**Table 1**. Background characteristics for demographic, plumage traits, morphology and physiology variables. Abbreviations include: sy = second year, asy = after second year, T = throat, R = breast, B = belly, post = post treatment, and TS = tail streamer length.

| **variable type** | **variable** | **female** | | **male** | |
| --- | --- | --- | --- | --- | --- |
| **sy** | **asy** | **sy** | **asy** |
| demography | n | 12 | 14 | 12 | 14 |
| freq | 0.23 | 0.27 | 0.23 | 0.27 |
| plumage | avg.T.avg.bright | 28.04 | 24.59 | 21.09 | 22.68 |
| stdev.T.avg.bright | 7.67 | 6.04 | 4.37 | 7.20 |
| avg.R.avg.bright | 40.91 | 35.85 | 34.23 | 31.06 |
| stdev.R.avg.bright | 7.79 | 12.57 | 11.15 | 6.17 |
| avg.B.avg.bright | 41.61 | 37.98 | 36.30 | 31.51 |
| stdev.B.avg.bright | 6.16 | 13.18 | 6.29 | 8.11 |
| n.Post.R.avg.bright | - | - | 9 | 4 |
| avg.Post.R.avg.bright | - | - | 24.07 | 20.14 |
| stdev.Post.R.avg.bright | - | - | 5.25 | 6.73 |
| n.TS | 11 | 14 | 12 | 14 |
| avg.TS | 74.40 | 79.19 | 86.99 | 91.35 |
| stdev.TS | 3.26 | 4.91 | 6.46 | 6.41 |

**Table 2**. Background characteristics for node-level social network measures based on association interactions for female-male, female-female, and male-male networks.

| **variable** | **female-male** | | | | **female-female** | | **male-male** | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **female** | | **male** | | **female** | | **male** | |
| **sy** | **asy** | **sy** | **asy** | **sy** | **asy** | **sy** | **asy** |
| n | 12 | 14 | 12 | 14 | 12 | 14 | 12 | 14 |
| avg.strength | 51.08 | 39.21 | 49.08 | 34.29 | 42.75 | 33.43 | 29.83 | 26.79 |
| stdev.strength | 21.19 | 18.31 | 26.98 | 15.11 | 23.57 | 24.02 | 18.75 | 13.55 |
| med.strength | 55.00 | 36.50 | 41.50 | 34.00 | 39.50 | 33.50 | 33.50 | 23.00 |
| avg.degree | 14.33 | 12.07 | 12.67 | 11.79 | 14.42 | 11.64 | 11.08 | 12.29 |
| stdev.degree | 6.08 | 5.11 | 5.43 | 4.61 | 4.85 | 6.23 | 6.10 | 4.70 |
| med.degree | 17.00 | 12.00 | 13.00 | 14.00 | 15.50 | 13.50 | 13.50 | 12.50 |

**Table 3**. Background characteristics for reproductive success measures for females (tot.fecund = nests 1, 2, and 3 fecundity; nest.2.3.fecund = nests 2 and 3 fecundity) and males (nest.2.3.tot.pat = nests 2 and 3 total paternity; nest.2.3.epp = nests 2 and 3 extra pair paternity; and nest.2.3.spp = nests 2 and 3 social pair paternity).

| **variable** | **sex** |  | **reproduction** | |
| --- | --- | --- | --- | --- |
|  | **sy** | **asy** |
| n.repro | f/m |  | 12 | 14 |
| avg.tot.fecund | f |  | 8.50 | 11.00 |
| stdev.tot.fecund | f |  | 2.91 | 3.04 |
| avg.nest.2.3.fecund | f |  | 5.00 | 6.14 |
| stdev.nest.2.3.fecund | f |  | 1.81 | 2.71 |
| avg.nest.2.3.tot.pat | m |  | 2.92 | 6.00 |
| stdev.nest.2.3.tot.pat | m |  | 2.11 | 3.88 |
| avg.nest.2.3.epp | m |  | 1.50 | 4.29 |
| stdev.nest.2.3.epp | m |  | 1.38 | 3.24 |
| avg.nest.2.3.spp | m |  | 1.42 | 1.71 |
| stdev.nest.2.3.spp | m |  | 1.38 | 1.38 |

**Table 5**. Age associations with measures of reproductive success for females and males. Second year (sy) is the reference category. Abbreviations include: epp = extra pair paternity and spp = social pair paternity.

| model | term | estimate | 95% CI |
| --- | --- | --- | --- |
| total fecundity | ASY | 2.50 | [0.20, 4.80] |
| nests 2-3 total paternity | ASY | 3.08 | [0.62, 5.55] |
| nests 2-3 epp | ASY | 2.79 | [0.81, 4.76] |
| nests 2-3 spp | ASY | 0.30 | [-0.77, 1.36] |

**Table 6**. Age determinants of node level social interaction strength and degree from opposite (female-male) and same sex (female-female and male-male) social networks. Second year (sy) is the reference category when age is included in the model.

| model | term | estimate | 95% CI |
| --- | --- | --- | --- |
| female age - fxm strength | ASY | -11.87 | [-27.05, 3.31] |
| female age - fxm degree | ASY | -2.26 | [-6.56, 2.04] |
| female age - fxf strength | ASY | -9.32 | [-27.68, 9.04] |
| female age - fxf degree | ASY | -2.77 | [-7.12, 1.58] |
| male age - fxm strength | ASY | -14.80 | [-31.29, 1.69] |
| male age - fxm degree | ASY | -0.88 | [-4.74, 2.98] |
| male age - mxm strength | ASY | -3.05 | [-15.49, 9.40] |
| male age - mxm degree | ASY | 1.20 | [-2.95, 5.35] |

**Table 7**. Associations of node level social interaction strength and degree from same sex (female-female and male-male) social networks with female fecundity and male paternity (second and third clutches).

| model | Term | estimate | 95% CI |
| --- | --- | --- | --- |
| female-fecundity - fxm | strength.fxf | -0.07 | [-0.12, -0.01] |
| female-fecundity - fxf | strength.fxf | -0.05 | [-0.10, 0.01] |
| female-fecundity - fxf | degree.fxf | -0.17 | [-0.39, 0.05] |
|  |  |  |  |
| male-paternity - mxm | strength.mxm | 0.03 | [-0.06, 0.12] |
| male-paternity - mxm | degree.mxm | 0.10 | [-0.17, 0.38] |