Electronic Supplementary Material

Selective feeding behaviors illuminate patterns of sap beetle associations with ophiostomatoid fungi

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Table S1 Tukey's pairwise comparisons of fungal relative attractiveness to *Carpophilus hemipterus*

```
contrast                              estimate  SE    df  t.ratio p.value
H. cryptoformis – Fusarium sp.          6.1    2.24   16  2.720   0.0654
H. cryptoformis – H. moniliformis      -5.7    2.24   16 -2.542   0.0909
H. cryptoformis – Ophiostoma sp.        5.6    2.24   16  2.497   0.0986
Fusarium sp. – H. moniliformis        -11.8    2.24   16 -5.261   0.0004
Fusarium sp. – Ophiostoma sp.          -0.5    2.24   16 -0.223   0.9959
H. moniliformis – Ophiostoma sp.       11.3    2.24   16  5.038   0.0006
```

P value adjustment: tukey method for comparing a family of 4 estimates

```
Treatment             emmean   SE df lower.CL upper.CL .group
Fusarium SP.          5.9    1.59 16    1.45    10.3   a
Ophiostoma SP.        6.4    1.59 16    1.95    10.8   a
H. cryptoformis       12.0   1.59 16    7.55    16.4   ab
H. moniliformis       17.7   1.59 16   13.25    22.1    b
```

Confidence level used: 0.95
Conf-level adjustment: sidak method for 4 estimates
P value adjustment: tukey method for comparing a family of 4 estimates
significance level used: alpha = 0.05

Table S2 Tukey's pairwise comparisons of *Carpophilus hemipterus* fungus-feeding preference

```
contrast                          estimate   SE df t.ratio p.value
Fusarium sp. - H. cryptoformis      -20.9 3.34 20 -6.260  <.0001
Fusarium sp. - H. moniliformis      -26.7 3.34 20 -7.998  <.0001
Fusarium sp. - Ophiostoma sp.       -10.8 3.34 20 -3.235  0.0199
H. cryptoformis - H. moniliformis    -5.8 3.34 20 -1.737  0.3315
H. cryptoformis - Ophiostoma sp.     10.1 3.34 20  3.025  0.0312
H. moniliformis - Ophiostoma sp.     15.9 3.34 20  4.763  0.0006
```

Results are averaged over the levels of: Pre.treatment

```
Treatment         emmean   SE df lower.CL upper.CL .group
Fusarium sp.         5.9 2.36 20   -0.558     12.4  a
Ophiostoma sp.      16.7 2.36 20   10.242     23.2   b
H. cryptoformis     26.8 2.36 20   20.342     33.3    c
H. moniliformis     32.6 2.36 20   26.142     39.1    c
```

Results are averaged over the levels of: Pre.treatment
Confidence level used: 0.95
Conf-level adjustment: sidak method for 4 estimates
P value adjustment: tukey method for comparing a family of 4 estimates
significance level used: alpha = 0.05

Table S3 Tukey's pairwise comparisons of *Carpophilus hemipterus* oviposition substrate preference

```
contrast                              estimate   SE df t.ratio p.value
Fusarium sp. - H. cryptoformis          -8.90 4.81 20 -1.852  0.2797
Fusarium sp. - H. moniliformis          -3.15 4.81 20 -0.655  0.9124
Fusarium sp. - Ophiostoma sp.          -22.55 4.81 20 -4.692  0.0007
H. cryptoformis - H. moniliformis        5.75 4.81 20  1.196  0.6361
H. cryptoformis - Ophiostoma sp.       -13.65 4.81 20 -2.840  0.0459
H. moniliformis - Ophiostoma sp.       -19.40 4.81 20 -4.037  0.0033
```

Results are averaged over the levels of: Pre.treatment
P value adjustment: tukey method for comparing a family of 4 estimates

```
Treatment         emmean  SE df lower.CL upper.CL .group
Fusarium sp.        11.8 3.4 20     2.55     21.1  a
H. moniliformis     15.0 3.4 20     5.70     24.3  a
H. cryptoformis     20.8 3.4 20    11.45     30.0  a
Ophiostoma sp.      34.4 3.4 20    25.10     43.7   b
```

Results are averaged over the levels of: Pre.treatment
Confidence level used: 0.95
Conf-level adjustment: sidak method for 4 estimates
P value adjustment: tukey method for comparing a family of 4 estimates
significance level used: alpha = 0.05

Table S4 Tukey's pairwise comparisons of *Carpophilus hemipterus* reproductive potential on various fungi

```
contrast                              estimate   SE df t.ratio p.value
Fusarium sp. - H. cryptoformis          -81.2 19.5 12 -4.176  0.0061
Fusarium sp. - H. moniliformis         -104.8 19.5 12 -5.383  0.0008
Fusarium sp. - Ophiostoma sp.           -41.2 19.5 12 -2.120  0.2017
H. cryptoformis - H. moniliformis       -23.5 19.5 12 -1.208  0.6338
H. cryptoformis - Ophiostoma sp.         40.0 19.5 12  2.056  0.2221
H. moniliformis - Ophiostoma sp.         63.5 19.5 12  3.263  0.0300
```

P value adjustment: tukey method for comparing a family of 4 estimates

```
Fungal.diet       emmean   SE df lower.CL upper.CL .group
Fusarium sp.        33.2 13.8 12    -6.98     73.5  a
Ophiostoma sp.      74.5 13.8 12    34.27    114.7  ab
H. cryptoformis    114.5 13.8 12    74.27    154.7   bc
H. moniliformis    138.0 13.8 12    97.77    178.2    c
```

Confidence level used: 0.95

Conf-level adjustment: sidak method for 4 estimates
P value adjustment: tukey method for comparing a family of 4 estimates
significance level used: alpha = 0.05