 | - 0.17 |
| Neck B | - 2.46 | 1.40 | 0.60 | - 0.11 | - 0.32 | 0.11 | 1.38 | 0.15 |
| Background colour H | - 2.73 | 0.11 | - 0.43 | 0.00 | - 0.37 | - 0.41 | - 0.51 | 0.68 |
| Background colour S  | 2.93 | 0.06 | 0.40 | 0.51 | 0.27 | 1.37 | 0.97 | - 0.38 |
| Background colour B | - 1.56 | 0.48 | - 0.17 | 0.17 | - 0.97 | 0.31 | 0.78 | 0.78 |
| Dorsal colouration PC1 | 0.19 | 0.78 | - 0.52 | 0.19 | - 0.97 | 1.25 | 2.53 | 0.17 |
| Dorsal colouration PC2 | - 1.39 | 0.05 | - 1.27 | 0.05 | 0.37 | 0.44 | - 0.64 | - 0.22 |
| Dorsal pattern index | 0.26 | 0.04 | - 0.06 | - 0.22 | 0.42 | - 0.12 | 1.71 | 0.38 |
| Proportion of black colouration  | 0.58 | - 1.75 | - 0.03 | - 0.26 | 0.62 | - 1.80 | 0.60 | 0.09 |
| Proportion of white colouration | - 1.53 | 0.49 | - 0.92 | - 0.32 | - 0.18 | - 0.38 | - 0.15 | 1.28 |
| Dorsal line thickness | - 2.56 | 0.47 | - 0.73 | - 0.39 | - 0.35 | 0.15 | 1.07 | - 0.41 |
| Nuptial colouration | 5.71 | - 1.88 | 0.10 | 0.93 | - 0.28 | 1.74 | 0.30 | 0.33 |
| Number of ocelli | - 3.83 | - 2.24 | 0.92 | - 0.17 | - 0.25 | - 2.96 | 1.29 | 0.52 |