

S1 Table. Taxonomic classification of representative sequences of 74 OTUs obtained from 16S rRNA amplicon sequencing of 13 bumble bee whole guts. Also provided are number of sequences that belong to each OTU. Numbers in parenthesis next to each taxonomic classification represents bootstrap confidence.

| Representative sequence | Class                      | Order                                | Family                 | No. of samples with the OTU | Total no. of reads | terricola_MI | terricola_WI | pensylvanic_us_FL | pensylvanic_us_NC | bohemicus | atratus | ussuriensis | convexus | fracternus_FL | impatiens_GA | impatiens_MI | terrestris_RG | terrestris_A | terrestris_F | terrestris_R |
|-------------------------|----------------------------|--------------------------------------|------------------------|-----------------------------|--------------------|--------------|--------------|-------------------|-------------------|-----------|---------|-------------|----------|---------------|--------------|--------------|---------------|--------------|--------------|--------------|
| HUSOE0101A3N3V          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 12                          | 57913              | 2184         | 26           | 11909             | 4775              | 0         | 320     | 8887        | 1        | 0             | 659          | 11242        | 2957          | 2821         | 2821         | 12132        |
| HUSOE0101BDJDRB         | Bacilli(100)               | Lactobacillales_incertae_sedis(100)  | unclassified           | 5                           | 14807              | 0            | 0            | 25                | 0                 | 0         | 0       | 125         | 0        | 0             | 9            | 0            | 1             | 2604         | 0            | 0            |
| HUSOE0101BQDNP          | Enterobacteriales(100)     | Enterobacteriales(100)               | gamma-1(100)           | 9                           | 11601              | 110          | 8320         | 11                | 11                | 0         | 0       | 1443        | 0        | 0             | 1931         | 0            | 0             | 7            | 7            | 70           |
| HUSOE0101BN8HGK         | Flavobacteria(93)          | Flavobacteriales(93)                 | Flavobacteriaceae(93)  | 7                           | 10853              | 1273         | 850          | 1                 | 1                 | 0         | 0       | 0           | 0        | 0             | 56           | 8602         | 0             | 0            | 0            | 70           |
| HUSOE0101BUA5R          | Bacilli(100)               | Lactobacillales(100)                 | Leuconostocaceae(100)  | 4                           | 3552               | 0            | 0            | 0                 | 15                | 0         | 0       | 3           | 3511     | 0             | 0            | 0            | 0             | 0            | 23           | 0            |
| HUSOE0101BOC8I          | Bacilli(100)               | Lactobacillales_incertae_sedis(95)   | unclassified           | 2                           | 2665               | 0            | 0            | 0                 | 46                | 0         | 0       | 0           | 2619     | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AJQ2K          | Actinobacteria(100)        | Bifidobacteriales(88)                | unclassified           | 7                           | 1288               | 13           | 1            | 56                | 123               | 0         | 0       | 264         | 0        | 0             | 49           | 0            | 0             | 782          | 0            | 0            |
| HUSOE0101BLVLCI         | Gammaproteobacteria(100)   | Oceanospirillales(70)                | Oceanospirillaceae(69) | 1                           | 783                | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 783      | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AYGNK          | Alphaproteobacteria(100)   | Rhodospirillales(90)                 | Acetobacteraceae(48)   | 2                           | 641                | 0            | 0            | 0                 | 0                 | 0         | 640     | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 1            | 0            |
| HUSOE0101A8PYF          | Gammaproteobacteria(67)    | Enterobacteriales(67)                | Enterobacteriaceae(32) | 3                           | 612                | 0            | 0            | 0                 | 0                 | 321       | 0       | 0           | 0        | 0             | 0            | 119          | 0             | 0            | 0            | 0            |
| HUSOE0101A3MOH          | Actinobacteria(100)        | Bifidobacteriales_incertae_sedis(99) | unclassified           | 3                           | 567                | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 5            | 505           | 0            | 57           | 0            |
| HUSOE0101B3JGQ          | Betaproteobacteria(80)     | Neisseriales(80)                     | beta(59)               | 3                           | 195                | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 120           | 71           | 0            | 0            |
| HUSOE0101B4WXT          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 6                           | 143                | 0            | 2            | 0                 | 43                | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 60            | 14           | 14           | 49           |
| HUSOE0101BP7S6          | Bacilli(93)                | Lactobacillales(93)                  | firm-5(93)             | 9                           | 92                 | 16           | 12           | 0                 | 0                 | 5         | 2       | 0           | 17       | 0             | 8            | 0            | 26            | 4            | 2            | 0            |
| HUSOE0101B32PS          | Betaproteobacteria(100)    | Burkholderiales(100)                 | Burkholderiaceae(100)  | 3                           | 42                 | 0            | 0            | 1                 | 0                 | 0         | 7       | 0           | 34       | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101B2I67          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 3                           | 42                 | 0            | 0            | 36                | 2                 | 0         | 0       | 4           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BUQ2B          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 4                           | 31                 | 0            | 0            | 16                | 1                 | 0         | 0       | 9           | 0        | 0             | 5            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101CE7GA          | Betaproteobacteria(98)     | Neisseriales(98)                     | beta(97)               | 3                           | 22                 | 0            | 0            | 7                 | 4                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 11           |
| HUSOE0101A3DA4          | Gammaproteobacteria(85)    | Enterobacteriales(85)                | Enterobacteriaceae(65) | 3                           | 22                 | 0            | 5            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 15           | 0            | 0             | 0            | 0            | 2            |
| HUSOE0101BWy8W          | Bacilli(100)               | Lactobacillales_incertae_sedis(100)  | unclassified           | 1                           | 18                 | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 18           | 0            |
| HUSOE0101BRGR9          | Bacilli(100)               | Lactobacillales_incertae_sedis(99)   | unclassified           | 1                           | 14                 | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 14           | 0            |
| HUSOE0101BWyU5          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(99)               | 4                           | 13                 | 1            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 3            | 4            | 0             | 5            | 0            | 5            |
| HUSOE0101ATT37          | Gammaproteobacteria(100)   | Enterobacteriales(100)               | gamma-1(82)            | 3                           | 13                 | 7            | 3            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 3            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BZVWB          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 9                           | 10                 | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101A9PAE          | Bacilli(99)                | Lactobacillales(89)                  | Lactobacillaceae(89)   | 1                           | 8                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 8        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101CDEN5          | Betaproteobacteria(95)     | Neisseriales(92)                     | beta(81)               | 2                           | 7                  | 0            | 0            | 2                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 5            | 0            | 0            |
| HUSOE0101CD6EU          | Betaproteobacteria(99)     | Neisseriales(99)                     | beta(99)               | 2                           | 7                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 4            | 0            | 0             | 3            | 0            | 3            |
| HUSOE0101BP6WJ          | Bacilli(100)               | Lactobacillales_incertae_sedis(94)   | unclassified           | 1                           | 7                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 7            | 0            | 0            |
| HUSOE0101BD200          | Actinobacteria(100)        | Bifidobacteriales(88)                | unclassified           | 1                           | 7                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 7           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AWCV6          | Bacilli(100)               | Lactobacillales_incertae_sedis(93)   | unclassified           | 1                           | 7                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 7            | 0            | 0            |
| HUSOE0101BCP6C          | Actinobacteria(100)        | Bifidobacteriales_incertae_sedis(99) | unclassified           | 1                           | 6                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 6            | 0             | 0            | 0            | 0            |
| HUSOE0101BBJAD          | Bacilli(100)               | Lactobacillales(100)                 | Leuconostocaceae(100)  | 1                           | 5                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 5        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AZRX1          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 1                           | 5                  | 0            | 0            | 0                 | 5                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101CBSJ8          | Gammaproteobacteria(100)   | Enterobacteriales(100)               | gamma-1(54)            | 1                           | 4                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BW3DE          | Betaproteobacteria(99)     | Neisseriales(99)                     | beta(99)               | 2                           | 4                  | 0            | 0            | 3                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AHDHH          | Gammaproteobacteria(99)    | Oceanospirillales(62)                | Oceanospirillaceae(60) | 1                           | 4                  | 0            | 0            | 0                 | 0                 | 0         | 1       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101A4VJH          | Betaproteobacteria(97)     | Neisseriales(95)                     | beta(89)               | 1                           | 4                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101CDMUK          | Bacilli(100)               | Lactobacillales(100)                 | Lactobacillaceae(100)  | 1                           | 4                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 3           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BJQ1Q          | Gammaproteobacteria(80)    | Enterobacteriales(79)                | Enterobacteriaceae(79) | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 3            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BB9C3          | Bacilli(62)                | Lactobacillales_incertae_sedis(61)   | unclassified           | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 3            | 0            |
| HUSOE0101B240B          | ML635J-2(121)              | unclassified                         | unclassified           | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 3           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101B0TB0          | Gammaproteobacteria(75)    | Enterobacteriales(75)                | Enterobacteriaceae(66) | 1                           | 3                  | 0            | 0            | 3                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101ARNEE          | Gammaproteobacteria(98)    | Enterobacteriales(97)                | Enterobacteriaceae(91) | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 3            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AQ150          | Alphaproteobacteria(100)   | Rhodospirillales(90)                 | alpha-2(2(90)          | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 3        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101A7U5H          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101A7ZEZ          | Actinobacteria(59)         | Bifidobacteriales_incertae_sedis(53) | unclassified           | 1                           | 3                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 3            | 0            | 0            |
| HUSOE0101CD3QW          | Gammaproteobacteria(100)   | Enterobacteriales(100)               | gamma-1(99)            | 1                           | 2                  | 0            | 2            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101CCSFS          | Bacilli_incertae_sedis(41) | unclassified                         | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 2                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101CBNPP          | Actinobacteria(100)        | Bifidobacteriales_incertae_sedis(82) | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 2            | 0             | 0            | 0            | 0            |
| HUSOE0101BZKLU          | Flavobacteria(82)          | Flavobacteriales(82)                 | Flavobacteriaceae(81)  | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 2            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BWBQH          | Bacilli(88)                | Lactobacillales_incertae_sedis(53)   | unclassified           | 1                           | 2                  | 0            | 0            | 2                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BRHWZ          | Actinobacteria(96)         | Bifidobacteriales(71)                | unclassified           | 1                           | 2                  | 0            | 0            | 2                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101BK8MG          | Actinobacteria(100)        | Bifidobacteriales(66)                | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 2             | 0            | 0            | 0            |
| HUSOE0101BJ87N          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 2             | 0            | 0            | 0            |
| HUSOE0101BC4E4          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101B8SEI          | Bacilli(100)               | Lactobacillales_incertae_sedis(100)  | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 2            | 0            | 0            |
| HUSOE0101B7PJE          | Betaproteobacteria(99)     | Neisseriales(99)                     | beta(94)               | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 2            | 0            | 0            |
| HUSOE0101B5IQC          | Gammaproteobacteria(67)    | Enterobacteriales(67)                | Enterobacteriaceae(66) | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 2            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AXW23          | Bacilli(84)                | Lactobacillales_incertae_sedis(60)   | unclassified           | 1                           | 2                  | 0            | 0            | 2                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AWST0          | Bacilli(100)               | Lactobacillales_incertae_sedis(100)  | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 2                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AW46E          | Actinobacteria(100)        | Bifidobacteriales_incertae_sedis(97) | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 2            | 0             | 0            | 0            | 0            |
| HUSOE0101AVA9Y          | Actinobacteria(100)        | Bifidobacteriales_incertae_sedis(69) | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 2            | 0             | 0            | 0            | 0            |
| HUSOE0101AV2VD          | Gammaproteobacteria(97)    | Enterobacteriales(97)                | Enterobacteriaceae(61) | 1                           | 2                  | 0            | 2            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101ATNJR          | Gammaproteobacteria(97)    | Oceanospirillales(39)                | Oceanospirillaceae(35) | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 2             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101ASHPF          | Bacilli(100)               | Lactobacillales_incertae_sedis(100)  | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 2                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101ANFEB          | Bacilli(100)               | Lactobacillales(72)                  | Leuconostocaceae(69)   | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 2       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AMOCR          | Actinobacteria(100)        | Bifidobacteriales(87)                | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 2       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AM18L          | Gammaproteobacteria(67)    | Enterobacteriales(67)                | Enterobacteriaceae(67) | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 2         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AIU2N          | Gammaproteobacteria(100)   | Enterobacteriales(100)               | gamma-1(99)            | 1                           | 2                  | 0            | 2            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101AIB7F          | Flavobacteria(89)          | Flavobacteriales(89)                 | Flavobacteriaceae(89)  | 2                           | 2                  | 1            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 1            | 0            |
| HUSOE0101A7CXH          | Betaproteobacteria(88)     | Neisseriales(88)                     | beta(52)               | 1                           | 2                  | 0            | 0            | 2                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101A5OX9          | Betaproteobacteria(100)    | Neisseriales(100)                    | beta(100)              | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 2            | 0            | 0            |
| HUSOE0101A5EKU          | Gammaproteobacteria(69)    | Enterobacteriales(69)                | Enterobacteriaceae(62) | 1                           | 2                  | 2            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 0            | 0            | 0            |
| HUSOE0101A3VJ4          | Bacilli(100)               | Lactobacillales_incertae_sedis(100)  | unclassified           | 1                           | 2                  | 0            | 0            | 0                 | 0                 | 0         | 0       | 0           | 0        | 0             | 0            | 0            | 0             | 2            | 0            | 0            |
|                         |                            |                                      |                        | Sum                         | 106196             | 4616         | 9227         | 12084             | 5005              | 1296      | 9434    | 12233       | 6982     | 11284         | 11556        | 4551         | 5520          | 12408        |              |              |