SUPPLEMENTARY MATERIAL for:

Variation in *Angiostrongylus cantonensis* infection in definitive and intermediate hosts in Hawaii, a global hotspot of rat lungworm disease.

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Table S1. Exact dates for each sampling period and site.

|  |  |  |  |
| --- | --- | --- | --- |
| Sampling Period | Site | Rats | Snails |
| A | 1 | 1-11 May 2018 | 1-4, 9-10 May 2018 |
|  | 2 | 22-31 May 2018 | 22-23 May 2018 |
|  |  |  |  |
| B | 1 | 14-17 Aug 2018 | 10, 13-14 Aug 2018 |
|  | 2 | 5-7 Sep 2018 | 5, 7 Sep 2018 |
|  |  |  |  |
| C | 1 | 27-29 Nov 2018 | 27 Nov 2018 |
|  | 2 | 4-6 Dec 2018 | 5 Dec 2018 |
|  |  |  |  |
| D | 1 | 12-13 Feb 2019 | 13 Feb 2019 |
|  | 2 | 22-23 Feb 2019 | 22 Feb 2019 |

Table S2. Results of prevalence of *Angiostrongylus cantonensis* infection in three host species in Hawaii. Infection prevalence is presented as percent positive followed by total number of samples positive/total number of samples analysed in brackets. Periods A–D represent host sampling periods (A: May 2018; B: Aug.–Sep. 2018; C: Nov.–Dec. 2018; D: Feb. 2019; with exact dates included in Suppl. Table S1.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | Sampling period | Infection prevalence | Site | Infection prevalence |
| *Rattus rattus* | A | 48.3 (29/60) | 1 | 32.1 (9/28) |
|  |  |  | 2 | 62.5 (20/32) |
|  | B | 25.9 (7/27) | 1 | 26.9 (7/26) |
|  |  |  | 2 | 0.0 (0/1) |
|  | C | 55.7 (34/61) | 1 | 57.4 (27/47) |
|  |  |  | 2 | 50.0 (7/14) |
|  | D | 48.8 (21/43) | 1 | 48.0 (12/25) |
|   |   |   | 2 | 50.0 (9/18) |
| *Rattus exulans* | A | 100 (64/64) | 1 | 100 (37/37) |
|  |  |  | 2 | 100 (27/27) |
|  | B | 64.3 (27/42) | 1 | 76.0 (19/25) |
|  |  |  | 2 | 47.1 (8/17) |
|  | C | 46.0 (29/63) | 1 | 59.5 (22/37) |
|  |  |  | 2 | 26.9 (7/26) |
|  | D | 96.5 (55/57) | 1 | 90.5 (19/21) |
|   |   |   | 2 | 100 (36/36) |
| *Parmarion martensi* | A | 95.7 (44/46) | 1 | 94.3 (33/35) |
|  |  |  | 2 | 100 (11/11) |
|  | B | 85.0 (34/40) | 1 | 80.0 (16/20) |
|  |  |  | 2 | 90.0 (18/20) |
|  | C | 87.5 (35/40) | 1 | 85.0 (17/20) |
|  |  |  | 2 | 90.0 (18/20) |
|  | D | 72.7 (24/33) | 1 | 100 (20/20) |
|  |  |  | 2 | 30.8 (4/13) |

Table S3. Results of intensity of *Angiostrongylus cantonensis* infection in three host species in Hawaii. Infection intensity values for *Rattus* spp. represents mean adult worms (± S.E.), while values for *Parmarion martensi* represent the mean estimated larval counts per mg of tissue (± S.E.). The number of infected individuals within each category is available in Suppl. table 2. Periods A–D represent host sampling periods (A: May 2018; B: Aug.–Sep. 2018; C: Nov.–Dec. 2018; D: Feb. 2019; with exact dates included in Suppl. Table S1.)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Species | Sampling period | Infection intensity | Site | Infection intensity |
| *Rattus rattus* | A | 4.7 ± 0.9 | 1 | 4.1 ± 1.7 |
|  |  |  | 2 | 5 ± 1.0 |
|  | B | 6.4 ± 2.6 | 1 | 6.4 ± 2.6 |
|  |  |  | 2 | - |
|  | C | 5.6 ± 0.9 | 1 | 5.8 ± 1.1 |
|  |  |  | 2 | 4.7 ± 1.3 |
|  | D | 9.2 ± 2.0 | 1 | 10.2 ± 3.1 |
|   |   |   | 2 | 8 ± 2.5 |
| *Rattus exulans* | A | 13.8 ± 1.1 | 1 | 13.4 ± 1.1 |
|  |  |  | 2 | 14.4 ± 2.1 |
|  | B | 11.3 ± 2.4 | 1 | 13.9 ± 3.1 |
|  |  |  | 2 | 4.9 ± 1.4 |
|  | C | 6.7 ± 1.2 | 1 | 6.5 ± 1.4 |
|  |  |  | 2 | 7.1 ± 2.6 |
|  | D | 10.2 ± 1.0 | 1 | 11.1 ± 1.8 |
|   |   |   | 2 | 9.8 ± 1.3 |
| *Parmarion martensi* | A | 121.04 ± 16.13 | 1 | 126.79 ± 20.24 |
|  |  |  | 2 | 103.8 ± 22.48 |
|  | B | 73.92 ± 19.38 | 1 | 29.96 ± 10.39 |
|  |  |  | 2 | 113 ± 33.19 |
|  | C | 71.78 ± 21.22 | 1 | 81.67 ± 41.31 |
|  |  |  | 2 | 62.43 ± 14.97 |
|  | D | 44.06 ± 9.27 | 1 | 49.06 ± 10.59 |
|  |  |  | 2 | 19.06 ± 12.17 |