Supplementary Information

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European foulbrood in Czechia after 40 years: Application of next-generation sequencing to analyze *Melissococcus plutonius* transmission

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Figure S1. Krona projection of the bacteriomes in honeybee worker samples. Mean Krona projections were constructed from subsamples for different situations according to EFB occurrence. Coding for the sample types: EFB0 – control outside the EFB zone without signs of EFB; (ii) EFB1 – bees from an EFB apiary but from colonies without clinical symptoms; and (iii) EFB2 – bees from hives with clinical symptoms of EFB.

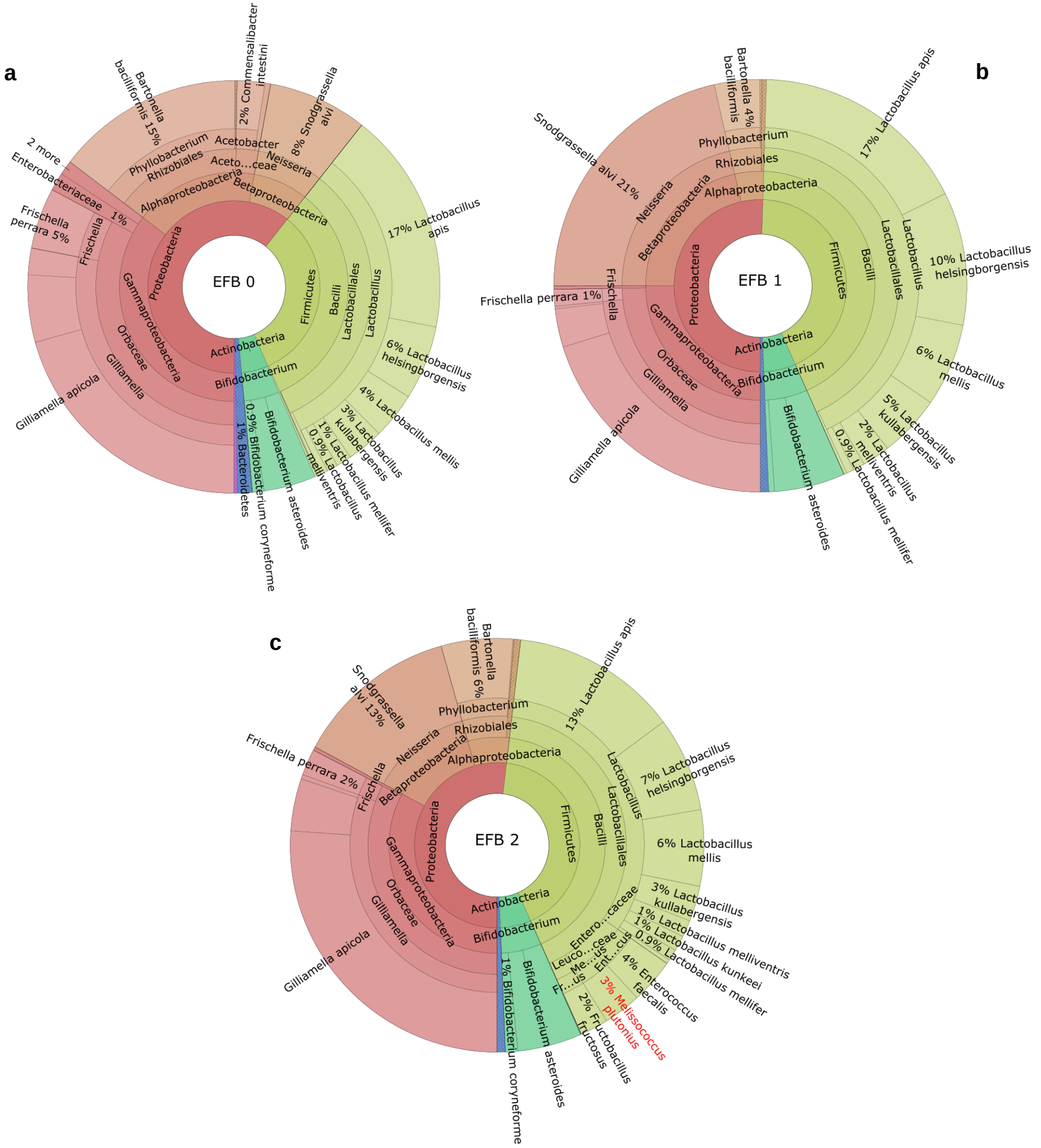

Figure S2. Cluster analyses of *Apis mellifera* samples.

Color indicates significantly (P < 0.05) different clusters. The samples are identified in Table S1.

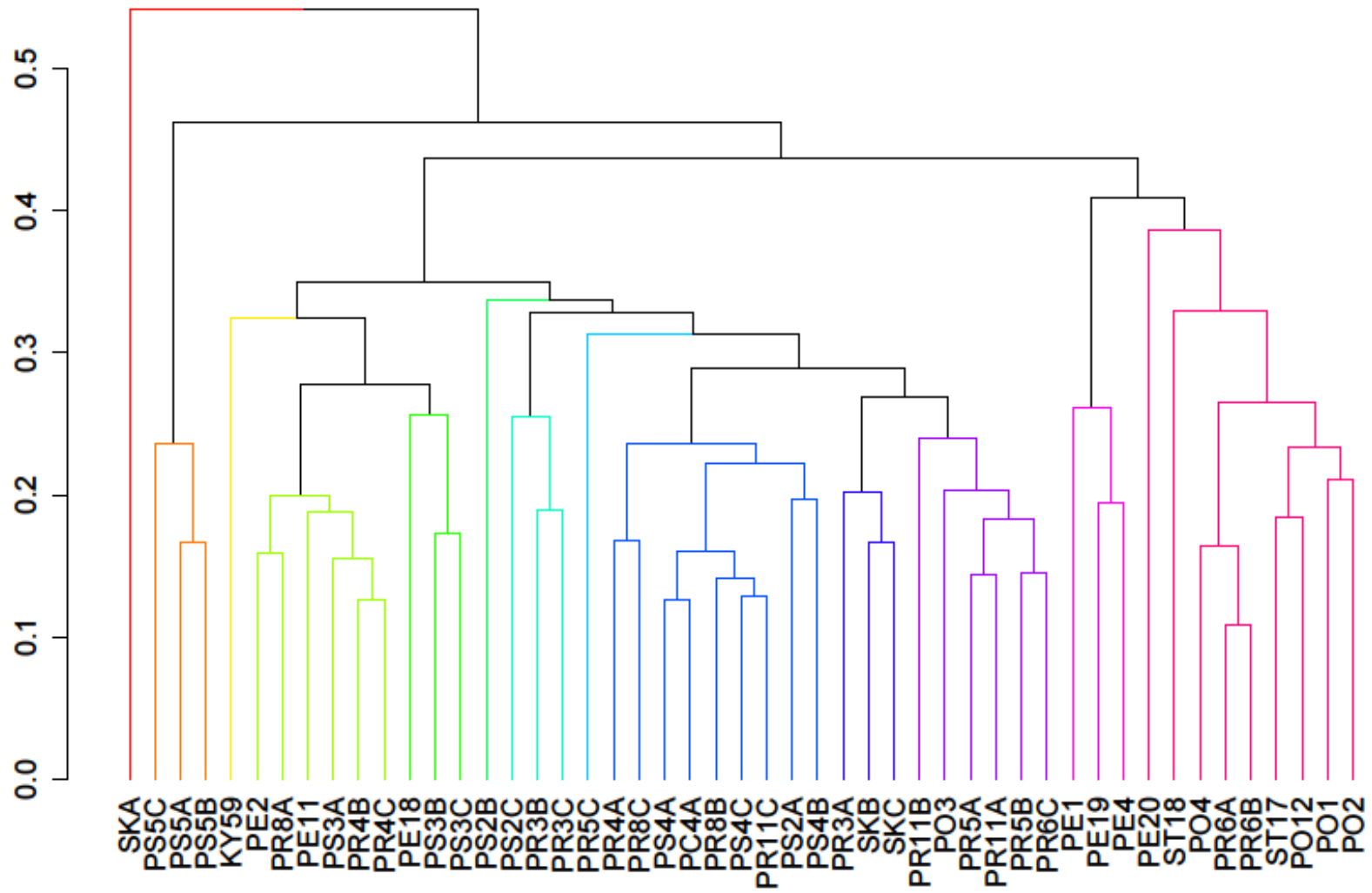

Figure S3. Krona projections of honeybee larvae and pupae.

The Krona projections were constructed for each sample separately. Legend: **a)** PR3D – larvae, EFB2 – colony with EFB clinical symptoms; **b)** PR5D – larvae, EFB1 – asymptomatic colony from EFB apiary; **c)** PR6D – larvae, EFB2 – colony with EFB clinical symptoms; **d)** PR8D – larvae, EFB2 – colony with EFB clinical symptoms; **e)** PR6E – pupae, EFB2 – colony with EFB clinical symptoms; **f)** PRK8E – pupae, EFB1 – asymptomatic colony from EFB apiary.

Table S1. The list of apiaries investigated in the study. Samples, acession numbers and barcodes for the environmetal samples of *Apis mellifera* are included.

Sample Name	Barcode	Biosample	Bioproject	Reference
KY59	CGTGATAA	SAMN04299293	RJNA304944	Hubert et al. 2016b
PC4A	CGTGGGAC	SAMN05991976	PRJNA352995	this study
PE1	CGTGAGAC	SAMN05292190	PRJNA326764	Hubert et al. 2016b
PE11	CGTGAGAC	SAMN05292190	PRJNA326764	Hubert et al. 2016b
PE18	CGTGATAA	SAMN05292191	PRJNA326764	Hubert et al. 2016b
PE19	CGTGAGAC	SAMN05292192	PRJNA326764	Hubert et al. 2016b
PE2	CGTCGCAT	SAMN04299384	RJNA304944	Hubert et al. 2016b
PE20	CGTGGGAC	SAMN05292193	PRJNA326764	Hubert et al. 2016b
PE4	CGTCTGAA	SAMN05292310	PRJNA326764	Hubert et al. 2016b
PO1	CGTCAAGA	SAMN04299295	RJNA304944	Hubert et al. 2016b
PO12	CGTGGTCA	SAMN05292189	PRJNA326764	Hubert et al. 2016b
PO2	CGTCACAG	SAMN04299376	RJNA304944	Hubert et al. 2016b
PO3	CGTCCAGG	SAMN04299378	RJNA304944	Hubert et al. 2016b
PO4	CGTCGCAT	SAMN04299380	RJNA304944	Hubert et al. 2016b
PR11A	CTAACACA	SAMN05991977	PRJNA352995	this study
PR11B	CTAACAGC	SAMN05991978	PRJNA352995	this study
PR11C	CTAAGAAC	SAMN05991979	PRJNA352995	this study
PR3A	CGTAGATA	SAMN05991980	PRJNA352995	this study
PR3B	CGTCCAGG	SAMN05991981	PRJNA352995	this study
PR3C	CGTCGCAT	SAMN05991982	PRJNA352995	this study
PR3D	CGTAGGCT	SAMN05991983	PRJNA352995	this study
PR4A	CGTATTCA	SAMN05991984	PRJNA352995	this study
PR4B	CGTCTGAA	SAMN05991985	PRJNA352995	this study
PR4C	CGTGAGAC	SAMN05991986	PRJNA352995	this study
PR5A	CGTGATAA	SAMN05991987	PRJNA352995	this study
PR5B	CGTGGGAC	SAMN05991988	PRJNA352995	this study
PR5C	CGTATTTC	SAMN05991989	PRJNA352995	this study
PR5D	CGTCAAGA	SAMN05991990	PRJNA352995	this study
PR6A	CGTCACAG	SAMN05991991	PRJNA352995	this study
PR6B	CGTGGTCA	SAMN05991992	PRJNA352995	this study
PR6C	CGTTCACG	SAMN05991993	PRJNA352995	this study
PR6D	CGTCCAGG	SAMN05991994	PRJNA352995	this study
PR6E	CGTCGCAT	SAMN05991995	PRJNA352995	this study
PR8A	CGTTTACT	SAMN05991996	PRJNA352995	this study
PR8B	CGTTTCTA	SAMN05991997	PRJNA352995	this study
PR8C	CGTCTGAA	SAMN05991998	PRJNA352995	this study
PR8D	CGTGAGAC	SAMN05991999	PRJNA352995	this study
PRK8E	CGTGATAA	SAMN05992000	PRJNA352995	this study
PS2A	CGTAACCA	SAMN05992001	PRJNA352995	this study
PS2B	CGTAACCA	SAMN05992002	PRJNA352995	this study
PS2C	CGTAAGAA	SAMN05992003	PRJNA352995	this study
PS3A	CGTACCCA	SAMN05992004	PRJNA352995	this study
PS3B	CGTAGATA	SAMN05992005	PRJNA352995	this study
PS3C	CGTAGGCT	SAMN05992006	PRJNA352995	this study
PS4A	CGTAAGAA	SAMN05992007	PRJNA352995	this study
PS4B	CGTATTCA	SAMN05992008	PRJNA352995	this study
PS4C	CGTATTTC	SAMN05992009	PRJNA352995	this study
PS5A	CGTACCCA	SAMN05992010	PRJNA352995	this study
PS5B	CGTCAAGA	SAMN05992011	PRJNA352995	this study
PS5C	CGTCACAG	SAMN05992012	PRJNA352995	this study
SKB	CTCGTGAT	SAMN05992013	PRJNA352995	this study
SKB	CGTAGGCT	PRJNA304944	SAMN04299502	Hubert et al. 2016b
SKC	CTCTAGCG	SAMN05992014	PRJNA352995	this study
ST17	CGTGGGAC	SAMN05292316	PRJNA326764	Hubert et al. 2016b
ST18	CGTTTACT	SAMN05292317	PRJNA326764	Hubert et al. 2016b

Table S2. The list of honeybee (Apis mellifera) samples and numbers of OTUs. OTUs were identified using the Ribosome database project and by comparing sequences in GenBank. Legend: ct – contingency threshold; n.d. – non-determined.

	RDP identification					GenBank identification			TOTAL
OTU_{97}	Phylum	Class	Order	Family	Genus	c.t.	Taxon (identity%)	Acess. No.	
OTU1	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	0.88	Lactobacillus apis (99)	NR_125702	356,906
OTU10	Firmicutes	Bacilli	Lactobacillales	Enterococcaceae	Enterococcus	0.98	Enterococcus faecalis (99)	NR_113901	71,438
OTU100	Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	Delftia	0.91	Delftia acidovorans (99)	NR_074691	27
OTU101	Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	Ralstonia	0.91	Ralstonia pickettii (99)	NR_102967	169
OTU103	Proteobacteria	Gammaproteobacteria	Pasteurellales	Pasteurellaceae	Haemophilus	0.71	Haemophilus aegyptius (98)	NR_042875	72
OTU104	Proteobacteria	Alphaproteobacteria	Rhizobiales	Bartonellaceae	Bartonella	0.09	Bartonella rattimassiliensis (95)	NR_115255	97
OTU105	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Orbus	0.28	Gilliamella apicola (95)	NR_118433	214
OTU106	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Leclercia	0.68	Enterobacter cloacae(99)	NR_102794	829
OTU107	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.13	Prevotella brevis (89)	NR_041954	25
OTU108	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.09	Prevotella marshii (89)	NR_113111	22
OTU109	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	1.00	Lactobacillus kimbladii (99)	NR_126250	12,512
OTU11	Firmicutes	Clostridia	Clostridiales	Natranaerovirga	n.d.	n.d.	Natranaerovirga hydrolytica (86)	NR_108630	58,662
OTU112	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	1.00	Prevotella bryantii (99)	NR_028866	87
OTU113	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.23	Prevotella salivae (89)	NR_024816	7
OTU114	Firmicutes	Clostridia	Clostridiales	Ruminococcaceae	Oscillibacter	0.02	Saccharofermentans acetigenes	NR_115340	4
OTU115	Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	Pelomonas	0.68	Pelomonas saccharophila (99)	NR_114189	96
OTU116	Firmicutes	Bacilli	Bacillales	Staphylococcaceae	Staphylococcus	0.99	Staphylococcus hominis (99)	NR_036956	87
OTU117	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Orbus	0.98	Orbus hercynius (99)	NR_116759	28
OTU12	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	0.99	Lactobacillus kullabergensis (99)	NR_126251	115,013
OTU120	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.68	Prevotella ruminicola (95)	NR_044632	26
OTU13	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	1.00	Lactobacillus mellifer (99)	NR_126248	36,515
OTU14	Actinobacteria	Actinobacteria	Bifidobacteriales	Bifidobacteriaceae	Bifidobacterium	0.97	Bifidobacterium asteroides (99)	NR_102860	95,049
OTU15	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Acetobacter	0.09	Commensalibacter intestini (95)	NR_116307	22,668
OTU16	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Gilliamella	0.61	Gilliamella apicola (97)	NR_121727	19,180
OTU17	Actinobacteria	Actinobacteria	Bifidobacteriales	Bifidobacteriaceae	Bifidobacterium	0.97	Bifidobacterium coryneforme (99)	NR_044690	32,285
OTU18	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Frischella	0.98	Frischella perrara (99)	NR_118490	95,862
OTU19	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Gluconobacter	0.07	Swingsia samuiensis (94)	NR_132672	6,593
OTU2	Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	Phyllobacterium	0.23	Bartonella bacilliformis (96)	NR_074203	219,379
OTU21	Bacteroidetes	Bacteroidia	Bacteroidales	Porphyromonadaceae	Dysgonomonas	0.48	Dysgonomonas capnocytophagoides (92)	NR_113133	11,427
OTU22	Tenericutes	Mollicutes	Entomoplasmatales	Spiroplasmataceae	Spiroplasma	0.99	Spiroplasma melliferum (99)	NR_025756	3,491
OTU23	Bacteroidetes	Flavobacteriia	Flavobacteriales	Flavobacteriaceae	Ornithobacterium	0.01	Ornithobacterium rhinotracheale(84)	NR_102940	13,465
OTU24	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Azotobacter	0.04	Azotobacter chroococcum (88)	NR_114167	2,685
OTU25	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	0.98	Lactobacillus melliventris (97)	NR_126252	45,666
OTU26	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Morganella	0.61	Morganella morganii(96)	NR_102517	3,392
OTU28	Proteobacteria	Gammaproteobacteria	Oceanospirillales	Hahellaceae	Zooshikella	0.02	Pseudomonas indica(88)	NR_114196	4,210
OTU29	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Saccharibacter	0.64	Parasaccharibacter apium (99)	NR_133042	1,211
OTU3	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Gilliamella	0.97	Gilliamella apicola (99)	NR_118433	439,813
OTU30	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	0.02	Lactobacillus crispatus (85)	NR_119274	2,421
OTU31	Proteobacteria	Alphaproteobacteria	Rhizobiales	Bartonellaceae	Bartonella	0.18	Bartonella queenslandensis(95)	NR_116176	815
OTU32	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Hafnia	0.64	Hafnia alvei (99)	NR_112985	3,600
OTU33	Actinobacteria	Actinobacteria	Bifidobacteriales	Bifidobacteriaceae	Bifidobacterium	0.71	Bifidobacterium asteroides (98)	NR_102860	83,558
OTU34	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Arsenophonus	0.91	Arsenophonus nasoniae (98)	NR_042811	439
OTU35	Firmicutes	Bacilli	Lactobacillales	Leuconostocaceae	Fructobacillus	0.98	Fructobacillus tropaeoli (99)	NR_113043	1,045
OTU36	Actinobacteria	Actinobacteria	Actinomycetales	Brevibacteriaceae	Brevibacterium	0.88	Brevibacterium siliguriense (98)	NR_115086	1,048
OTU37	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Gilliamella	0.38	Gilliamella apicola (96)	NR_118433	3,399
OTU38	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Serratia	0.75	Serratia proteamaculans (99)	NR_074820	718
OTU39	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Tatumella	0.95	Tatumella ptyseos (99)	NR_116283	2,206
OTU4	Firmicutes	Bacilli	Lactobacillales	Enterococcaceae	Melissococcus	0.48	Melissococcus plutonius (99)	NR_074098	160,330
OTU40	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Klebsiella	0.88	Klebsiella oxytoca (99)	NR_113341	967
OTU41	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Gilliamella	0.53	Gilliamella apicola(94)	NR_118433	389
OTU42	Proteobacteria	Gammaproteobacteria	Legionellales	Coxiellaceae	Diplorickettsia	0.06	Diplorickettsia massiliensis (90)	NR_117407	507
OTU43	Actinobacteria	Actinobacteria	Actinomycetales	Propionibacteriaceae	Propionibacterium	1.00	Propionibacterium acnes (98)	NR_07467	303
OTU44	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Gilliamella	0.33	Gilliamella apicola (95)	NR_118433	641
OTU45	Firmicutes	Bacilli	Lactobacillales	Streptococcaceae	Streptococcus	0.99	Streptococcus mitis (99)	NR_102808	128
OTU47	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Escherichia/Shigella	0.78	Shigella sonnei (99)	NR_074894	572
OTU49	Actinobacteria	Actinobacteria	Actinomycetales	Mycobacteriaceae	Mycobacterium	0.08	Rhodococcus rhodochrous (93)	NR_116689	284
OTU5	Firmicutes	Bacilli	Lactobacillales	Leuconostocaceae	Fructobacillus	0.98	Fructobacillus fructosus (99)	NR_113579	128,143
OTU50	Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	Ralstonia	0.97	Ralstonia insidiosa (99)	NR_025242	374
OTU51	Bacteroidetes	Bacteroidia	Bacteroidales	Porphyromonadaceae	Porphyromonas	0.99	Porphyromonas asaccharolytica (99)	NR_074588	215
OTU53	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Yersinia	0.71	Yersinia kristensenii (98)	NR_025159	1,864
OTU54	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Klebsiella	0.85	Klebsiella pneumoniae (99)	NR_117683	1,045
OTU55	Proteobacteria	Gammaproteobacteria	Orbales	Orbaceae	Gilliamella	0.78	Gilliamella apicola (98)	NR_121727	144,851
OTU56	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.33	Prevotella brevis (90)	NR_041954	177
OTU57	Firmicutes	Bacilli	Lactobacillales	Carnobacteriaceae	Dolosigranulum	0.99	Dolosigranulum pigrum (99)	NR_113774	296
OTU58	Firmicutes	Bacilli	Bacillales	Paenibacillaceae_1	Paenibacillus	0.98	Paenibacillus larvae (98)	NR_042947	639
OTU59	Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	Phyllobacterium	0.81	Phyllobacterium myrsinacearum (99)	NR_113874	52
OTU6	Proteobacteria	Betaproteobacteria	Neisseriales	Neisseriaceae	Neisseria	0.23	Snodgrassella alvi (99)	NR_122055	338,708
OTU60	Firmicutes	Clostridia	Clostridiales	Lachnospiraceae	Clostridium_XlVa	0.75	Bacteroides xylanolyticus (99)	NR_104899	872
OTU61	Firmicutes	Bacilli	Bacillales	Staphylococcaceae	Staphylococcus	0.99	Staphylococcus epidermidis (99)	NR_113957	473
OTU63	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Tatumella	0.33	Tatumella morbirosei (96)	NR_116282	469
OTU64	Actinobacteria	Actinobacteria	Actinomycetales	Corynebacteriaceae	Corynebacterium	0.97	Corynebacterium aurimucosum (99)	NR_115262	135
OTU65	Firmicutes	Bacilli	Lactobacillales	Leuconostocaceae	Leuconostoc	0.98	Leuconostoc mesenteroides (99)	NR_074957	486
OTU66	Firmicutes	Bacilli	Bacillales	Staphylococcaceae	Staphylococcus	0.97	Staphylococcus cohnii (97)	NR_037046	171
OTU67	Actinobacteria	Actinobacteria	Actinomycetales	Corynebacteriaceae	Corynebacterium	0.71	Corynebacterium ureicelerivorans (98)	NR_042558	162
OTU68	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Pantoea	0.81	Pantoea vagans (100)	NR_102966	507
OTU7	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	0.99	Lactobacillus helsingborgensis (99)	NR_126253	233,441
OTU70	Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Sphingobacteriaceae	Mucilaginibacter	0.01	Bizionia hallyeonensis (80)	NR_109525	292
OTU72	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Saccharibacter	0.38	Saccharibacter floricola (95)	NR_024819	294
OTU73	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas	0.81	Pseudomonas rhizosphaerae (98)	NR_029063	70
OTU75	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.97	Prevotella copri (98)	NR_113411	100
OTU77	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.07	Prevotella ruminicola (91)	NR_102887	56
OTU78	Firmicutes	Bacilli	Bacillales	Bacillaceae_1	Bacillus	0.98	Bacillus cereus (99)	NR_113266	356
OTU79	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.71	Prevotella brevis (90)	NR_041954	103
OTU8	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	0.99	Lactobacillus mellis (99)	NR_126249	182,941
OTU80	Proteobacteria	Alphaproteobacteria	Rickettsiales	Anaplasmataceae	Anaplasma	0.01	Wolbachia endosymbiont (90)	NR_074571	58
OTU83	Proteobacteria	Alphaproteobacteria	Rhizobiales	Bartonellaceae	Bartonella	0.18	Paenochrobactrum glaciei (96)	NR_112750	3,693
OTU84	Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Providencia	0.48	Moellerella wisconsensis (99)	NR_104939	102
OTU86	Bacteroidetes	Bacteroidia	Bacteroidales	Prevotellaceae	Prevotella	0.28	Prevotella ruminicola (92)	NR_102887	29
OTU87	Actinobacteria	Actinobacteria	Actinomycetales	Corynebacteriaceae	Corynebacterium	0.88	Corynebacterium mucifaciens (98)	NR_026396	76
OTU88	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Gluconobacter	0.09	Commensalibacter intestini (98)	NR_116307	46
OTU89	Bacteroidetes	Bacteroidia	Bacteroidales	Porphyromonadaceae	Dysgonomonas	0.71	Dysgonomonas gadei (96)	NR_113134	62
OTU9	Firmicutes	Bacilli	Lactobacillales	Lactobacillaceae	Lactobacillus	1.00	Lactobacillus kunkeei (99)	NR_026404	54,689
OTU90	Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Tanticharoenia	0.85	Tanticharoenia sakaeratensis (99)	NR_041601	34
OTU91	Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	Sphingomonas	0.98	Sphingomonas yabuuchiae (99)	NR_028634	4
OTU94	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Acinetobacter	0.98	Acinetobacter radioresistens (99)	NR_114074	107
OTU96	Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Pseudomonas	0.97	Pseudomonas agarici (99)	NR_036998	80
OTU97	Firmicutes	Clostridia	Clostridiales	Lachnospiraceae	Clostridium_XlVa	0.38	Butyrivibrio fibrisolvens (89)	NR_025981	28
OTU98	Bacteroidetes	Bacteroidia	Bacteroidales	Porphyromonadaceae	Dysgonomonas	0.06	Dysgonomonas capnocytophagoides (90)	NR_113133	14
								TOTAL	3,028,896

	Sampled beehives (honeybee colonies)																															
OTU_{97}	PR3D	PR5D	PR6D	PR8D	PR6E	PRK8E	PO1	PO2	PO3	PO4	PE1	PE19	KY59	ST17	PS2A	PS4A	PS5A	PR3A	PR4A	PR5C	PR6A	PR8C	PC4A	SKB	SKC	SKA	PE2	PE4	PE11	PE18	PE20	PO12
OTU1	0.057	0.002	0.003	0.002	0.044	0.009	0.178	0.212	0.206	0.073	0.062	0.049	0.481	0.261	0.070	0.063	0.069	0.118	0.063	0.069	0.055	0.082	0.087	0.079	0.076	0.013	0.182	0.053	0.208	0.236	0.299	0.199
OTU10	0.001	0.000	0.001	0.000	0.001	0.002	0.002	0.003	0.003	0.002	0.002	0.002	0.002	0.002	0.001	0.000	0.392	0.003	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.002	0.001	0.002	0.001	0.002	0.002
OTU100	-	0.000	-	-	0.000	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU101	-	0.000	-	-	0.000	0.010	-	-	-	-	-	0.000	-	-	0.000	-	-	-	-	-	-	0.000	0.000	-	-	-	-	0.000	0.000	-	-	0.000
OTU103	-	-	0.000	-	-	0.005	-	-	-	-	-	-	-	-	0.000	-	-	0.000	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-
OTU104	-	-	-	-	0.000	-	0.000	0.000	-	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	-	0.000	-	0.000	0.000	-	0.000	0.000	0.000
OTU105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-	-
OTU106	-	-	-	0.000	0.000	0.000	0.000	-	-	0.002	-	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	-	-	0.000
OTU107	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU108	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU109	0.000	0.000	0.000	0.000	0.000	0.003	0.002	0.002	0.005	0.001	0.001	0.000	0.003	0.001	0.005	0.003	0.002	0.003	0.005	0.003	0.002	0.004	0.010	0.011	0.007	0.007	0.003	0.001	0.001	0.002	0.002	0.001
OTU11	0.000	0.840	0.001	0.383	0.001	0.119	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.003	0.001	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.000	0.000	-	0.000	0.000	0.000	0.000	-	0.000
OTU112	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU113	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU115	-	-	-	-	-	0.007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU116	-	0.000	-	-	0.001	-	0.000	0.000	-	0.000	-	0.000	0.000	0.000	-	-	-	-	-	-	-	0.000	0.000	-	-	0.000	0.000	0.000	0.000	0.000	-	0.000
OTU117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-	-	-	0.000	0.000
OTU12	0.001	0.001	0.001	0.001	0.001	0.004	0.043	0.038	0.065	0.027	0.025	0.026	0.094	0.024	0.022	0.022	0.016	0.036	0.029	0.037	0.035	0.027	0.046	0.054	0.055	0.028	0.017	0.014	0.025	0.031	0.009	0.015
OTU120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU13	0.000	0.001	0.001	0.000	0.001	0.001	0.014	0.018	0.007	0.012	0.008	0.009	0.002	0.006	0.017	0.018	0.008	0.015	0.025	0.015	0.014	0.016	0.045	0.024	0.044	0.015	0.013	0.010	0.004	0.008	0.011	0.007
OTU14	0.001	0.001	0.001	0.001	0.001	0.001	0.032	0.050	0.042	0.019	0.015	0.002	0.005	0.007	0.040	0.071	0.023	0.057	0.064	0.121	0.056	0.040	0.067	0.074	0.060	0.006	0.019	0.001	0.006	0.018	0.009	0.012
OTU15	0.000	0.001	0.001	0.000	0.000	0.000	0.004	0.007	0.003	0.011	0.006	0.006	0.001	0.003	0.003	0.001	0.003	0.011	0.003	0.006	0.018	0.007	0.002	0.022	0.026	0.283	0.007	0.022	0.015	0.007	0.003	0.005
OTU16	-	0.000	0.000	0.000	0.000	-	0.001	0.055	0.000	0.001	0.001	0.121	0.000	0.000	0.004	0.004	0.005	0.001	0.001	0.000	0.000	0.000	0.000	0.013	0.000	0.001	0.002	0.025	0.001	0.001	0.190	0.000
OTU17	0.000	0.000	0.000	0.000	0.000	0.000	0.007	0.006	0.020	0.008	0.005	0.001	0.001	0.008	0.019	0.013	0.016	0.045	0.024	0.010	0.010	0.013	0.023	0.028	0.036	0.004	0.012	0.000	0.003	0.002	0.003	0.008
OTU18	0.000	0.001	0.003	0.001	0.001	0.016	0.019	0.010	0.052	0.012	0.050	0.110	0.015	0.019	0.065	0.046	0.014	0.023	0.024	0.009	0.022	0.023	0.056	0.039	0.031	0.169	0.094	0.073	0.087	0.101	0.013	0.019
OTU19	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	0.008	0.001	0.004	0.003	0.000	0.000	0.000	0.009	0.001	0.002	0.006	0.010	0.000	0.001	0.023	0.002	0.000	0.001	0.006	0.009	0.000	0.003
OTU2	0.001	0.002	0.001	0.001	0.001	0.001	0.229	0.255	0.029	0.328	0.227	0.154	0.002	0.317	0.003	0.010	0.038	0.032	0.006	0.129	0.374	0.072	0.001	0.005	0.052	0.143	0.185	0.131	0.004	0.143	0.155	0.260
OTU21	-	0.000	0.000	0.000	-	0.000	-	-	0.014	0.002	0.000	-	0.000	0.008	0.000	0.007	0.000	0.005	0.000	0.015	0.003	0.000	0.000	-	0.003	0.000	0.000	0.039	0.000	0.000	0.000	0.000
OTU22	0.000	-	0.000	0.000	0.000	-	0.002	0.003	0.002	0.002	0.002	0.002	0.002	0.002	0.000	-	-	-	-	0.000	0.000	-	0.000	0.032	0.009	0.007	0.000	-	-	-	-	-
OTU23	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	0.001	0.011	0.009	0.001	0.000	0.035	0.011	0.001	0.004	0.008	0.004	0.000	0.000	0.010	0.030	0.009	0.002	0.004	0.017	0.000	0.002	0.000	0.000
OTU24	-	-	-	-	-	-	0.030	0.000	0.000	0.041	0.001	0.000	0.000	0.004	-	-	-	-	-	-	0.000	-	0.000	-	-	-	0.000	0.000	0.000	-	0.001	0.020
OTU25	0.001	0.000	0.001	0.000	0.001	0.001	0.014	0.020	0.014	0.015	0.008	0.002	0.013	0.004	0.027	0.016	0.009	0.014	0.024	0.019	0.022	0.014	0.010	0.013	0.014	0.004	0.010	0.008	0.016	0.004	0.006	0.007
OTU26	-	-	-	-	-	-	0.003	0.002	0.002	0.003	0.033	0.003	0.003	0.003	-	-	-	0.000	-	-	-	-	-	-	-	0.000	0.000	0.049	0.000	0.009	0.000	-
OTU28	-	0.000	-	-	-	0.000	0.000	0.001	0.000	0.000	0.005	0.000	0.000	0.000	0.000	0.000	0.000	-	-	0.000	0.007	0.000	0.001	0.001	0.000	0.001	0.000	0.029	0.000	0.000	0.000	0.011
OTU29	0.000	0.000	0.000	0.001	0.000	-	0.001	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001
OTU3	0.003	0.115	0.004	0.200	0.005	0.055	0.165	0.052	0.151	0.131	0.173	0.243	0.145	0.083	0.155	0.193	0.165	0.122	0.169	0.102	0.099	0.147	0.145	0.119	0.085	0.177	0.160	0.259	0.416	0.207	0.157	0.209
OTU30	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.006	0.001	0.005	0.003	0.002	0.000	0.001	0.000	0.001	0.000	0.002	0.002	0.001	0.001	0.000	0.000	0.001	0.009	0.001	0.001	0.005	0.000	0.001	0.001	0.001
OTU31	-	0.000	0.000	-	0.000	0.059	-	-	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	-	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-
OTU32	-	-	-	0.000	-	0.000	0.002	0.000	-	0.006	-	0.000	0.000	0.002	0.002	0.001	0.000	0.001	0.000	0.001	0.000	0.004	0.000	0.000	0.000	-	0.000	0.001	0.002	0.000	0.001	0.001
OTU33	0.001	0.001	0.001	0.001	0.001	0.001	0.024	0.031	0.039	0.021	0.011	0.003	0.005	0.007	0.036	0.063	0.032	0.049	0.049	0.040	0.029	0.081	0.061	0.089	0.117	0.005	0.027	0.002	0.005	0.006	0.010	0.014
OTU34	-	-	-	-	-	-	0.002	0.001	0.002	0.001	0.002	0.002	0.001	0.002	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.000	-	-
OTU35	0.001	0.000	0.002	0.000	0.003	0.000	0.000	-	-	0.000	-	-	0.000	-	0.000	-	-	0.007	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	-	0.000
OTU36	-	-	-	0.000	-	0.080	-	-	-	-	-	-	-	-	0.000	0.000	0.000	-	0.000	-	-	-	-	0.000	-	-	-	0.000	-	-	-	-
OTU37	0.000	0.000	-	0.000	-	-	0.000	-	-	-	0.000	-	0.000	-	0.005	0.014	0.001	0.000	0.000	0.001	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	-	-	-
OTU38	-	0.000	0.000	-	-	0.000	0.000	0.000	0.000	0.019	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	-	-	0.000	0.000	0.000
OTU39	-	-	-	-	-	-	0.000	-	-	0.002	-	0.001	-	0.013	0.000	0.000	-	0.000	0.000	0.000	-	0.000	0.000	0.000	-	0.000	0.011	0.000	0.005	0.000	0.000	0.005
OTU4	0.587	0.001	0.514	0.015	0.418	0.114	-	-	-	-	-	-	-	-	0.141	0.004	0.041	0.042	0.062	0.001	0.004	0.011	0.001	0.001	0.001	-	-	-	-	-	-	-
OTU40	-	-	-	-	-	-	0.001	0.000	-	0.004	-	-	0.000	0.001	0.000	0.000	-	0.007	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	0.001	0.000	0.000	0.000	0.000
OTU41	-	0.000	-	-	-	-	-	-	-	-	0.000	-	-	-	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	-	-	-	-	-
OTU42	-	0.002	0.000	-	-	0.033	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-	-	-
OTU43	-	0.000	-	-	0.000	0.016	0.000	0.000	-	0.000	-	0.000	0.000	0.000	0.000	-	-	-	-	-	-	-	-	0.000	-	0.000	0.000	0.000	-	0.000	0.000	0.000
OTU44	0.000	-	0.000	-	-	-	-	-	-	-	-	-	0.000	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	-	0.000	-	0.001	0.000	-	0.000
OTU45	-	0.000	-	-	0.000	0.008	-	-	-	0.000	0.000	-	0.000	-	-	-	0.000	-	-	-	0.000	-	-	-	-	-	0.000	-	-	0.000	0.000	-
OTU47	0.000	0.000	-	-	0.000	0.021	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000	-	-	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OTU49	-	-	-	-	0.000	0.000	-	0.000	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-
OTU5	0.307	0.002	0.177	0.360	0.450	0.166	-	-	0.000	-	-	0.000	-	-	0.009	0.001	0.001	0.053	0.097	0.001	0.003	0.116	0.001	0.001	0.001	0.000	-	-	0.000	-	-	-
OTU50	-	0.000	-	-	0.000	0.026	-	-	-	-	-	0.000	-	0.000	-	0.000	-	-	-	-	0.000	-	-	0.000	-	-	0.000	0.000	-	-	0.000	0.000
OTU51	-	-	-	-	-	0.016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-
OTU53	-	-	-	-	0.000	-	0.000	0.000	0.000	0.002	0.000	0.002	0.000	0.015	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.010
OTU54	-	0.000	0.000	-	-	0.000	-	-	0.000	0.001	-	-	0.000	0.002	0.000	0.000	-	0.009	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	0.001	0.000	0.000	0.001	0.000
OTU55	0.001	0.017	0.001	0.026	0.001	0.004	0.048	0.014	0.072	0.047	0.195	0.125	0.019	0.018	0.073	0.035	0.024	0.045	0.062	0.035	0.023	0.043	0.034	0.036	0.043	0.033	0.066	0.134	0.038	0.089	0.024	0.021
OTU56	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU57	-	-	-	-	-	0.023	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU58	0.000	-	0.000	0.000	0.000	-	0.001	0.001	0.001	0.000	0.001	0.000	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001	0.001	0.001	0.001
OTU59	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-
OTU6	0.002	0.004	0.002	0.002	0.002	0.023	0.026	0.051	0.097	0.066	0.062	0.063	0.088	0.068	0.104	0.231	0.068	0.098	0.139	0.245	0.089	0.158	0.208	0.105	0.109	0.037	0.097	0.073	0.059	0.074	0.058	0.069
OTU60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	0.000	0.000	-	0.000
OTU61	0.000	0.000	0.000	-	0.002	0.023	-	0.000	-	-	0.000	-	-	-	-	-	-	0.000	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000
OTU63	-	0.000	-	0.000	-	0.035	-	-	-	-	-	-	-	-	-	0.000	-	0.000	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-	-	-
OTU64	-	-	-	-	-	0.010	-	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-
OTU65	-	-	0.000	0.000	0.000	-	-	-	-	-	-	-	-	0.001	-	-	0.000	0.000	0.000	-	-	0.000	-	-	-	-	-	-	-	-	0.000	0.012
OTU66	-	0.000	-	-	-	0.012	0.000	-	-	-	-	-	0.000	-	-	-	0.000	-	-	-	-	0.000	-	-	-	0.000	0.000	-	0.000	-	-	-
OTU67	-	0.000	-	-	0.000	0.012	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU68	-	0.000	-	-	-	0.000	-	-	0.000	0.000	-	0.000	-	0.000	0.002	0.001	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.001	0.001	0.000	0.000
OTU7	0.003	0.003	0.004	0.002	0.004	0.019	0.101	0.087	0.104	0.083	0.042	0.020	0.088	0.068	0.080	0.093	0.031	0.061	0.063	0.091	0.054	0.054	0.110	0.070	0.081	0.041	0.053	0.033	0.073	0.026	0.025	0.060
OTU70	-	0.000	-	-	-	0.022	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU72	0.000	0.000	-	0.000	-	-	-	0.000	-	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	-	0.000	0.000
OTU73	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	0.000
OTU75	-	0.000	-	-	-	0.008	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU78	-	0.000	-	-	0.000	0.025	-	0.000	0.000	0.000	-	0.000	0.000	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	0.000	-	-	-	-
OTU79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU8	0.002	0.001	0.003	0.001	0.002	0.001	0.042	0.069	0.065	0.045	0.037	0.036	0.020	0.035	0.048	0.071	0.037	0.115	0.076	0.039	0.062	0.066	0.058	0.150	0.105	0.017	0.025	0.011	0.019	0.009	0.014	0.020
OTU80	-	0.001	-	-	-	0.002	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	0.000	0.000	-	-	-	-	-	-	-	-	-	-
OTU83	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.002	0.000	0.002	0.001	0.001	0.000	0.003	0.000	0.000	0.000	0.001	0.000	0.003	0.002	0.007	0.000	0.000	0.001	0.002	0.005	0.001	0.000	0.002	0.002	0.002
OTU84	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	0.000	0.001	-	-	-	-	-	0.000	0.000	-	-	-	0.000	-	0.000	-	-	-
OTU86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU87	-	-	-	-	0.000	0.005	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-
OTU88	-	-	-	-	-	-	0.000	-	-	0.001	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-
OTU89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-
OTU9	0.028	0.001	0.278	0.003	0.055	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.028	0.003	0.003	0.005	0.000	0.000	0.000	0.000	0.018	0.000	0.000	0.000	0.000	-	-	-	-	0.000
OTU90	-	-	-	-	-	-	-	-	-	0.000	0.000	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	0.000	0.000	0.000	-	-	-	0.000
OTU91	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	0.000
OTU94	-	-	-	-	-	-	-	-	-	-	0.000	0.000	0.000	0.000	-	-	-	-	-	-	-	-	-	-	-	-	0.000	0.000	0.000	0.000	-	0.000
OTU96	-	-	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	-	-	-	-	-	-	-	-	-	-	0.000	-	0.000	0.000	0.000	0.000
OTU97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	56,748	39,562	70,565	59,778	52,089	13,016	17,759	20,064	22,210	29,420	18,637	41,122	82,269	41,813	75,989	66,428	53,732	41,910	56,249	43,358	70,881	68,444	67,479	68,223	60,455	25,159	85,333	34,158	46,173	36,734	34,032	32,781

	Sampled beehives (honeybee colonies)																						
OTU_{97}	ST18	PS2B	PS2C	PS3A	PS3B	PS3C	PS4B	PS4C	PS5B	PS5C	PR3B	PR3C	PR4B	PR4C	PR5A	PR5B	PR6B	PR6C	PR8A	PR8B	PR11A	PR11B	PR11C
OTU1	0.136	0.066	0.150	0.149	0.297	0.213	0.081	0.072	0.030	0.056	0.075	0.081	0.179	0.156	0.117	0.114	0.037	0.134	0.176	0.067	0.160	0.094	0.113
OTU10	0.001	0.001	0.001	0.006	0.001	0.001	0.001	0.000	0.415	0.299	0.006	0.001	0.001	0.000	0.001	0.000	0.001	0.001	0.001	0.001	0.000	0.000	0.000
OTU100	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-
OTU101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-
OTU103	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU104	0.000	-	-	0.000	-	0.000	-	-	-	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	-
OTU105	-	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	-	0.000	0.001	0.000	-	-	-	0.000	-	0.000	0.000	-	0.001
OTU106	0.001	0.000	-	-	-	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	-	0.000	0.004	0.000
OTU107	-	0.001	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-
OTU108	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU109	0.001	0.006	0.003	0.004	0.004	0.005	0.004	0.004	0.004	0.003	0.003	0.005	0.006	0.007	0.005	0.002	0.002	0.003	0.005	0.006	0.009	0.012	0.011
OTU11	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	-	-	-	-	0.001	0.000	0.000	-	-	0.000	0.000	0.000	0.000	0.000
OTU112	-	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU113	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU114	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU115	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU116	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU117	-	-	-	0.000	-	-	-	-	-	-	0.000	-	0.000	-	-	-	-	-	-	-	-	-	0.000
OTU12	0.004	0.043	0.033	0.034	0.028	0.040	0.028	0.034	0.022	0.027	0.027	0.060	0.074	0.102	0.062	0.068	0.028	0.044	0.041	0.046	0.067	0.088	0.064
OTU120	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU13	0.013	0.012	0.009	0.008	0.005	0.018	0.012	0.012	0.004	0.003	0.003	0.011	0.023	0.024	0.015	0.011	0.007	0.010	0.005	0.007	0.021	0.014	0.006
OTU14	0.007	0.007	0.046	0.026	0.012	0.015	0.028	0.028	0.045	0.027	0.025	0.032	0.044	0.011	0.067	0.058	0.021	0.034	0.029	0.036	0.039	0.029	0.032
OTU15	0.006	0.000	0.000	0.001	0.001	0.001	0.000	0.000	0.001	0.000	0.005	0.004	0.001	0.003	0.007	0.009	0.021	0.014	0.002	0.005	0.001	0.002	0.000
OTU16	0.000	0.005	0.003	0.000	0.000	0.018	0.001	0.002	0.005	0.014	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.000	0.002	0.000	0.001	0.000	0.000
OTU17	0.029	0.002	0.016	0.020	0.013	0.017	0.011	0.009	0.009	0.008	0.011	0.008	0.020	0.004	0.007	0.009	0.005	0.006	0.008	0.006	0.008	0.006	0.003
OTU18	0.042	0.045	0.018	0.058	0.067	0.045	0.011	0.009	0.011	0.050	0.016	0.009	0.030	0.020	0.016	0.012	0.031	0.013	0.006	0.044	0.021	0.015	0.029
OTU19	0.018	0.000	-	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.002	0.003	0.000	0.000	0.004	0.001	0.000	0.001	0.006	0.003	0.000	0.000	0.000
OTU2	0.318	0.002	0.008	0.053	0.025	0.053	0.001	0.001	0.007	0.007	0.029	0.092	0.006	0.002	0.050	0.144	0.399	0.154	0.105	0.045	0.013	0.006	0.005
OTU21	0.070	0.000	0.000	0.001	0.000	0.001	0.016	0.029	0.002	0.000	0.000	0.005	0.000	0.005	0.005	0.010	0.000	0.000	0.000	0.000	0.006	0.003	0.000
OTU22	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	0.000	-	0.000	0.000	-	0.000	-
OTU23	0.000	0.000	0.003	0.000	0.001	0.000	0.010	0.018	0.001	0.004	0.001	0.000	0.000	0.001	0.002	0.003	0.000	0.001	0.000	0.000	0.001	0.010	0.004
OTU24	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU25	0.003	0.043	0.019	0.013	0.010	0.008	0.025	0.020	0.011	0.007	0.008	0.013	0.010	0.019	0.035	0.036	0.021	0.025	0.021	0.022	0.039	0.025	0.017
OTU26	0.000	-	0.000	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-
OTU28	0.066	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	-	0.001	-	-	0.000	-	0.000	0.001	-	-	0.000	0.000	0.000
OTU29	0.001	-	0.000	0.001	0.002	0.006	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
OTU3	0.083	0.135	0.091	0.195	0.156	0.136	0.189	0.191	0.113	0.221	0.094	0.116	0.198	0.232	0.112	0.083	0.100	0.142	0.193	0.214	0.095	0.094	0.167
OTU30	0.004	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	-	0.000	0.000
OTU31	-	-	0.000	0.000	0.000	-	-	-	0.000	-	-	-	-	-	-	0.000	0.000	0.000	-	-	-	-	-
OTU32	0.002	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.001	0.000	0.000	0.002	0.004	0.001	0.001	0.000	0.015	0.001	0.001	0.000	0.002	0.005	0.001
OTU33	0.011	0.006	0.034	0.032	0.022	0.022	0.018	0.019	0.027	0.023	0.017	0.021	0.033	0.006	0.033	0.033	0.012	0.022	0.020	0.018	0.053	0.027	0.025
OTU34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU35	0.000	-	-	-	0.000	-	-	-	-	-	0.004	0.000	0.000	0.000	0.000	-	-	0.000	0.000	0.000	0.000	-	-
OTU36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU37	-	0.001	0.001	0.002	0.000	0.001	0.002	0.000	0.000	0.000	0.001	0.001	0.001	0.003	0.002	0.001	0.000	0.000	0.000	0.001	0.001	0.000	0.001
OTU38	-	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000
OTU39	0.006	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU4	-	0.064	0.155	0.029	0.052	0.009	0.008	0.001	0.030	0.052	0.167	0.098	0.002	0.003	0.001	0.001	0.020	0.013	0.002	0.003	0.001	0.000	0.001
OTU40	0.001	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000	-	0.000	-	0.000	-	-	0.000	-	0.001	0.000
OTU41	-	0.002	0.000	0.000	-	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	-	-	-	-	0.000	0.000	0.000
OTU42	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	0.000	-	0.000	-	-	0.000
OTU43	0.001	0.000	-	-	0.000	0.000	-	0.000	-	0.000	-	-	-	-	0.000	-	-	0.000	-	-	-	-	-
OTU44	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.004	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
OTU45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU47	0.000	0.000	0.000	0.000	0.000	0.001	0.000	-	-	-	-	-	0.000	0.000	-	-	0.000	-	0.000	-	-	0.000	-
OTU49	-	0.000	0.000	0.001	0.001	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	0.000	-
OTU5	-	0.001	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.189	0.184	0.002	0.009	0.000	0.000	0.002	0.001	0.006	0.024	0.002	0.003	0.007
OTU50	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	0.000	-	-	-	-	-
OTU51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU53	0.009	-	-	-	-	-	-	0.000	0.000	-	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-
OTU54	0.001	-	-	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.004	-	0.000	0.000	-	0.000	-	-	-	-	0.001	-
OTU55	0.027	0.057	0.040	0.069	0.073	0.066	0.093	0.102	0.051	0.057	0.029	0.036	0.050	0.064	0.033	0.042	0.050	0.065	0.039	0.057	0.031	0.047	0.060
OTU56	-	0.005	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-
OTU57	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU58	0.001	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU59	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU6	0.062	0.195	0.128	0.095	0.122	0.125	0.117	0.218	0.046	0.046	0.038	0.064	0.103	0.182	0.181	0.131	0.101	0.082	0.128	0.198	0.173	0.309	0.248
OTU60	0.031	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU61	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	0.000	-	-	0.000	-	-	-
OTU63	-	-	-	-	0.000	-	-	-	-	-	0.000	-	-	-	-	-	0.000	-	-	0.000	-	-	-
OTU64	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU65	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU66	0.000	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	0.000	-	-	-
OTU67	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU68	0.000	-	-	-	-	0.000	0.001	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	0.000	-	0.000	0.000	0.000
OTU7	0.026	0.194	0.064	0.063	0.030	0.031	0.270	0.114	0.041	0.032	0.034	0.077	0.126	0.081	0.107	0.130	0.056	0.130	0.148	0.093	0.159	0.150	0.134
OTU70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU72	0.000	-	0.000	-	0.000	0.000	-	-	-	-	0.000	-	-	0.000	-	-	0.000	-	-	0.000	0.000	0.000	0.000
OTU73	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU77	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-
OTU78	0.000	-	-	-	-	-	-	-	0.000	0.000	0.000	-	-	-	-	-	-	0.000	-	-	-	-	-
OTU79	-	0.003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU8	0.007	0.071	0.091	0.128	0.055	0.067	0.031	0.108	0.121	0.054	0.059	0.062	0.086	0.061	0.124	0.094	0.068	0.098	0.050	0.101	0.094	0.050	0.069
OTU80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.000	-	0.000	-	0.000	-
OTU83	0.004	0.000	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.001	0.002	0.000	0.000	0.003	0.004	0.002	0.002	0.004	0.000	0.002	0.001	0.000
OTU84	-	-	-	-	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	0.000	0.000	-	-	-
OTU86	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU87	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU89	0.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU9	0.000	0.027	0.025	0.008	0.020	0.100	0.038	0.004	0.001	0.004	0.156	0.005	0.000	0.001	0.001	0.000	0.000	0.001	0.000	0.000	0.001	0.001	0.001
OTU90	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU91	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU94	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU96	0.000	-	-	0.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU97	-	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OTU98	0.001	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TOTAL	27,927	37,856	64,739	77,610	64,927	59,165	69,230	66,572	62,845	70,019	74,777	65,743	86,310	72,173	69,124	58,594	64,413	62,720	66,948	65,751	64,698	71,461	72,724