

Figure S1 Rarefaction curves of bacterial ASVs for all samples

Table S1 Diversity indices of bacterial communities between the two ponerine ant species

|  |  |  |
| --- | --- | --- |
| **Ant species** | **Chao1 (mean±SE)** | **Shannon(mean±SE)** |
| *O. formosae* | 77.82±6.47 | 2.02±0.19 |
| *E. javanus* | 108.82±10.01 | 3.60±0.39 |

Table S2 Diversity indices of bacterial communities in the infrabuccal pockets and guts of workers and larvae

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| --- | --- | --- |
| **Samples** | **Chao1 (mean±SE)** | **Shannon(mean±SE)** |
| O1WI | 132.00±6.81 | 3.15±0.18 |
| O1WC | 9.76±2.33 | 0.19±0.06 |
| O1WM | 8.33±0.88 | 0.26±0.10 |
| O1WH | 28.00±8.50 | 0.90±0.12 |
| O1L | 81.00±8.00 | 1.16±0.26 |
| O2WI | 87.33±13.38 | 2.73 ±0.34 |
| O2WC | 88.00±16.62 | 2.51±1.05 |
| O2WM | 116.33±14.62 | 3.40±0.34 |
| O2WH | 94.67±15.24 | 1.79±0.71 |
| O2L | 79.33±16.68 | 2.06±0.50 |
| O3WC | 88.67±3.71 | 2.65±0.16 |
| O3WM | 94.33±1.20 | 2.77±0.17 |
| O3WH | 104.00±1.15 | 2.69±0.08 |
| E1WI | 175.00±22.50 | 4.64±1.74 |
| E1WC | 99.00±2.08 | 3.47±0.16 |
| E1WM | 88.00±4.16 | 3.46±0.52 |
| E1WH | 98.33±9.94 | 4.23±0.80 |
| E2WI | 154.33±27.45 | 4.35±1.22 |
| E2WC | 91.00±3.06 | 3.70±0.22 |
| E2WM | 50.00±4.04 | 1.14±0.19 |
| E2WH | 68.33±8.99 | 2.05±0.37 |

Table S3 ANOSIM analysis of bacterial communities across infrabuccal pockets, guts of workers, and larvae (*p*-values)

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Samples** | | **O1** | | | **O2** | | | **O3** | | **E1** | | **E2** | |
| **infrabuccal pockets** | **guts** | **larvae** | **infrabuccal pockets** | **guts** | **larvae** | **guts** | **infrabuccal pockets** | | **guts** | **infrabuccal pockets** | **guts** |
| O1 | infrabuccal pockets | / | / | / | / | / | / | / | / | | / | / | / |
| guts | 0.005\*\* | / | / | / | / | / | / | / | | / | / | / |
| larvae | 0.100 | 0.007\*\* | / | / | / | / | / | / | | / | / | / |
| O2 | infrabuccal pockets | 0.200 | 0.003\*\* | 0.100 | / | / | / | / | / | | / | / | / |
| guts | 0.129 | 0.001\*\* | 0.221 | 0.043\* | / | / | / | / | | / | / | / |
| larvae | 0.400 | 0.002\*\* | 0.900 | 0.200 | 0.046\* | / | / | / | | / | / | / |
| O3 | guts | 0.005\*\* | 0.001\*\* | 0.008\*\* | 0.005\*\* | 0.001\*\* | 0.007\*\* | / | / | | / | / | / |
| E1 | infrabuccal pockets | 0.100 | 0.008\*\* | 0.100 | 0.100 | 0.006\*\* | 0.100 | 0.006\*\* | / | | / | / | / |
| guts | 0.005\*\* | 0.001\*\* | 0.010\* | 0.009\*\* | 0.001\*\* | 0.003\*\* | 0.001\*\* | 0.002\*\* | | / | / | / |
| E2 | infrabuccal pockets | 0.100 | 0.008\*\* | 0.100 | 0.100 | 0.007\*\* | 0.100 | 0.010\* | 0.300 | | 0.001\*\* | / | / |
| guts | 0.003\*\* | 0.001\*\* | 0.007\*\* | 0.006\*\* | 0.001\*\* | 0.007\*\* | 0.001\*\* | 0.004\*\* | | 0.001\*\* | 0.009\*\* | / |

Statistical significance: \*\**p*<0.01, \**p*<0.05.