

# **A multidisciplinary approach in tackling invasive species: barcoding, morphology, and metataxonomy of the leafhopper *Arboridia adanae***

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## Supplementary information

### Alpha and beta diversities of microbial communities

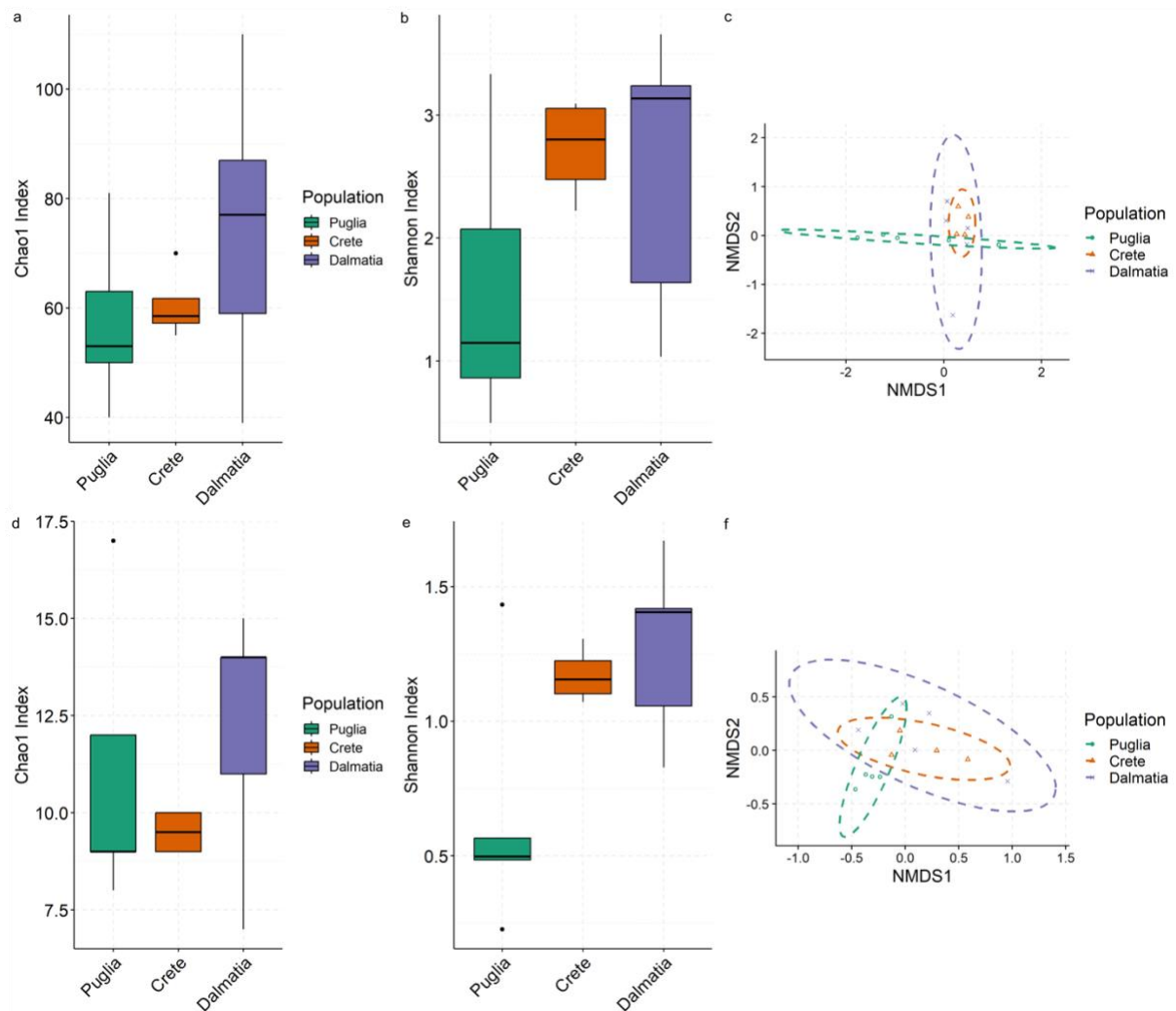


Fig. S1. Plots about alpha and beta diversity of microbiota of Apulian, Cretan and Dalmatian individuals. The three plots on top (**a**, **b** and **c**) are results of the 16S analysis at the genus level. The three plots on top (**d**, **e** and **f**) are results of the 16S analysis at the phylum level. **a**) Chao1 index at the genus level. All comparisons are not significant (n.s.). **b**) Shannon index at the genus level. All comparisons are n.s. **c**) NMDS plot based on dissimilarities at the genus level (PERMANOVA  $R^2 = 0.28$ ,  $P = 0.041$ ). Pairwise adonis n.s. for any contrasts. **d**) Chao1 index at the phylum level. All comparisons are not significant (n.s.). **e**) Shannon index at the phylum level. All comparisons are n.s. **f**) NMDS plot based on dissimilarities at the phylum level (PERMANOVA  $R^2 = 0.29$ ,  $P = 0.059$ ). Pairwise adonis significant only for the contrast “Apulia vs. Crete” ( $R^2 = 0.47$ ,  $P = 0.024$ ).

## COI sequences used for phylogeny

Table S1. Sequences downloaded from NCBI nucleotide to perform the phylogenetic and molecular divergence analysis. Our 23 sequences (5 Apulian, 5 Dalmatian, 5 Cretan and 8 Turkish) were uploaded on NCBI.

| NCBI ID    | Species                      | NCBI ID    | Species                      |
|------------|------------------------------|------------|------------------------------|
| MN972661.1 | <i>Arboridia kakogawana</i>  | MN972656.1 | <i>Arboridia maculifrons</i> |
| MN972662.1 | <i>Arboridia kakogawana</i>  | MN972655.1 | <i>Arboridia maculifrons</i> |
| MN972665.1 | <i>Arboridia kakogawana</i>  | MN972660.1 | <i>Arboridia maculifrons</i> |
| MN972667.1 | <i>Arboridia kakogawana</i>  | MF935009.1 | <i>Dikrella cruentata</i>    |
| MN972663.1 | <i>Arboridia kakogawana</i>  | MF929911.1 | <i>Dikrella cruentata</i>    |
| MN972668.1 | <i>Arboridia kakogawana</i>  | MF934624.1 | <i>Dikrella cruentata</i>    |
| MN972664.1 | <i>Arboridia kakogawana</i>  | MF933368.1 | <i>Dikrella cruentata</i>    |
| MN972666.1 | <i>Arboridia kakogawana</i>  | MG398285.1 | <i>Dikrella cruentata</i>    |
| MN972669.1 | <i>Arboridia kakogawana</i>  | MF932414.1 | <i>Dikrella cruentata</i>    |
| MN972659.1 | <i>Arboridia maculifrons</i> | MF931840.1 | <i>Dikrella cruentata</i>    |
| MN972658.1 | <i>Arboridia maculifrons</i> | MF934830.1 | <i>Dikrella cruentata</i>    |
| MN972657.1 | <i>Arboridia maculifrons</i> | MF932997.1 | <i>Dikrella cruentata</i>    |
| MN972654.1 | <i>Arboridia maculifrons</i> | KT623269.1 | <i>Dikrella cruentata</i>    |
| KR581114.1 | <i>Dikrella cruentata</i>    | MK603803.1 | <i>Mileewa sp.</i>           |
| MK603796.1 | <i>Mileewa sp.</i>           | MK603792.1 | <i>Mileewa sp.</i>           |

|            |                                      |            |                                      |
|------------|--------------------------------------|------------|--------------------------------------|
| MK603800.1 | <i>Mileewa sp.</i>                   | MK603799.1 | <i>Mileewa sp.</i>                   |
| MK603793.1 | <i>Mileewa sp.</i>                   | MK603801.1 | <i>Mileewa sp.</i>                   |
| MK603797.1 | <i>Mileewa sp.</i>                   | MK603791.1 | <i>Mileewa sp.</i>                   |
| MK603788.1 | <i>Mileewa sp.</i>                   | MK603802.1 | <i>Mileewa sp.</i>                   |
| MK603794.1 | <i>Mileewa sp.</i>                   | MK603789.1 | <i>Mileewa sp.</i>                   |
| MK603787.1 | <i>Mileewa sp.</i>                   | OQ410656   | <i>Apulian Arboridia sp.</i>         |
| OQ410659   | <i>Apulian Arboridia sp.</i>         | OQ410661   | <i>Apulian Arboridia sp.</i>         |
| OQ410669   | <i>Apulian Arboridia sp.</i>         | OQ410670   | <i>Apulian Arboridia sp.</i>         |
| OQ410658   | <i>Cretan Arboridia adanae</i>       | OQ410657   | <i>Cretan Arboridia adanae</i>       |
| OQ410662   | <i>Cretan Arboridia adanae</i>       | OQ410663   | <i>Cretan Arboridia adanae</i>       |
| OQ410664   | <i>Cretan Arboridia adanae</i>       | OQ410668   | <i>Dalmatian Arboridia adanae</i>    |
| OQ410665   | <i>Dalmatian Arboridia dalmatina</i> | OQ410667   | <i>Dalmatian Arboridia dalmatina</i> |
| OQ410660   | <i>Dalmatian Arboridia dalmatina</i> | OQ410666   | <i>Dalmatian Arboridia dalmatina</i> |
| OQ410669   | <i>Turkish Arboridia adanae</i>      | OQ410670   | <i>Turkish Arboridia adanae</i>      |
| OQ410673   | <i>Turkish Arboridia adanae</i>      | OQ410674   | <i>Turkish Arboridia adanae</i>      |
| OQ410675   | <i>Turkish Arboridia adanae</i>      | OQ410676   | <i>Turkish Arboridia adanae</i>      |

|          |                                           |          |                                           |
|----------|-------------------------------------------|----------|-------------------------------------------|
| OQ410677 | Turkish <i>Arboridia</i><br><i>adanae</i> | OQ410678 | Turkish <i>Arboridia</i><br><i>adanae</i> |
|----------|-------------------------------------------|----------|-------------------------------------------|

## Most abundant bacteria detected

Table S2. Twenty most abundant bacterial genus for each specimen.

| Population | Specimen | Genus                                                       | Population | Specimen | Genus                                         |
|------------|----------|-------------------------------------------------------------|------------|----------|-----------------------------------------------|
| Apulia     | 1        | <i>Wolbachia</i>                                            | Apulia     | 2        | <i>Staphylococcus</i>                         |
| Apulia     | 1        | <i>Acinetobacter</i>                                        | Apulia     | 2        | <i>Corynebacterium</i>                        |
| Apulia     | 1        | <i>Pseudomonas</i>                                          | Apulia     | 2        | <i>Stenotrophomonas</i>                       |
| Apulia     | 1        | <i>Anaerobacillus</i>                                       | Apulia     | 2        | <i>Bacillus</i>                               |
| Apulia     | 1        | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Apulia     | 2        | <i>Anaerobacillus</i>                         |
| Apulia     | 1        | <i>Stenotrophomonas</i>                                     | Apulia     | 2        | <i>Cutibacterium</i>                          |
| Apulia     | 1        | <i>Methylobacterium-<br/>Methylobacterium</i>               | Apulia     | 2        | <i>Craurococcus-<br/>Caldovatus</i>           |
| Apulia     | 1        | <i>Bacillus</i>                                             | Apulia     | 2        | <i>Rickettsia</i>                             |
| Apulia     | 1        | <i>Cutibacterium</i>                                        | Apulia     | 2        | <i>Tsukamurella</i>                           |
| Apulia     | 1        | <i>Staphylococcus</i>                                       | Apulia     | 2        | <i>Methylobacterium-<br/>Methylobacterium</i> |
| Apulia     | 1        | <i>Sphingomonas</i>                                         | Apulia     | 2        | <i>Veillonella</i>                            |
| Apulia     | 1        | <i>Craurococcus-<br/>Caldovatus</i>                         | Apulia     | 2        | <i>Mycobacterium</i>                          |
| Apulia     | 1        | <i>Rickettsia</i>                                           | Apulia     | 2        | <i>Sphingobacterium</i>                       |
| Apulia     | 1        | <i>Tsukamurella</i>                                         | Apulia     | 2        | <i>Tepidimonas</i>                            |
| Apulia     | 1        | <i>Corynebacterium</i>                                      | Apulia     | 2        | <i>Blastococcus</i>                           |
| Apulia     | 1        | <i>Veillonella</i>                                          | Apulia     | 3        | <i>Wolbachia</i>                              |
| Apulia     | 1        | <i>Mycobacterium</i>                                        | Apulia     | 3        | <i>Bacillus</i>                               |
| Apulia     | 1        | <i>Sphingobacterium</i>                                     | Apulia     | 3        | <i>Pseudomonas</i>                            |
| Apulia     | 1        | <i>Tepidimonas</i>                                          | Apulia     | 3        | <i>Acinetobacter</i>                          |
| Apulia     | 1        | <i>Blastococcus</i>                                         | Apulia     | 3        | <i>Anaerobacillus</i>                         |

|        |   |                                                             |        |   |                                                             |
|--------|---|-------------------------------------------------------------|--------|---|-------------------------------------------------------------|
| Apulia | 2 | <i>Wolbachia</i>                                            | Apulia | 3 | <i>Stenotrophomonas</i>                                     |
| Apulia | 2 | <i>Pseudomonas</i>                                          | Apulia | 3 | <i>Staphylococcus</i>                                       |
| Apulia | 2 | <i>Sphingomonas</i>                                         | Apulia | 3 | <i>Cutibacterium</i>                                        |
| Apulia | 2 | <i>Acinetobacter</i>                                        | Apulia | 3 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> |
| Apulia | 2 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Apulia | 3 | <i>Corynebacterium</i>                                      |
| Apulia | 3 | <i>Methylobacterium-<br/>Methylobacterium</i>               | Apulia | 4 | <i>Veillonella</i>                                          |
| Apulia | 3 | <i>Tepidimonas</i>                                          | Apulia | 4 | <i>Sphingobacterium</i>                                     |
| Apulia | 3 | <i>Mycobacterium</i>                                        | Apulia | 4 | <i>Tepidimonas</i>                                          |
| Apulia | 3 | <i>Sphingomonas</i>                                         | Apulia | 4 | <i>Blastococcus</i>                                         |
| Apulia | 3 | <i>Craurococcus-<br/>Caldovatus</i>                         | Apulia | 5 | <i>Methylobacterium-<br/>Methylobacterium</i>               |
| Apulia | 3 | <i>Rickettsia</i>                                           | Apulia | 5 | <i>Pseudomonas</i>                                          |
| Apulia | 3 | <i>Tsukamurella</i>                                         | Apulia | 5 | <i>Sphingomonas</i>                                         |
| Apulia | 3 | <i>Veillonella</i>                                          | Apulia | 5 | <i>Acinetobacter</i>                                        |
| Apulia | 3 | <i>Sphingobacterium</i>                                     | Apulia | 5 | <i>Stenotrophomonas</i>                                     |
| Apulia | 3 | <i>Blastococcus</i>                                         | Apulia | 5 | <i>Anaerobacillus</i>                                       |
| Apulia | 4 | <i>Acinetobacter</i>                                        | Apulia | 5 | <i>Corynebacterium</i>                                      |
| Apulia | 4 | <i>Pseudomonas</i>                                          | Apulia | 5 | <i>Staphylococcus</i>                                       |
| Apulia | 4 | <i>Bacillus</i>                                             | Apulia | 5 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> |
| Apulia | 4 | <i>Stenotrophomonas</i>                                     | Apulia | 5 | <i>Bacillus</i>                                             |
| Apulia | 4 | <i>Wolbachia</i>                                            | Apulia | 5 | <i>Cutibacterium</i>                                        |
| Apulia | 4 | <i>Cutibacterium</i>                                        | Apulia | 5 | <i>Tepidimonas</i>                                          |
| Apulia | 4 | <i>Anaerobacillus</i>                                       | Apulia | 5 | <i>Veillonella</i>                                          |

|        |   |                                                             |        |   |                                               |
|--------|---|-------------------------------------------------------------|--------|---|-----------------------------------------------|
| Apulia | 4 | <i>Staphylococcus</i>                                       | Apulia | 5 | <i>Wolbachia</i>                              |
| Apulia | 4 | <i>Corynebacterium</i>                                      | Apulia | 5 | <i>Craurococcus-<br/>Caldovatus</i>           |
| Apulia | 4 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Apulia | 5 | <i>Rickettsia</i>                             |
| Apulia | 4 | <i>Mycobacterium</i>                                        | Apulia | 5 | <i>Tsukamurella</i>                           |
| Apulia | 4 | <i>Methylobacterium-<br/>Methylobacterium</i>               | Apulia | 5 | <i>Mycobacterium</i>                          |
| Apulia | 4 | <i>Sphingomonas</i>                                         | Apulia | 5 | <i>Sphingobacterium</i>                       |
| Apulia | 4 | <i>Craurococcus-<br/>Caldovatus</i>                         | Apulia | 5 | <i>Blastococcus</i>                           |
| Apulia | 4 | <i>Rickettsia</i>                                           | Crete  | 1 | <i>Methylobacterium-<br/>Methylobacterium</i> |
| Apulia | 4 | <i>Tsukamurella</i>                                         | Crete  | 1 | <i>Pseudomonas</i>                            |
| Crete  | 1 | <i>Sphingomonas</i>                                         | Crete  | 2 | <i>Corynebacterium</i>                        |
| Crete  | 1 | <i>Acinetobacter</i>                                        | Crete  | 2 | <i>Sphingomonas</i>                           |
| Crete  | 1 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Crete  | 2 | <i>Veillonella</i>                            |
| Crete  | 1 | <i>Staphylococcus</i>                                       | Crete  | 2 | <i>Staphylococcus</i>                         |
| Crete  | 1 | <i>Cutibacterium</i>                                        | Crete  | 2 | <i>Tepidimonas</i>                            |
| Crete  | 1 | <i>Bacillus</i>                                             | Crete  | 2 | <i>Blastococcus</i>                           |
| Crete  | 1 | <i>Stenotrophomonas</i>                                     | Crete  | 2 | <i>Wolbachia</i>                              |
| Crete  | 1 | <i>Anaerobacillus</i>                                       | Crete  | 2 | <i>Craurococcus-<br/>Caldovatus</i>           |
| Crete  | 1 | <i>Blastococcus</i>                                         | Crete  | 2 | <i>Rickettsia</i>                             |
| Crete  | 1 | <i>Veillonella</i>                                          | Crete  | 2 | <i>Tsukamurella</i>                           |
| Crete  | 1 | <i>Corynebacterium</i>                                      | Crete  | 2 | <i>Mycobacterium</i>                          |
| Crete  | 1 | <i>Wolbachia</i>                                            | Crete  | 2 | <i>Sphingobacterium</i>                       |
| Crete  | 1 | <i>Craurococcus-</i>                                        | Crete  | 3 | <i>Acinetobacter</i>                          |

|       |   |                                                             |          |   |                                                             |
|-------|---|-------------------------------------------------------------|----------|---|-------------------------------------------------------------|
|       |   | <i>Caldovatus</i>                                           |          |   |                                                             |
| Crete | 1 | <i>Rickettsia</i>                                           | Crete    | 3 | <i>Pseudomonas</i>                                          |
| Crete | 1 | <i>Tsukamurella</i>                                         | Crete    | 3 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> |
| Crete | 1 | <i>Mycobacterium</i>                                        | Crete    | 3 | <i>Stenotrophomonas</i>                                     |
| Crete | 1 | <i>Sphingobacterium</i>                                     | Crete    | 3 | <i>Bacillus</i>                                             |
| Crete | 1 | <i>Tepidimonas</i>                                          | Crete    | 3 | <i>Anaerobacillus</i>                                       |
| Crete | 2 | <i>Pseudomonas</i>                                          | Crete    | 3 | <i>Tepidimonas</i>                                          |
| Crete | 2 | <i>Acinetobacter</i>                                        | Crete    | 3 | <i>Cutibacterium</i>                                        |
| Crete | 2 | <i>Methylobacterium-<br/>Methylobacterium</i>               | Crete    | 3 | <i>Corynebacterium</i>                                      |
| Crete | 2 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Crete    | 3 | <i>Methylobacterium-<br/>Methylobacterium</i>               |
| Crete | 2 | <i>Stenotrophomonas</i>                                     | Crete    | 3 | <i>Staphylococcus</i>                                       |
| Crete | 2 | <i>Anaerobacillus</i>                                       | Crete    | 3 | <i>Wolbachia</i>                                            |
| Crete | 2 | <i>Bacillus</i>                                             | Crete    | 3 | <i>Sphingomonas</i>                                         |
| Crete | 2 | <i>Cutibacterium</i>                                        | Crete    | 3 | <i>Craurococcus-<br/>Caldovatus</i>                         |
| Crete | 3 | <i>Rickettsia</i>                                           | Dalmatia | 1 | <i>Blastococcus</i>                                         |
| Crete | 3 | <i>Tsukamurella</i>                                         | Dalmatia | 1 | <i>Sphingobacterium</i>                                     |
| Crete | 3 | <i>Veillonella</i>                                          | Dalmatia | 1 | <i>Acinetobacter</i>                                        |
| Crete | 3 | <i>Mycobacterium</i>                                        | Dalmatia | 1 | <i>Mycobacterium</i>                                        |
| Crete | 3 | <i>Sphingobacterium</i>                                     | Dalmatia | 1 | <i>Pseudomonas</i>                                          |
| Crete | 3 | <i>Blastococcus</i>                                         | Dalmatia | 1 | <i>Craurococcus-<br/>Caldovatus</i>                         |
| Crete | 4 | <i>Pseudomonas</i>                                          | Dalmatia | 1 | <i>Anaerobacillus</i>                                       |
| Crete | 4 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Dalmatia | 1 | <i>Staphylococcus</i>                                       |

|          |   |                                               |          |   |                                                             |
|----------|---|-----------------------------------------------|----------|---|-------------------------------------------------------------|
| Crete    | 4 | <i>Bacillus</i>                               | Dalmatia | 1 | <i>Stenotrophomonas</i>                                     |
| Crete    | 4 | <i>Staphylococcus</i>                         | Dalmatia | 1 | <i>Sphingomonas</i>                                         |
| Crete    | 4 | <i>Anaerobacillus</i>                         | Dalmatia | 1 | <i>Bacillus</i>                                             |
| Crete    | 4 | <i>Stenotrophomonas</i>                       | Dalmatia | 1 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> |
| Crete    | 4 | <i>Acinetobacter</i>                          | Dalmatia | 1 | <i>Cutibacterium</i>                                        |
| Crete    | 4 | <i>Corynebacterium</i>                        | Dalmatia | 1 | <i>Corynebacterium</i>                                      |
| Crete    | 4 | <i>Cutibacterium</i>                          | Dalmatia | 1 | <i>Veillonella</i>                                          |
| Crete    | 4 | <i>Sphingomonas</i>                           | Dalmatia | 1 | <i>Methylobacterium-<br/>Methylobacterium</i>               |
| Crete    | 4 | <i>Methylobacterium-<br/>Methylobacterium</i> | Dalmatia | 1 | <i>Wolbachia</i>                                            |
| Crete    | 4 | <i>Mycobacterium</i>                          | Dalmatia | 1 | <i>Rickettsia</i>                                           |
| Crete    | 4 | <i>Wolbachia</i>                              | Dalmatia | 1 | <i>Tsukamurella</i>                                         |
| Crete    | 4 | <i>Craurococcus-<br/>Caldovatus</i>           | Dalmatia | 1 | <i>Tepidimonas</i>                                          |
| Crete    | 4 | <i>Rickettsia</i>                             | Dalmatia | 2 | <i>Staphylococcus</i>                                       |
| Crete    | 4 | <i>Tsukamurella</i>                           | Dalmatia | 2 | <i>Pseudomonas</i>                                          |
| Crete    | 4 | <i>Veillonella</i>                            | Dalmatia | 2 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> |
| Crete    | 4 | <i>Sphingobacterium</i>                       | Dalmatia | 2 | <i>Anaerobacillus</i>                                       |
| Crete    | 4 | <i>Tepidimonas</i>                            | Dalmatia | 2 | <i>Bacillus</i>                                             |
| Crete    | 4 | <i>Blastococcus</i>                           | Dalmatia | 2 | <i>Cutibacterium</i>                                        |
| Dalmatia | 2 | <i>Stenotrophomonas</i>                       | Dalmatia | 3 | <i>Methylobacterium-<br/>Methylobacterium</i>               |
| Dalmatia | 2 | <i>Acinetobacter</i>                          | Dalmatia | 3 | <i>Wolbachia</i>                                            |
| Dalmatia | 2 | <i>Sphingomonas</i>                           | Dalmatia | 3 | <i>Rickettsia</i>                                           |
| Dalmatia | 2 | <i>Methylobacterium-<br/>Methylobacterium</i> | Dalmatia | 3 | <i>Tsukamurella</i>                                         |

|          |   |                                                             |          |   |                                                             |
|----------|---|-------------------------------------------------------------|----------|---|-------------------------------------------------------------|
| Dalmatia | 2 | <i>Corynebacterium</i>                                      | Dalmatia | 3 | <i>Bacillus</i>                                             |
| Dalmatia | 2 | <i>Blastococcus</i>                                         | Dalmatia | 3 | <i>Mycobacterium</i>                                        |
| Dalmatia | 2 | <i>Wolbachia</i>                                            | Dalmatia | 3 | <i>Sphingobacterium</i>                                     |
| Dalmatia | 2 | <i>Craurococcus-<br/>Caldovatus</i>                         | Dalmatia | 3 | <i>Blastococcus</i>                                         |
| Dalmatia | 2 | <i>Rickettsia</i>                                           | Dalmatia | 4 | <i>Rickettsia</i>                                           |
| Dalmatia | 2 | <i>Tsukamurella</i>                                         | Dalmatia | 4 | <i>Tsukamurella</i>                                         |
| Dalmatia | 2 | <i>Veillonella</i>                                          | Dalmatia | 4 | <i>Staphylococcus</i>                                       |
| Dalmatia | 2 | <i>Mycobacterium</i>                                        | Dalmatia | 4 | <i>Pseudomonas</i>                                          |
| Dalmatia | 2 | <i>Sphingobacterium</i>                                     | Dalmatia | 4 | <i>Sphingomonas</i>                                         |
| Dalmatia | 2 | <i>Tepidimonas</i>                                          | Dalmatia | 4 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> |
| Dalmatia | 3 | <i>Staphylococcus</i>                                       | Dalmatia | 4 | <i>Acinetobacter</i>                                        |
| Dalmatia | 3 | <i>Pseudomonas</i>                                          | Dalmatia | 4 | <i>Anaerobacillus</i>                                       |
| Dalmatia | 3 | <i>Acinetobacter</i>                                        | Dalmatia | 4 | <i>Bacillus</i>                                             |
| Dalmatia | 3 | <i>Veillonella</i>                                          | Dalmatia | 4 | <i>Stenotrophomonas</i>                                     |
| Dalmatia | 3 | <i>Stenotrophomonas</i>                                     | Dalmatia | 4 | <i>Cutibacterium</i>                                        |
| Dalmatia | 3 | <i>Anaerobacillus</i>                                       | Dalmatia | 4 | <i>Wolbachia</i>                                            |
| Dalmatia | 3 | <i>Tepidimonas</i>                                          | Dalmatia | 4 | <i>Craurococcus-<br/>Caldovatus</i>                         |
| Dalmatia | 3 | <i>Burkholderia-<br/>Caballeronia-<br/>Paraburkholderia</i> | Dalmatia | 4 | <i>Methylobacterium-<br/>Methylobacterium</i>               |
| Dalmatia | 3 | <i>Craurococcus-<br/>Caldovatus</i>                         | Dalmatia | 4 | <i>Corynebacterium</i>                                      |
| Dalmatia | 3 | <i>Cutibacterium</i>                                        | Dalmatia | 4 | <i>Veillonella</i>                                          |
| Dalmatia | 3 | <i>Sphingomonas</i>                                         | Dalmatia | 4 | <i>Mycobacterium</i>                                        |
| Dalmatia | 3 | <i>Corynebacterium</i>                                      | Dalmatia | 4 | <i>Sphingobacterium</i>                                     |
| Dalmatia | 4 | <i>Tepidimonas</i>                                          | Dalmatia | 5 | <i>Bacillus</i>                                             |

|          |   |                                                   |          |   |                                          |
|----------|---|---------------------------------------------------|----------|---|------------------------------------------|
| Dalmatia | 4 | <i>Blastococcus</i>                               | Dalmatia | 5 | <i>Methylobacterium-Methylobacterium</i> |
| Dalmatia | 5 | <i>Pseudomonas</i>                                | Dalmatia | 5 | <i>Tsukamurella</i>                      |
| Dalmatia | 5 | <i>Sphingomonas</i>                               | Dalmatia | 5 | <i>Wolbachia</i>                         |
| Dalmatia | 5 | <i>Acinetobacter</i>                              | Dalmatia | 5 | <i>Craurococcus-Caldovatus</i>           |
| Dalmatia | 5 | <i>Staphylococcus</i>                             | Dalmatia | 5 | <i>Rickettsia</i>                        |
| Dalmatia | 5 | <i>Stenotrophomonas</i>                           | Dalmatia | 5 | <i>Corynebacterium</i>                   |
| Dalmatia | 5 | <i>Anaerobacillus</i>                             | Dalmatia | 5 | <i>Veillonella</i>                       |
| Dalmatia | 5 | <i>Burkholderia-Caballeronia-Paraburkholderia</i> | Dalmatia | 5 | <i>Mycobacterium</i>                     |
| Dalmatia | 5 | <i>Tepidimonas</i>                                | Dalmatia | 5 | <i>Sphingobacterium</i>                  |
| Dalmatia | 5 | <i>Cutibacterium</i>                              | Dalmatia | 5 | <i>Blastococcus</i>                      |