

**Appendices to J Poll Ecol 35(11), Blakeman et al.**

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Appendix I. Search terms used for Google image search and number of resulting images.

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| --- | --- |
| **Search Term** | **No. of usable images** |
| "Acroceridae flower" | 5 |
| "Anthomyiidae flower" | 16 |
| "Asiliidae flower" | 1 |
| "Bibionidae flower" | 37 |
| "St. Mark's fly flower" | 18 |
| "love bug flower" | 11 |
| "Bombyliidae flower" | 24 |
| "flower fly" | 2 |
| "Calliphoridae flower" | 4 |
| "blow fly flower" | 19 |
| "bottle fly flower" | 166 |
| "green fly" | 3 |
| "Conopidae flower" | 13 |
| "thick headed fly" | 3 |
| "Culicidae flower" | 27 |
| "mosquito flower" | 39 |
| "Sarcophagidae flower" | 9 |
| "flesh fly flower" | 62 |
| Sciomyzidae flower | 3 |
| "marsh fly flower" | 12 |
| "Tipulidae flower" | 44 |
| "crane fly flower" | 78 |
| "midge flower" | 24 |
| "Stratiomyidae flower" | 28 |
| Soldier fly flower | 11 |
| "Tabanidae flower" | 12 |
| "Tachinidae flower" | 21 |
| "Tephritidae flower" | 4 |
| "hoverflies on flowers" | 162 |
| "flies" | 32 |
| "fly day friday" | 27 |
| "fly on flower" | 358 |
|  |  |

Appendix II. Models predicting pollen carrying. Model results of All Flies, Non-*Syrphidae,* and *Syrphidae* models evaluating predictors (*Shape, Color, Syrphidae / Non-Syrphidae, Higher / Lesser*) and predictor interactions for predicting pollen carrying. Models within 2 AICc units from the top model for each of the three model sets have similar support. (loglik – log-likelihood, AICc = Akaike’s Information Criterion adjusted for small sample size; AUC ROC = Area Under the Curve of the Receiver Operating Characteristic; × denotes interaction terms).

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Model set** | **Predictors** | **df** | **logLik** | **AICc** | **Delta AICc** | **AICc weight** | **AUC ROC** |
| All Flies | *Shape × Color + Syrphidae / Non-Syrphidae + Higher / Lesser* | 18 | -787.111 | 1610.8 | 0 | 0.478 | 0.672 |
| *Shape × Color + Higher / Lesser* | 17 | -788.443 | 1611.4 | 0.61 | 0.353 | 0.667 |
| *Shape + Color + Syrphidae / Non-Syrphidae + Higher / Lesser* | 9 | -797.353 | 1612.8 | 2.08 | 0.169 | 0.656 |
| *Higher / Lesser* | 2 | -820.703 | 1645.4 | 34.65 | 0 | 0.584 |
| *Syrphidae / Non-Syrphidae + Higher / Lesser* | 3 | -819.744 | 1645.5 | 34.74 | 0 | 0.595 |
| *Color × Syrphidae / Non-Syrphidae* | 8 | -823.152 | 1662.4 | 51.65 | 0 | 0.599 |
| *Color + Syrphidae / Non-Syrphidae* | 5 | -826.672 | 1663.4 | 52.62 | 0 | 0.596 |
| *Shape × Color* | 16 | -816.964 | 1666.4 | 55.59 | 0 | 0.619 |
| *Color* | 4 | -830.452 | 1668.9 | 58.17 | 0 | 0.576 |
| *Shape + Color* | 7 | -827.437 | 1669 | 58.2 | 0 | 0.595 |
| *Shape × Syrphidae / Non-Syrphidae* | 8 | -834.938 | 1686 | 75.22 | 0 | 0.572 |
| *Shape + Syrphidae / Non-Syrphidae* | 5 | -838.529 | 1687.1 | 76.34 | 0 | 0.562 |
| *Syrphidae / Non-Syrphidae* | 2 | -844.014 | 1692 | 81.27 | 0 | 0.528 |
| *Shape* | 4 | -842.281 | 1692.6 | 81.83 | 0 | 0.552 |
| NULL | 1 | -847.895 | 1697.8 | 87.03 | 0 | 0.5 |
| Non-*Syrphidae* | *Shape + Color* | 7 | -716.029 | 1446.2 | 0 | 0.68 | 0.595 |
| *Color* | 4 | -719.819 | 1447.7 | 1.51 | 0.319 | 0.566 |
| *Shape* | 4 | -725.107 | 1458.3 | 12.09 | 0.002 | 0.55 |
| NULL | 1 | -730.448 | 1462.9 | 16.74 | 0 | 0.5 |
| *Syrphidae* | *Color* | 3 | -103.332 | 212.8 | 0 | 0.595 | 0.624 |
| *Shape + Color* | 6 | -100.755 | 214.1 | 1.24 | 0.32 | 0.691 |
| *Shape × Color* | 12 | -95.388 | 216.9 | 4.08 | 0.077 | 0.724 |
| *Shape* | 4 | -107.076 | 222.4 | 9.59 | 0.005 | 0.618 |
| NULL | 1 | -110.891 | 223.8 | 10.99 | 0.002 | 0.5 |

Appendix III. Models predicting floral foraging. Model results of All Flies, Non-*Syrphidae,* and *Syrphidae* models evaluating predictors (*Shape, Color, Syrphidae / Non-Syrphidae, Higher / Lesser*) and predictor interactions for predicting floral foraging. Models within 2 AICc units from the top model for each of the three model sets have similar support. (loglik – log-likelihood, AICc = Akaike’s Information Criterion adjusted for small sample size; AUC ROC = Area Under the Curve of the Receiver Operating Characteristic; × denotes interaction terms).

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| --- | --- | --- | --- | --- | --- | --- | --- |
| **Model set** | **Predictors** | **df** | **logLik** | **AICc** | **Delta AICc** | **AICc weight** | **AUC ROC** |
| All Flies | *Shape × Color + Syrphidae / Non-Syrphidae +* *Higher / Lesser* | 18 | -775.614 | 1587.8 | 0 | 1 | 0.723 |
| *Syrphidae / Non-Syrphidae + Higher / Lesser* | 3 | -811.881 | 1629.8 | 42.01 | 0 | 0.659 |
| *Shape × Color + Higher / Lesser* | 17 | -812.726 | 1659.9 | 72.17 | 0 | 0.687 |
| *Shape + Syrphidae / Non-Syrphidae* | 5 | -833.855 | 1677.8 | 89.99 | 0 | 0.65 |
| *Shape × Syrphidae / Non-Syrphidae* | 8 | -832.15 | 1680.4 | 92.64 | 0 | 0.65 |
| *Color + Syrphidae / Non-Syrphidae* | 5 | -845.047 | 1700.1 | 112.37 | 0 | 0.625 |
| *Color × Syrphidae / Non-Syrphidae* | 8 | -844 | 1704.1 | 116.34 | 0 | 0.625 |
| *Higher / Lesser* | 2 | -850.224 | 1704.5 | 116.69 | 0 | 0.593 |
| *Syrphidae / Non-Syrphidae* | 2 | -859.282 | 1722.6 | 134.8 | 0 | 0.564 |
| *Shape + Color* | 7 | -854.393 | 1722.9 | 135.1 | 0 | 0.624 |
| *Shape × Color* | 16 | -846.593 | 1725.6 | 137.85 | 0 | 0.634 |
| *Shape* | 4 | -860.13 | 1728.3 | 140.52 | 0 | 0.605 |
| *Color* | 4 | -868.685 | 1745.4 | 157.63 | 0 | 0.577 |
| NULL | 1 | -883.433 | 1768.9 | 181.1 | 0 | 0.5 |
| Non-*Syrphidae* | *Shape + Color* | 7 | -737.653 | 1489.4 | 0 | 0.688 | 0.627 |
| *Shape* | 4 | -741.946 | 1491.9 | 2.52 | 0.195 | 0.612 |
| *Color* | 4 | -752.591 | 1513.2 | 23.81 | 0 | 0.579 |
| NULL | 1 | -764.926 | 1531.9 | 42.45 | 0 | 0.5 |
| *Syrphidae* | *Shape* | 4 | -90.204 | 188.7 | 0 | 0.546 | 0.637 |
| NULL | 1 | -94.356 | 190.7 | 2.08 | 0.193 | 0.5 |
| *Color* | 4 | -91.409 | 191.1 | 2.41 | 0.164 | 0.602 |
| *Shape + Color* | 7 | -88.694 | 192.1 | 3.45 | 0.097 | 0.664 |
| *Shape × Color* | 15 | -87.023 | 207.3 | 18.63 | 0 | 0.682 |