**Electronic Supplementary Material**

DeLong, J.P., “**The body size dependence of mutual interference”**

**Data**

This ESM describes briefly how I found data and estimated values of interference and body mass. See Dryad entry for more details and raw data. The data set was built upon a previous data set on mutual interference [1]. I conducted searches on Google scholar for additional works on mutual interference. I searched each available source for an estimate of the body size of the focal consumer or parasitoid. Body sizes were generally not available, so other sources were sought. These often included websites reporting on biocontrol agents or the natural history of certain organisms, as well as publications that had previously compiled body size estimates for a wide range of species (e.g. [2,3]), or related publications by the same authors [4]. In one case a personal communication was used [5]. Body sizes were given in lengths, widths, dry masses, wet masses, or volumes, and all were converted to wet mass (g). Body sizes given in length for insects or arachnids were converted to dry mass using the length-weight relationship from [6] for insects (dry mass (mg) = 0.0266 length (mm) ^2.494) and then converted to wet mass assuming water content of 62% [7]. Body widths given for crabs was converted to wet mass given the carapace-weight relationship in [8].

Approaches 2, 3, and 4 described in [1] were used. Wherever possible, original estimates of the mutual interference parameter *m* were used from the original source. In several cases, new values of *m* were calculated in an earlier compendium and used here [9]. When necessary, data were digitized and values of *m* were estimated using non-linear least squares regression for the equation $f=\frac{αC^{m}R}{1+αC^{m}hR}$, following methods reported in [1]. Confidence intervals were available for some estimates, including the recalculations, but authors variably reported standard errors, ranges across replicates, or no error.

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| **Original Publication** | **Source of estimate** | ***m*** | **Error (SE, CI, range)** | **Species** | **Type** | **Wet mass (g)** | **Source for mass** |
| [10] | Calculated in original source | -0.76 | - | *Aphidius matricariae* | Insect | 6.88E-04 | [www.evergreengrowers.com](http://www.evergreengrowers.com/)  |
| [11] | Recalculated by [9] | -1.05 | ± 0.36 (SE) | *Daphnia pulex* | Crustacean | 4.62E-04 | [3] |
| [12] | Recalculated by [9] | -0.50 | ± 0.09 (SE) | *Amblyseius degenerans* | Insect | 2.88E-05 | [www.Biotech-system.com](http://www.Biotech-system.com) |
| [13] | Recalculated by [9] | -1.14 | ± 0.15 (SE) | *Nasonia vitripennis* | Insect | 3.94E-04 | <http://www.bios.niu.edu/bking/nasonia.htm> |
| [14] | Recalculated by [9] | -0.83 | ± 0.09 (SE) | *Tribolium castaneum* | Insect | 1.08E-03 | <http://entnemdept.ifas.ufl.edu/creatures/> |
| [13] | Recalculated by [9] | -0.89 | ± 0.07 (SE) | *Trichogramma evanescens* | Insect | 1.24E-05 | <http://usagardener.com/disease_pests_and_weeds/garden_pests_and_control.php> |
| [15] | Recalculated by [9] | -0.33 | ± 0.14 (SE) | *Trichogramma pretiosum* | Insect | 1.24E-05 | <http://usagardener.com/disease_pests_and_weeds/garden_pests_and_control.php> |
| [12] | Recalculated by [9] | -0.92 | ± 0.16 (SE) | *Phytoseiulus persimilis* | Arachnid | 1.24E-05 | <http://www.biocontrol.entomology.cornell.edu/index.php> |
| [16] | Calculated by Skalski and Gilliam 2001 | -0.33 | -0.20 to -0.43 (CI) | Back swimmer | Insect | 1.20E-02 | Wikipedia entry for 'Notonectidae' |
| [17] | Calculated in original source | -0.63 | -0.59 to -0.66 | *Bracon hebetor* | Insect | 2.50E-03 | [18] |
| [17] | Calculated in original source | -0.45 | -0.41 to -0.49 | *Bracon hebetor* | Insect | 2.50E-03 | [18] |
| [5] | Calculated in original source | -0.67 | ± 0.11 (SE) | *Stenostomum virginianum* | Flatworm | 2.21E-05 | P. Kratina, pers. communication |
| [19] | Calculated in original source | -0.50 | -0.40 to -0.61 (CI) | *Polistes dominulus* | Insect | 1.23E-01 | <http://www.cirrusimage.com/Bees_wasp_polistes.htm> |
| [20] | Calculated in original source | -0.32 | -0.26 to -0.38 (CI) | *Polistes dominulus* | Insect | 1.23E-01 | <http://www.cirrusimage.com/Bees_wasp_polistes.htm> |
| [21] | Calculated in original source | -1.00 | -0.58 to -1.43 (CI) | *Thanasimus dubius* | Insect | 3.00E-01 | <http://bugguide.net/node/view/33027> |
| [22] | Calculated in original source | -0.35 | -0.06 to -0.78 | *Anisops bouvieri* | Insect | 6.68E-03 | Reported in original paper |
| [22] | Calculated in original source | -0.22 | -0.09 to -0.35 | *Diplonychus annulatus* | Insect | 1.61E-01 | Reported in original paper |
| [22] | Calculated in original source | -0.24 | -0.01 to -0.35 | *Diplonychus rusticus* | Insect | 6.33E-02 | Reported in original paper |
| [23] | Calculated in original source | -1.06 | -2.1 to -0.02 | *Didinium nasutum* | Protist | 7.35E-07 | Reported in original paper |
| [24] | Calculated in original source, pack-scale | -1.85 | -2.17 to -1.53 (CI) | *Canis lupus* | Mammal | 4.60E+04 | [2] |
| [25] | Recalculated from data in Figure 1 | -0.65 | -1.17 to -0.12 (CI) | *Callinectes sapidus* | Crustacean | 1.42E+02 | Carapace width in original paper |
| [26] | Recalculated from data in Figure 1 | -0.85 | -1.04 to -0.66 (CI) | *Daphnia pulex* | Crustacean | 4.62E-04 | [3] |
| [27] | Recalculated from data in Figure 1a,b | -1.25 | -1.48 to -1.02 (CI) | *Trichogramma minutum* | Insect | 1.24E-05 | <http://usagardener.com/disease_pests_and_weeds/garden_pests_and_control.php> |
| [28] | Recalculated from data in Figure 2 | -1.27 | -1.04 to -1.50 (CI) | *Tetragoneuria cynosura* larvae | Insect | 1.32E-03 | Dry mass approximate given ~ 4x size difference between tc1 and tc2 |
| [29] | Recalculated from data in Figure 2 | -0.02 | -0.19 to 0.15 (CI) | *Brachionus calyciflorus* | Rotifer | 1.54E-06 | [3] |
| [30] | Recalculated from data in Figure 4 | -0.63 | -0.22 to -1.04 (CI) | *Arenaria interpres* | Bird | 1.37E+02 | [http://www.allaboutbirds.org](http://www.allaboutbirds.org/)  |
| [30] | Recalculated from data in Figure 4 | -0.55 | -0.43 to -0.66 (CI) | *Calidris canutus* | Bird | 1.35E+02 | [http://www.allaboutbirds.org](http://www.allaboutbirds.org/)  |
| [31] | Recalculated from data in Table 1 | -0.63 | -0.28 to -0.97 (CI) | *Apanteles (Cotesia) glomeratus* | Insect | 8.97E-03 | <http://www.biocontrol.entomology.cornell.edu/index.php> |
| [31] | Recalculated from data in Table 1 | -1.99 | -1.99 to -2.00 (CI) | *Pteromalus puparum* | Insect | 1.59E-03 | <http://www.entomology.wisc.edu/mbcn/kyf312.html> |
| [32] | Calculated in original source | -1.18 | -1.2 to -1.16 | *Pardosa milvina* | Arachnid | 1.13E-02 | [4] |
| [33] | Recalculated from data in Figure 1 | -0.70 | -0.47 to -0.94 (CI) | *Canis lupus* | Mammal | 4.60E+04 | [2] |
| [34] | Recalculated from data in Figure 1 | -0.79 | -1.14 to -0.45 (CI) | *Poecilus versicolor* | Insect | 6.10E-02 | Reported in original paper |
| [34] | Recalculated from data in Figure 1 | -0.78 | -1.10 to -0.45 (CI) | *Poecilus versicolor* | Insect | 6.10E-02 | Reported in original paper |
| [34] | Recalculated from data in Figure 1 | -0.71 | -1.04 to -0.39 (CI) | *Pterostichus melanarius* | Insect | 1.43E-01 | Reported in original paper |
| [34] | Recalculated from data in Figure 1 | -0.93 | -1.21 to -0.65 (CI) | *Pterostichus melanarius* | Insect | 1.43E-01 | Reported in original paper |
| [35] | Recalculated from data in Figure 2 | -0.52 | -0.85 to -0.18 (CI) | *Mysis mixta* | Crustacean | 2.34E-02 | Reported in original paper |
| [36] | Recalculated from data in Figure 3 | -2.83 | -7.54 to 1.88 (CI) | *Calidris canutus* | Bird | 1.35E+02 | [http://www.allaboutbirds.org](http://www.allaboutbirds.org/)  |
| [37] | Recalculated from data in Figure 3b | -0.42 | -2.84 to 2.00 (CI) | *Anagrus delicatus* | Insect | 2.88E-05 | Reported in original paper |
| [38] | Recalculated from data in Figure 7 | 0.00 | -0.16 to 0.15 | *Woodruffia metabolica* | Protist | 1.18E-07 | Assume similar in cell volume to *Woodruffia rostrata*, size from EOL (<http://eol.org/>) |
| [39] | Recalculated from data in Figure 7b | -1.60 | -4.06 to 0.86 (CI) | *Anagrus delicatus* | Insect | 2.88E-05 | [37] |
| [40] | Recalculated from data in Figure 2 | -1.00 | -1.23 to -0.80 (CI) | *Carcinus aestuarii* | Crustacean | 1.32E+01 | Carapace width in original paper |

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