闫满玉, 杜晓军, 赵爱花, 彭明春. 河南宝天曼落叶阔叶林木本植物单物种－面积关系. 生物多样性, 2015, 23(5): 630-640.
http://www.biodiversity-science.net/CN/10.17520/biods.2015031

附录1　宝天曼森林动态监测样地土壤细菌名录(–表示相应分类水平上没有明确分类名称信息；[ ]表示分类信息存在争议)
Appendix 1　Soil bacteria list in the Baotianman Forest Dynamics Plot. – means without specific names at the relative classification levels; [ ] means with controversial names.

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Planctomycetes	Planctomycetia	Pirellulales	Pirellulaceae	*A17*
Proteobacteria	Betaproteobacteria	Burkholderiales	Alcaligenaceae	*Achromobacter*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	*Acidiphilium*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	*Acidisoma*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	*Acidocella*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Acidovorax*
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	*Acinetobacter*
Actinobacteria	Actinobacteria	Actinomycetales	Streptosporangiaceae	*Acrocarpospora*
Actinobacteria	Actinobacteria	Actinomycetales	Thermomonosporaceae	*Actinoallomurus*
Actinobacteria	Actinobacteria	Actinomycetales	Thermomonosporaceae	*Actinocorallia*
Actinobacteria	Actinobacteria	Actinomycetales	Thermomonosporaceae	*Actinomadura*
Actinobacteria	Actinobacteria	Actinomycetales	Pseudonocardiaceae	*Actinomycetospora*
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Actinoplanes*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Adhaeribacter*
Actinobacteria	Actinobacteria	Actinomycetales	Nocardioidaceae	*Aeromicrobium*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhodobiaceae	*Afifella*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	*Afipia*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	*Agrobacterium*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Agromyces*
Firmicutes	Bacilli	Bacillales	Alicyclobacillaceae	*Alicyclobacillus*
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	*Alkanindiges*
Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	*Amaricoccus*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	*Aminobacter*
Firmicutes	Bacilli	Bacillales	Paenibacillaceae	*Ammoniphilus*
Actinobacteria	Actinobacteria	Actinomycetales	Pseudonocardiaceae	*Amycolatopsis*
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolinaceae	*Anaerolinea*
Proteobacteria	Deltaproteobacteria	Myxococcales	Myxococcaceae	*Anaeromyxobacter*
Firmicutes	Bacilli	Bacillales	Bacillaceae	*Anoxybacillus*
Proteobacteria	Gammaproteobacteria	Legionellales	Coxiellaceae	*Aquicella*
Actinobacteria	Actinobacteria	Actinomycetales	Micrococcaceae	*Arthrobacter*
Tenericutes	Mollicutes	Anaeroplasmatales	Anaeroplasmataceae	*Asteroleplasma*
Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	*Asticcacaulis*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Azohydromonas*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Azospira*
Firmicutes	Bacilli	Bacillales	Bacillaceae	*Bacillus*
Proteobacteria	Deltaproteobacteria	Bdellovibrionales	Bacteriovoracaceae	*Bacteriovorax*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	*Balneimonas*
Proteobacteria	Deltaproteobacteria	Bdellovibrionales	Bdellovibrionaceae	*Bdellovibrio*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Xanthobacteraceae	*Blastochloris*

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	*Blastomonas*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	*Bosea*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Brachymonas*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	*Bradyrhizobium*
Firmicutes	Bacilli	Bacillales	Paenibacillaceae	*Brevibacillus*
Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	*Burkholderia*
Chloroflexi	Anaerolineae	Caldilineales	Caldilineaceae	*Caldilinea*
Firmicutes	Clostridia	Clostridiales	Clostridiaceae	*Caloramator*
Bacteroidetes	Cytophagia	Cytophagales	[Amoebophilaceae]	Candidatus *Amoebophilus*
Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	Candidatus *Glomeribacter*
Acidobacteria	Acidobacteriia	Acidobacteriales	Koribacteraceae	Candidatus *Koribacter*
Chlamydiae	Chlamydiia	Chlamydiales	Parachlamydiaceae	Candidatus *Protochlamydia*
Chlamydiae	Chlamydiia	Chlamydiales	Rhabdochlamydiaceae	Candidatus *Rhabdochlamydia*
Acidobacteria	Solibacteres	Solibacterales	Solibacteraceae	Candidatus *Solibacter*
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	Candidatus *Xiphinematobacte*
Firmicutes	Bacilli	Lactobacillales	Carnobacteriaceae	*Carnobacterium*
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Catellatospora*
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Catenuloplanes*
Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	*Caulobacter*
Actinobacteria	Actinobacteria	Actinomycetales	Cellulomonadaceae	*Cellulomonas*
Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	*Cellvibrio*
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	*Chitinophaga*
Bacteroidetes	Flavobacteriia	Flavobacteriales	[Weeksellaceae]	*Chryseobacterium*
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	*Chthoniobacter*
Firmicutes	Clostridia	Clostridiales	Clostridiaceae	*Clostridium*
Firmicutes	Bacilli	Bacillales	Paenibacillaceae	*Cohnella*
Actinobacteria	Thermoleophilia	Solirubrobacterales	Conexibacteraceae	*Conexibacter*
Firmicutes	Clostridia	Clostridiales	Lachnospiraceae	*Coprococcus*
Proteobacteria	Gammaproteobacteria	Legionellales	Coxiellaceae	*Coxiella*
Proteobacteria	Gammaproteobacteria	Methylococcales	Crenotrichaceae	*Crenothrix*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Cryocola*
Proteobacteria	Betaproteobacteria	Burkholderiales	Oxalobacteraceae	*Cupriavidus*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Cytophaga*
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	*DA*101
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Dactylosporangium*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Dechloromonas*
Firmicutes	Clostridia	Clostridiales	Peptococcaceae	*Dehalobacter_Syntrophobotul*
[Thermi]	Deinococci	Deinococcales	Deinococcaceae	*Deinococcus*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Delftia*
Actinobacteria	Actinobacteria	Actinomycetales	Dermacoccaceae	*Dermacoccus*
Proteobacteria	Deltaproteobacteria	Desulfarculales	Desulfarculaceae	*Desulfarculus*

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Deltaproteobacteria	Desulfobacterales	Desulfobulbaceae	*Desulfobulbus*
Proteobacteria	Deltaproteobacteria	Syntrophobacterales	Syntrophaceae	*Desulfomonile*
Firmicutes	Clostridia	Clostridiales	Peptococcaceae	*Desulfosporosinus*
Proteobacteria	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae	*Desulfovibrio*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	*Devosia*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Dok*59
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Dokdonella*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Dyadobacter*
Bacteroidetes	Bacteroidia	Bacteroidales	Porphyromonadaceae	*Dysgonomonas*
Acidobacteria	Acidobacteriia	Acidobacteriales	Acidobacteriaceae	*Edaphobacter*
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	*Ellin*506
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	*Enhydrobacter*
Firmicutes	Clostridia	Clostridiales	Lachnospiraceae	*Epulopiscium*
Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	*Erwinia*
Chloroflexi	Ktedonobacteria	Ktedonobacterales	Ktedonobacteraceae	*FFCH*10602
Armatimonadetes	[Fimbriimonadia]	[Fimbriimonadales]	[Fimbriimonadaceae]	*Fimbriimonas*
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	*Flavihumibacter*
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	*Flavisolibacter*
Bacteroidetes	Flavobacteriia	Flavobacteriales	Flavobacteriaceae	*Flavobacterium*
Actinobacteria	Actinobacteria	Actinomycetales	Frankiaceae	*Frankia*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Frigoribacterium*
Proteobacteria	Betaproteobacteria	Gallionellales	Gallionellaceae	*Gallionella*
Planctomycetes	Planctomycetia	Gemmatales	Gemmataceae	*Gemmata*
Gemmatimonadetes	Gemmatimonadetes	Gemmatimonadales	Gemmatimonadaceae	*Gemmatimonas*
Firmicutes	Bacilli	Bacillales	Bacillaceae	*Geobacillus*
Proteobacteria	Deltaproteobacteria	Desulfuromonadales	Geobacteraceae	*Geobacter*
Actinobacteria	Actinobacteria	Actinomycetales	Geodermatophilaceae	*Geodermatophilus*
Acidobacteria	Holophagae	Holophagales	Holophagaceae	*Geothrix*
Nitrospirae	Nitrospira	Nitrospirales	[Thermodesulfovibrionaceae]	*GOUTA*19
Proteobacteria	Deltaproteobacteria	Myxococcales	Haliangiaceae	*Haliangium*
Proteobacteria	Betaproteobacteria	Burkholderiales	Oxalobacteraceae	*Herminiimonas*
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	*heteroC*45_4*W*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Hydrogenophaga*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Hylemonella*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Hymenobacter*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	*Hyphomicrobium*
Actinobacteria	Acidimicrobiia	Acidimicrobiales	Iamiaceae	*Iamia*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	*Inquilinus*
Actinobacteria	Actinobacteria	Actinomycetales	Intrasporangiaceae	*Janibacter*
Proteobacteria	Betaproteobacteria	Burkholderiales	Oxalobacteraceae	*Janthinobacterium*
Nitrospirae	Nitrospira	Nitrospirales	Nitrospiraceae	*JG*37-*AG*-70

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	*Kaistia*
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	*Kaistobacter*
Actinobacteria	Actinobacteria	Actinomycetales	Actinosynnemataceae	*Kibdelosporangium*
Actinobacteria	Actinobacteria	Actinomycetales	Kineosporiaceae	*Kineosporia*
Chloroflexi	Chloroflexi	[Roseiflexales]	[Kouleothrixaceae]	*Kouleothrix*
Actinobacteria	Actinobacteria	Actinomycetales	Nocardioidaceae	*Kribbella*
Actinobacteria	Actinobacteria	Actinomycetales	Actinosynnemataceae	*Kutzneria*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Xanthobacteraceae	*Labrys*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Larkinella*
Proteobacteria	Gammaproteobacteria	Legionellales	Legionellaceae	*Legionella*
Spirochaetes	[Leptospirae]	[Leptospirales]	Leptospiraceae	*Leptonema*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Leucobacter*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Luteibacter*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Luteimonas*
Verrucomicrobia	Verrucomicrobiae	Verrucomicrobiales	Verrucomicrobiaceae	*Luteolibacter*
Firmicutes	Bacilli	Bacillales	Planococcaceae	*Lysinibacillus*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Lysobacter*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	*Magnetospirillum*
Proteobacteria	Gammaproteobacteria	Oceanospirillales	Oceanospirillaceae	*Marinomonas*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	*Mesorhizobium*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Methylibium*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylobacteriaceae	*Methylobacterium*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Beijerinckiaceae	*Methyloferula*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylocystaceae	*Methylopila*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylocystaceae	*Methylosinus*
Proteobacteria	Betaproteobacteria	Methylophilales	Methylophilaceae	*Methylotenera*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Microbacterium*
Actinobacteria	Actinobacteria	Actinomycetales	Geodermatophilaceae	*Modestobacter*
Actinobacteria	Actinobacteria	Actinomycetales	Mycobacteriaceae	*Mycobacterium*
Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	*Mycoplana*
Proteobacteria	Deltaproteobacteria	Myxococcales	Myxococcaceae	*Myxococcus*
Proteobacteria	Deltaproteobacteria	Myxococcales	Nannocystaceae	*Nannocystis*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Sinobacteraceae	*Nevskia*
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	*Niastella*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	*Nitrobacter*
Proteobacteria	Betaproteobacteria	Nitrosomonadales	Nitrosomonadaceae	*Nitrosovibrio*
Nitrospirae	Nitrospira	Nitrospirales	Nitrospiraceae	*Nitrospira*
Actinobacteria	Actinobacteria	Actinomycetales	Nocardiaceae	*Nocardia*
Actinobacteria	Actinobacteria	Actinomycetales	Nocardioidaceae	*Nocardioides*
Actinobacteria	Actinobacteria	Actinomycetales	Streptosporangiaceae	*Nonomuraea*
Planctomycetes	Planctomycetia	Gemmatales	Isosphaeraceae	*Nostocoida*

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	*Novosphingobium*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Brucellaceae	*Ochrobactrum*
Verrucomicrobia	Opitutae	Opitutales	Opitutaceae	*Opitutus*
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	*OR*-59
Acidobacteria	Solibacteres	Solibacterales	Other	Other
Acidobacteria	Acidobacteriia	Acidobacteriales	Acidobacteriaceae	Other
Acidobacteria	Other	Other	Other	Other
Acidobacteria	Acidobacteriia	Acidobacteriales	Koribacteraceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Geodermatophilaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Other	Other
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Intrasporangiaceae	Other
Actinobacteria	Thermoleophilia	Solirubrobacterales	Other	Other
Actinobacteria	Actinobacteria	Actinomycetales	Actinosynnemataceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Streptomycetaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Micrococcaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Streptosporangiaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Pseudonocardiaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Kineosporiaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Cryptosporangiaceae	Other
Actinobacteria	Acidimicrobiia	Acidimicrobiales	Iamiaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Thermomonosporaceae	Other
Actinobacteria	Actinobacteria	Actinomycetales	Cellulomonadaceae	Other
Actinobacteria	Thermoleophilia	Gaiellales	Other	Other
Actinobacteria	Acidimicrobiia	Acidimicrobiales	Other	Other
Actinobacteria	Actinobacteria	Actinomycetales	Frankiaceae	Other
AD3	Other	Other	Other	Other
Armatimonadetes	Chthonomonadetes	Chthonomonadales	Other	Other
Armatimonadetes	Other	Other	Other	Other
Armatimonadetes	Chthonomonadetes	Chthonomonadales	Chthonomonadaceae	Other
Armatimonadetes	[Fimbriimonadia]	[Fimbriimonadales]	[Fimbriimonadaceae]	Other
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	Other
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Other	Other
Bacteroidetes	Other	Other	Other	Other
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	Other
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Sphingobacteriaceae	Other
Bacteroidetes	Flavobacteriia	Flavobacteriales	Cryomorphaceae	Other
Chlamydiae	Chlamydiia	Chlamydiales	Parachlamydiaceae	Other
Chlamydiae	Chlamydiia	Chlamydiales	Other	Other
Chlamydiae	Chlamydiia	Other	Other	Other

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Chlamydiae	Chlamydiia	Chlamydiales	Waddliaceae	Other
Chlamydiae	Chlamydiia	Chlamydiales	Simkaniaceae	Other
Chloroflexi	Other	Other	Other	Other
Chloroflexi	Anaerolineae	Other	Other	Other
Chloroflexi	TK10	B07_WMSP1	Other	Other
Chloroflexi	Anaerolineae	A31	Other	Other
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolinaceae	Other
Firmicutes	Bacilli	Bacillales	Planococcaceae	Other
Firmicutes	Clostridia	Clostridiales	Peptostreptococcaceae	Other
Firmicutes	Bacilli	Bacillales	Bacillaceae	Other
Firmicutes	Bacilli	Bacillales	Thermoactinomycetaceae	Other
Firmicutes	Clostridia	Clostridiales	Other	Other
Firmicutes	Bacilli	Bacillales	Other	Other
Firmicutes	Bacilli	Bacillales	Sporolactobacillaceae	Other
Gemmatimonadetes	Gemmatimonadetes	Other	Other	Other
Gemmatimonadetes	Gemmatimonadetes	Gemmatimonadales	Other	Other
Nitrospirae	Nitrospira	Nitrospirales	Nitrospiraceae	Other
Other	Other	Other	Other	Other
Planctomycetes	Phycisphaerae	Phycisphaerales	Other	Other
Proteobacteria	Betaproteobacteria	Burkholderiales	Oxalobacteraceae	Other
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	Other
Proteobacteria	Betaproteobacteria	Other	Other	Other
Proteobacteria	Alphaproteobacteria	Other	Other	Other
Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Other	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	Other
Proteobacteria	Gammaproteobacteria	Other	Other	Other
Proteobacteria	Deltaproteobacteria	Myxococcales	Polyangiaceae	Other
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	Other
Proteobacteria	Deltaproteobacteria	Myxococcales	Other	Other
Proteobacteria	Gammaproteobacteria	Legionellales	Other	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Beijerinckiaceae	Other
Proteobacteria	Betaproteobacteria	Burkholderiales	Other	Other
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Sinobacteraceae	Other
Proteobacteria	Gammaproteobacteria	Legionellales	Legionellaceae	Other
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	Other
Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	Other
Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	Other

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Alphaproteobacteria	Rickettsiales	mitochondria	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylocystaceae	Other
Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	Other
Proteobacteria	Other	Other	Other	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Brucellaceae	Other
Proteobacteria	Betaproteobacteria	Methylophilales	Other	Other
Proteobacteria	Deltaproteobacteria	Other	Other	Other
Proteobacteria	Betaproteobacteria	Burkholderiales	Alcaligenaceae	Other
Proteobacteria	Betaproteobacteria	Methylophilales	Methylophilaceae	Other
Proteobacteria	Gammaproteobacteria	Alteromonadales	Alteromonadaceae	Other
Proteobacteria	Alphaproteobacteria	Rhizobiales	Aurantimonadaceae	Other
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	Other
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	Other
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	Other
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Other	Other
Proteobacteria	Deltaproteobacteria	Desulfuromonadales	Other	Other
Proteobacteria	Gammaproteobacteria	Chromatiales	Other	Other
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	Other
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	Other
Proteobacteria	Betaproteobacteria	Neisseriales	Neisseriaceae	Other
Proteobacteria	Gammaproteobacteria	Legionellales	Coxiellaceae	Other
TM6	SJA-4	Other	Other	Other
TM7	Other	Other	Other	Other
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	Other	Other
Verrucomicrobia	Other	Other	Other	Other
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	Other
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	[Pedosphaeraceae]	Other
WS3	PRR-12	Sediment-1	Other	Other
Proteobacteria	Betaproteobacteria	Burkholderiales	Oxalobacteraceae	*Oxalobacter*
Firmicutes	Bacilli	Bacillales	Paenibacillaceae	*Paenibacillus*
Firmicutes	Bacilli	Bacillales	Planococcaceae	*Paenisporosarcina*
Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	*Pandoraea*
Chlamydiae	Chlamydiia	Chlamydiales	Parachlamydiaceae	*Parachlamydia*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	*Parvibaculum*
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Sphingobacteriaceae	*Pedobacter*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	*Pedomicrobium*
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	[Pedosphaeraceae]	*Pedosphaera*
Proteobacteria	Deltaproteobacteria	Desulfuromonadales	Pelobacteraceae	*Pelobacter*
Firmicutes	Clostridia	Clostridiales	Veillonellaceae	*Pelosinus*
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	*Perlucidibaca*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	*Phaeospirillum*

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	*Phenylobacterium*
Actinobacteria	Actinobacteria	Actinomycetales	Intrasporangiaceae	*Phycicoccus*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	*Phyllobacterium*
Proteobacteria	Betaproteobacteria	Burkholderiales	Alcaligenaceae	*Pigmentiphaga*
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Pilimelia*
Planctomycetes	Planctomycetia	Pirellulales	Pirellulaceae	*Pirellula*
Planctomycetes	Planctomycetia	Planctomycetales	Planctomycetaceae	*Planctomyces*
Firmicutes	Bacilli	Bacillales	Thermoactinomycetaceae	*Planifilum*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylocystaceae	*Pleomorphomonas*
Proteobacteria	Deltaproteobacteria	Myxococcales	Nannocystaceae	*Plesiocystis*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Polaromonas*
Proteobacteria	Betaproteobacteria	Procabacteriales	Procabacteriaceae	*Procabacter*
Actinobacteria	Actinobacteria	Actinomycetales	Promicromonosporaceae	*Promicromonospora*
Verrucomicrobia	Verrucomicrobiae	Verrucomicrobiales	Verrucomicrobiaceae	*Prosthecobacter*
Firmicutes	Clostridia	Clostridiales	Clostridiaceae	*Proteiniclasticum*
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	*Pseudomonas*
Actinobacteria	Actinobacteria	Actinomycetales	Pseudonocardiaceae	*Pseudonocardia*
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	*Psychrobacter*
Bacteroidetes	Bacteroidia	Bacteroidales	Rikenellaceae	*PW*3
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Ramlibacter*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Rathayibacter*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	*Rhizobium*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Rhodanobacter*
Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	*Rhodobacter*
Actinobacteria	Actinobacteria	Actinomycetales	Nocardiaceae	*Rhodococcus*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	*Rhodoplanes*
Proteobacteria	Alphaproteobacteria	Rickettsiales	Rickettsiaceae	*Rickettsia*
Proteobacteria	Gammaproteobacteria	Legionellales	Coxiellaceae	*Rickettsiella*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Roseateles*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	*Roseococcus*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Rubrivivax*
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	*Salinibacterium*
Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	*Salinispora*
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	*Sediminibacterium*
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	*Segetibacter*
Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	*Serratia*
Firmicutes	Bacilli	Bacillales	Thermoactinomycetaceae	*Shimazuella*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	*Skermanella*
Firmicutes	Bacilli	Bacillales	Planococcaceae	*Solibacillus*
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Sphingobacteriaceae	*Solitalea*
Actinobacteria	Actinobacteria	Actinomycetales	Streptosporangiaceae	*Sphaerisporangium*

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Sphingobacteriaceae	*Sphingobacterium*
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	*Sphingobium*
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	*Sphingomonas*
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	*Sphingopyxis*
Spirochaetes	Spirochaetes	Spirochaetales	Spirochaetaceae	*Spirochaeta*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Spirosoma*
Actinobacteria	Actinobacteria	Actinomycetales	Sporichthyaceae	*Sporichthya*
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	*Sporocytophaga*
Firmicutes	Clostridia	Clostridiales	Veillonellaceae	*Sporomusa*
Firmicutes	Bacilli	Bacillales	Planococcaceae	*Sporosarcina*
Firmicutes	Bacilli	Bacillales	Staphylococcaceae	*Staphylococcus*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	*Stenotrophomonas*
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Sinobacteraceae	*Steroidobacter*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Sterolibacterium*
Actinobacteria	Actinobacteria	Actinomycetales	Streptomycetaceae	*Streptacidiphilus*
Actinobacteria	Actinobacteria	Actinomycetales	Streptomycetaceae	*Streptomyces*
Actinobacteria	Actinobacteria	Actinomycetales	Streptosporangiaceae	*Streptosporangium*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Sulfuritalea*
Firmicutes	Clostridia	Clostridiales	Symbiobacteriaceae	*Symbiobacterium*
Proteobacteria	Deltaproteobacteria	Syntrophobacterales	Syntrophobacteraceae	*Syntrophobacter*
Proteobacteria	Gammaproteobacteria	Legionellales	Legionellaceae	*Tatlockia*
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	*Telmatospirillum*
Firmicutes	Clostridia	Clostridiales	Peptostreptococcaceae	*Tepidibacter*
Actinobacteria	Actinobacteria	Actinomycetales	Intrasporangiaceae	*Terracoccus*
Acidobacteria	Acidobacteriia	Acidobacteriales	Acidobacteriaceae	*Terriglobus*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Thauera*
Proteobacteria	Betaproteobacteria	Hydrogenophilales	Hydrogenophilaceae	*Thiobacillus*
Firmicutes	Clostridia	Clostridiales	[Tissierellaceae]	*Tissierella_Soehngenia*
Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	*Trabulsiella*
Spirochaetes	Spirochaetes	Spirochaetales	Spirochaetaceae	*Treponema*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*TS*34
Firmicutes	Bacilli	Turicibacterales	Turicibacteraceae	*Turicibacter*
Spirochaetes	[Leptospirae]	[Leptospirales]	Leptospiraceae	*Turneriella*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Uliginosibacterium*
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	*Variovorax*
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Verrucosispora*
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	*Virgisporangium*
Chlamydiae	Chlamydiia	Chlamydiales	Waddliaceae	*Waddlia*
Proteobacteria	Alphaproteobacteria	Rickettsiales	Rickettsiaceae	*Wolbachia*
Proteobacteria	Alphaproteobacteria	Rhizobiales	Xanthobacteraceae	*Xanthobacter*
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	*Zoogloea*

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
-	-	-	-	-
Acidobacteria	DA052	Ellin6513	-	-
Acidobacteria	Acidobacteriia	Acidobacteriales	Koribacteraceae	-
Acidobacteria	Solibacteres	Solibacterales	-	-
Acidobacteria	[Chloracidobacteria]	RB41	-	-
Acidobacteria	iii1-8	32-20	-	-
Acidobacteria	Acidobacteriia	Acidobacteriales	Acidobacteriaceae	-
Acidobacteria	Acidobacteria-6	iii1-15	-	-
Acidobacteria	iii1-8	DS-18	-	-
Acidobacteria	Acidobacteria-6	CCU21	-	-
Acidobacteria	Sva0725	Sva0725	-	-
Acidobacteria	[Chloracidobacteria]	RB41	Ellin6075	-
Acidobacteria	[Chloracidobacteria]	42332	-	-
Acidobacteria	-	-	-	-
Acidobacteria	S035	-	-	-
Acidobacteria	RB25	-	-	-
Acidobacteria	Acidobacteria-6	iii1-15	mb2424	-
Acidobacteria	TM1	-	-	-
Acidobacteria	Solibacteres	Solibacterales	Solibacteraceae	-
Acidobacteria	Solibacteres	Solibacterales	PAUC26f	-
Acidobacteria	iii1-8	SJA-36	-	-
Acidobacteria	[Chloracidobacteria]	Ellin7246	-	-
Acidobacteria	[Chloracidobacteria]	DS-100	-	-
Acidobacteria	Acidobacteria-5	-	-	-
Acidobacteria	Solibacteres	JH-WHS99	-	-
Acidobacteria	BPC102	MVS-40	-	-
Acidobacteria	Acidobacteria-6	iii1-15	RB40	-
Acidobacteria	AT-s54	-	-	-
Acidobacteria	[Chloracidobacteria]	PK29	-	-
Acidobacteria	EC1113	-	-	-
Acidobacteria	GAL08	-	-	-
Acidobacteria	Holophagae	Holophagales	Holophagaceae	-
Acidobacteria	Solibacteres	Solibacterales	[Bryobacteraceae]	-
Acidobacteria	PAUC37f	-	-	-
Acidobacteria	Solibacteres	Solibacterales	AKIW659	-
Acidobacteria	BPC102	-	-	-
Acidobacteria	[Chloracidobacteria]	-	-	-
Acidobacteria	iii1-8	-	-	-
Acidobacteria	Acidobacteriia	Acidobacteriales	-	-
Actinobacteria	Thermoleophilia	Gaiellales	Gaiellaceae	-
Actinobacteria	Thermoleophilia	Solirubrobacterales	-	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Actinobacteria	Acidimicrobiia	Acidimicrobiales	EB1017	-
Actinobacteria	Actinobacteria	Actinomycetales	-	-
Actinobacteria	Acidimicrobiia	Acidimicrobiales	-	-
Actinobacteria	Actinobacteria	Actinomycetales	Micrococcaceae	-
Actinobacteria	MB-A2-108	0319-7L14	-	-
Actinobacteria	Acidimicrobiia	Acidimicrobiales	C111	-
Actinobacteria	Thermoleophilia	Gaiellales	-	-
Actinobacteria	Actinobacteria	Actinomycetales	Frankiaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Micromonosporaceae	-
Actinobacteria	Thermoleophilia	Solirubrobacterales	Conexibacteraceae	-
Actinobacteria	Thermoleophilia	Solirubrobacterales	Solirubrobacteraceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Nocardioidaceae	-
Actinobacteria	Thermoleophilia	Solirubrobacterales	Patulibacteraceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Pseudonocardiaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Nakamurellaceae	-
Actinobacteria	MB-A2-108	-	-	-
Actinobacteria	Actinobacteria	Actinomycetales	Microbacteriaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Streptomycetaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Sporichthyaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Actinospicaceae	-
Actinobacteria	Rubrobacteria	Rubrobacterales	Rubrobacteraceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Kineosporiaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Intrasporangiaceae	-
Actinobacteria	Actinobacteria	Micrococcales	-	-
Actinobacteria	Actinobacteria	Actinomycetales	Thermomonosporaceae	-
Actinobacteria	Thermoleophilia	Gaiellales	AK1AB1_02E	-
Actinobacteria	Actinobacteria	Actinomycetales	Cryptosporangiaceae	-
Actinobacteria	Acidimicrobiia	Acidimicrobiales	AKIW874	-
Actinobacteria	Acidimicrobiia	Acidimicrobiales	Microthrixaceae	-
Actinobacteria	Actinobacteria	Actinomycetales	Actinosynnemataceae	-
Actinobacteria	Acidimicrobiia	Acidimicrobiales	JdFBGBact	-
Actinobacteria	Actinobacteria	Actinomycetales	Geodermatophilaceae	-
Actinobacteria	OPB41	-	-	-
Actinobacteria	Actinobacteria	Actinomycetales	ACK-M1	-
AD3	ABS-6	-	-	-
AD3	JG37-AG-4	-	-	-
AD3	-	-	-	-
Armatimonadetes	Chthonomonadetes	Chthonomonadales	Chthonomonadaceae	-
Armatimonadetes	0319-6E2	-	-	-
Armatimonadetes	[Fimbriimonadia]	[Fimbriimonadales]	[Fimbriimonadaceae]	-
Armatimonadetes	Armatimonadia	FW68	-	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Armatimonadetes	Chthonomonadetes	SJA-22	-	-
Armatimonadetes	Armatimonadia	Armatimonadales	Armatimonadaceae	-
Armatimonadetes	OPB50	-	-	-
Armatimonadetes	[Fimbriimonadia]	[Fimbriimonadales]	-	-
Armatimonadetes	SHA-37	-	-	-
Armatimonadetes	SJA-176	RB046	-	-
Armatimonadetes	SJA-176	-	-	-
Armatimonadetes	SJA-176	GAB-B06	-	-
Bacteroidetes	[Saprospirae]	[Saprospirales]	Chitinophagaceae	-
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	-	-
Bacteroidetes	Sphingobacteriia	Sphingobacteriales	Sphingobacteriaceae	-
Bacteroidetes	Cytophagia	Cytophagales	Cytophagaceae	-
Bacteroidetes	[Saprospirae]	[Saprospirales]	-	-
Bacteroidetes	[Saprospirae]	[Saprospirales]	Saprospiraceae	-
Bacteroidetes	At12OctB3	-	-	-
Bacteroidetes	Flavobacteriia	Flavobacteriales	Cryomorphaceae	-
Bacteroidetes	Bacteroidia	Bacteroidales	-	-
Bacteroidetes	Bacteroidia	Bacteroidales	Rikenellaceae	-
Bacteroidetes	Cytophagia	Cytophagales	[Amoebophilaceae]	-
Bacteroidetes	VC2_1_Bac22	-	-	-
Bacteroidetes	Bacteroidia	Bacteroidales	GZKB119	-
Bacteroidetes	Cytophagia	Cytophagales	-	-
BHI80-139	-	-	-	-
BRC1	PRR-11	-	-	-
BRC1	NPL-UPA2	-	-	-
Chlamydiae	Chlamydiia	Chlamydiales	-	-
Chlamydiae	Chlamydiia	Chlamydiales	Parachlamydiaceae	-
Chlamydiae	Chlamydiia	-	-	-
Chlamydiae	Chlamydiia	Chlamydiales	Waddliaceae	-
Chlamydiae	Chlamydiia	Chlamydiales	Chlamydiaceae	-
Chlorobi	-	-	-	-
Chlorobi	SJA-28	-	-	-
Chlorobi	OPB56	-	-	-
Chlorobi	BSV26	A89	-	-
Chlorobi	BSV26	PK329	-	-
Chlorobi	BSV26	C20	-	-
Chlorobi	Ignavibacteria	Ignavibacteriales	Ignavibacteriaceae	-
Chloroflexi	Ellin6529	-	-	-
Chloroflexi	TK10	B07_WMSP1	FFCH4570	-
Chloroflexi	Anaerolineae	SBR1031	oc28	-
Chloroflexi	S085	-	-	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Chloroflexi	Ktedonobacteria	Thermogemmatisporales	Thermogemmatisporaceae	-
Chloroflexi	Anaerolineae	SBR1031	A4b	-
Chloroflexi	Anaerolineae	H39	-	-
Chloroflexi	Chloroflexi	[Roseiflexales]	[Kouleothrixaceae]	-
Chloroflexi	TK17	-	-	-
Chloroflexi	Ktedonobacteria	JG30-KF-AS9	-	-
Chloroflexi	TK10	B07_WMSP1	-	-
Chloroflexi	TK10	AKYG885	5B-12	-
Chloroflexi	C0119	-	-	-
Chloroflexi	Anaerolineae	A31	S47	-
Chloroflexi	Gitt-GS-136	-	-	-
Chloroflexi	Anaerolineae	CFB-26	-	-
Chloroflexi	TK17	mle1-48	-	-
Chloroflexi	Ktedonobacteria	Ktedonobacterales	Ktedonobacteraceae	-
Chloroflexi	TK10	AKYG885	Dolo_23	-
Chloroflexi	Ktedonobacteria	TK10	-	-
Chloroflexi	Anaerolineae	SHA-20	-	-
Chloroflexi	Anaerolineae	envOPS12	-	-
Chloroflexi	Thermomicrobia	JG30-KF-CM45	-	-
Chloroflexi	Anaerolineae	WCHB1-50	-	-
Chloroflexi	TK10	-	-	-
Chloroflexi	Anaerolineae	SB-34	-	-
Chloroflexi	Chloroflexi	[Roseiflexales]	-	-
Chloroflexi	Anaerolineae	Caldilineales	Caldilineaceae	-
Chloroflexi	Thermomicrobia	Ellin6537	-	-
Chloroflexi	Anaerolineae	S0208	-	-
Chloroflexi	Ktedonobacteria	-	-	-
Chloroflexi	Anaerolineae	GCA004	-	-
Chloroflexi	Ktedonobacteria	B12-WMSP1	-	-
Chloroflexi	SHA-26	-	-	-
Chloroflexi	Chloroflexi	AKIW781	-	-
Chloroflexi	SAR202	-	-	-
Chloroflexi	P2-11E	-	-	-
Chloroflexi	Anaerolineae	-	-	-
Chloroflexi	-	-	-	-
Chloroflexi	Thermomicrobia	AKYG1722	-	-
Chloroflexi	Anaerolineae	A31	-	-
Chloroflexi	Anaerolineae	SBR1031	SJA-101	-
Chloroflexi	Anaerolineae	pLW-97	-	-
Chloroflexi	Chloroflexi	Chloroflexales	01D2Z48	-
Chloroflexi	Chloroflexi	Chloroflexales	FFCH7168	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Chloroflexi	Ktedonobacteria	Elev-1554	-	-
Chloroflexi	Anaerolineae	Anaerolineales	Anaerolinaceae	-
Chloroflexi	Thermomicrobia	-	-	-
Chloroflexi	Anaerolineae	SBR1031	SHA-31	-
Chloroflexi	Chloroflexi	Herpetosiphonales	-	-
Cyanobacteria	4C0d-2	MLE1-12	-	-
Cyanobacteria	ML635J-21	-	-	-
Cyanobacteria	Chloroplast	Stramenopiles	-	-
Cyanobacteria	4C0d-2	SM1D11	-	-
Cyanobacteria	Chloroplast	Streptophyta	-	-
Cyanobacteria	Chloroplast	Chlorophyta	-	-
Elusimicrobia	Elusimicrobia	FAC88	-	-
Elusimicrobia	Elusimicrobia	IIb	-	-
Elusimicrobia	Elusimicrobia	Elusimicrobiales	-	-
Elusimicrobia	Endomicrobia	-	-	-
Elusimicrobia	Elusimicrobia	MVP-88	-	-
Elusimicrobia	-	-	-	-
FBP	-	-	-	-
FCPU426	-	-	-	-
Fibrobacteres	Fibrobacteria	258ds10	-	-
Fibrobacteres	SBZC_2415	-	-	-
Firmicutes	Bacilli	Bacillales	Bacillaceae	-
Firmicutes	Bacilli	Bacillales	Planococcaceae	-
Firmicutes	Clostridia	Clostridiales	Ruminococcaceae	-
Firmicutes	Bacilli	Bacillales	-	-
Firmicutes	Clostridia	Clostridiales	Lachnospiraceae	-
Firmicutes	Clostridia	Clostridiales	Peptostreptococcaceae	-
Firmicutes	Clostridia	Clostridiales	Clostridiaceae	-
Firmicutes	Bacilli	Bacillales	Thermoactinomycetaceae	-
Firmicutes	Clostridia	Clostridiales	-	-
Firmicutes	Clostridia	Clostridiales	Gracilibacteraceae	-
Firmicutes	Bacilli	Bacillales	Alicyclobacillaceae	-
Firmicutes	Clostridia	OPB54	-	-
Firmicutes	Bacilli	Bacillales	[Exiguobacteraceae]	-
Firmicutes	Clostridia	Clostridiales	Veillonellaceae	-
Firmicutes	Bacilli	Bacillales	Paenibacillaceae	-
Firmicutes	Clostridia	Clostridiales	Christensenellaceae	-
GAL15	-	-	-	-
Gemmatimonadetes	Gemm-1	-	-	-
Gemmatimonadetes	Gemmatimonadetes	N1423WL	-	-
Gemmatimonadetes	Gemmatimonadetes	Ellin5290	-	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Gemmatimonadetes	Gemmatimonadetes	-	-	-
Gemmatimonadetes	Gemmatimonadetes	Gemmatimonadales	Ellin5301	-
Gemmatimonadetes	Gemmatimonadetes	KD8-87	-	-
Gemmatimonadetes	Gemm-5	-	-	-
Gemmatimonadetes	Gemmatimonadetes	C114	-	-
Gemmatimonadetes	Gemm-2	-	-	-
Gemmatimonadetes	Gemmatimonadetes	Gemmatimonadales	-	-
Gemmatimonadetes	Gemm-3	-	-	-
Gemmatimonadetes	-	-	-	-
GN02	GN07	-	-	-
GN02	3BR-5F	-	-	-
GN02	GKS2-174	-	-	-
GN02	BB34	-	-	-
GN04	MSB-5A5	-	-	-
GN04	-	-	-	-
GOUTA4	-	-	-	-
Kazan-3B-28	-	-	-	-
MVP-21	-	-	-	-
Nitrospirae	Nitrospira	Nitrospirales	0319-6A21	-
Nitrospirae	Nitrospira	Nitrospirales	[Leptospirillaceae]	-
Nitrospirae	Nitrospira	Nitrospirales	Nitrospiraceae	-
Nitrospirae	Nitrospira	Nitrospirales	-	-
Nitrospirae	Nitrospira	Nitrospirales	4-29	-
NKB19	-	-	-	-
NKB19	TSBW08	-	-	-
OD1	ZB2	-	-	-
OD1	SM2F11	-	-	-
OD1	-	-	-	-
OD1	ABY1	-	-	-
OD1	Mb-NB09	-	-	-
OP11	OP11-3	-	-	-
OP11	-	-	-	-
OP11	WCHB1-64	d153	-	-
OP11	OP11-4	-	-	-
OP11	WCHB1-64	-	-	-
OP11	OP11-1	-	-	-
OP3	koll11	-	-	-
OP3	PBS-25	-	-	-
OP3	koll11	GIF10	kpj58rc	-
PAUC34f	-	-	-	-
Planctomycetes	Planctomycetia	Gemmatales	Gemmataceae	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Planctomycetes	Phycisphaerae	WD2101	-	-
Planctomycetes	Planctomycetia	Gemmatales	Isosphaeraceae	-
Planctomycetes	Planctomycetia	Pirellulales	Pirellulaceae	-
Planctomycetes	OM190	agg27	-	-
Planctomycetes	Phycisphaerae	Phycisphaerales	-	-
Planctomycetes	BD7-11	-	-	-
Planctomycetes	Phycisphaerae	CPla-3	-	-
Planctomycetes	vadinHA49	p04_C01	-	-
Planctomycetes	Phycisphaerae	S-70	-	-
Planctomycetes	Phycisphaerae	Pla1	-	-
Planctomycetes	-	-	-	-
Planctomycetes	C6	MVS-107	-	-
Planctomycetes	OM190	CL500-15	-	-
Planctomycetes	Phycisphaerae	mle1-8	-	-
Planctomycetes	Pla3	-	-	-
Planctomycetes	Pla4	-	-	-
Planctomycetes	028H05-P-BN-P5	-	-	-
Planctomycetes	Phycisphaerae	CCM11a	-	-
Planctomycetes	vadinHA49	DH61	-	-
Planctomycetes	Phycisphaerae	Phycisphaerales	Phycisphaeraceae	-
Planctomycetes	Planctomycetia	B97	-	-
Planctomycetes	C6	d113	-	-
Planctomycetes	OM190	-	-	-
Planctomycetes	Phycisphaerae	AKAU3564	-	-
Planctomycetes	ODP123	-	-	-
Planctomycetes	Phycisphaerae	C86	-	-
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Sinobacteraceae	-
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Rhodospirillaceae	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	-
Proteobacteria	Deltaproteobacteria	Syntrophobacterales	Syntrophobacteraceae	-
Proteobacteria	Betaproteobacteria	-	-	-
Proteobacteria	Alphaproteobacteria	Ellin329	-	-
Proteobacteria	Gammaproteobacteria	Enterobacteriales	Enterobacteriaceae	-
Proteobacteria	Deltaproteobacteria	Myxococcales	-	-
Proteobacteria	Betaproteobacteria	A21b	EB1003	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Hyphomicrobiaceae	-
Proteobacteria	Betaproteobacteria	Ellin6067	-	-
Proteobacteria	Betaproteobacteria	SC-I-84	-	-
Proteobacteria	Gammaproteobacteria	Xanthomonadales	Xanthomonadaceae	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	-	-
Proteobacteria	Alphaproteobacteria	-	-	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Alphaproteobacteria	Rhodospirillales	Acetobacteraceae	-
Proteobacteria	Betaproteobacteria	Burkholderiales	Comamonadaceae	-
Proteobacteria	Deltaproteobacteria	Myxococcales	Haliangiaceae	-
Proteobacteria	Betaproteobacteria	MND1	-	-
Proteobacteria	Betaproteobacteria	Burkholderiales	Oxalobacteraceae	-
Proteobacteria	Gammaproteobacteria	Legionellales	Coxiellaceae	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylocystaceae	-
Proteobacteria	Betaproteobacteria	IS-44	-	-
Proteobacteria	Alphaproteobacteria	Caulobacterales	Caulobacteraceae	-
Proteobacteria	Deltaproteobacteria	Myxococcales	Myxococcaceae	-
Proteobacteria	Alphaproteobacteria	Rhodobacterales	Hyphomonadaceae	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Beijerinckiaceae	-
Proteobacteria	Betaproteobacteria	Burkholderiales	Alcaligenaceae	-
Proteobacteria	Gammaproteobacteria	Thiotrichales	Piscirickettsiaceae	-
Proteobacteria	Gammaproteobacteria	Legionellales	-	-
Proteobacteria	Deltaproteobacteria	MIZ46	-	-
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	-
Proteobacteria	Deltaproteobacteria	Myxococcales	Polyangiaceae	-
Proteobacteria	Deltaproteobacteria	-	-	-
Proteobacteria	Gammaproteobacteria	HTCC2188	HTCC2089	-
Proteobacteria	Deltaproteobacteria	NB1-j	NB1-i	-
Proteobacteria	Deltaproteobacteria	NB1-j	MND4	-
Proteobacteria	Alphaproteobacteria	BD7-3	-	-
Proteobacteria	Deltaproteobacteria	[Entotheonellales]	[Entotheonellaceae]	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Phyllobacteriaceae	-
Proteobacteria	Alphaproteobacteria	Rickettsiales	-	-
Proteobacteria	Gammaproteobacteria	Chromatiales	Ectothiorhodospiraceae	-
Proteobacteria	Deltaproteobacteria	NB1-j	-	-
Proteobacteria	Deltaproteobacteria	Spirobacillales	-	-
Proteobacteria	Betaproteobacteria	A21b	UD5	-
Proteobacteria	Betaproteobacteria	Burkholderiales	-	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Xanthobacteraceae	-
Proteobacteria	Deltaproteobacteria	Myxococcales	OM27	-
Proteobacteria	Betaproteobacteria	Nitrosomonadales	Nitrosomonadaceae	-
Proteobacteria	TA18	CV90	-	-
Proteobacteria	Deltaproteobacteria	FAC87	-	-
Proteobacteria	Betaproteobacteria	Methylophilales	-	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Rhizobiaceae	-
Proteobacteria	Betaproteobacteria	Rhodocyclales	Rhodocyclaceae	-
Proteobacteria	Alphaproteobacteria	Rhodospirillales	-	-
Proteobacteria	Betaproteobacteria	Methylophilales	Methylophilaceae	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	TA18	PHOS-HD29	-	-
Proteobacteria	Gammaproteobacteria	-	-	-
Proteobacteria	Deltaproteobacteria	Myxococcales	Cystobacterineae	-
Proteobacteria	Gammaproteobacteria	Legionellales	Legionellaceae	-
Proteobacteria	Alphaproteobacteria	Sphingomonadales	Erythrobacteraceae	-
Proteobacteria	Gammaproteobacteria	Chromatiales	-	-
Proteobacteria	-	-	-	-
Proteobacteria	Alphaproteobacteria	Rickettsiales	Rickettsiaceae	-
Proteobacteria	Betaproteobacteria	Procabacteriales	Procabacteriaceae	-
Proteobacteria	Deltaproteobacteria	Myxococcales	0319-6G20	-
Proteobacteria	Betaproteobacteria	Burkholderiales	Burkholderiaceae	-
Proteobacteria	Betaproteobacteria	SBla14	-	-
Proteobacteria	Deltaproteobacteria	Bdellovibrionales	Bdellovibrionaceae	-
Proteobacteria	Betaproteobacteria	Nitrosomonadales	-	-
Proteobacteria	Gammaproteobacteria	Alteromonadales	OM60	-
Proteobacteria	Betaproteobacteria	Neisseriales	Neisseriaceae	-
Proteobacteria	Deltaproteobacteria	Syntrophobacterales	Syntrophaceae	-
Proteobacteria	Gammaproteobacteria	Acidithiobacillales	-	-
Proteobacteria	Deltaproteobacteria	Bdellovibrionales	Bacteriovoracaceae	-
Proteobacteria	Alphaproteobacteria	Sphingomonadales	-	-
Proteobacteria	Betaproteobacteria	Thiobacterales	-	-
Proteobacteria	Deltaproteobacteria	Sva0853	JTB36	-
Proteobacteria	Deltaproteobacteria	NB1-j	JTB38	-
Proteobacteria	Alphaproteobacteria	Rhodobacterales	Rhodobacteraceae	-
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	-
Proteobacteria	Gammaproteobacteria	Alteromonadales	125ds10	-
Proteobacteria	Deltaproteobacteria	Desulfobacterales	Desulfobulbaceae	-
Proteobacteria	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae	-
Proteobacteria	Deltaproteobacteria	AF420338	-	-
Proteobacteria	Deltaproteobacteria	PB19	-	-
Proteobacteria	Gammaproteobacteria	PYR10d3	-	-
Proteobacteria	Alphaproteobacteria	Kiloniellales	-	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Methylobacteriaceae	-
Proteobacteria	Gammaproteobacteria	Aeromonadales	Aeromonadaceae	-
Proteobacteria	Gammaproteobacteria	Alteromonadales	211ds20	-
Proteobacteria	Gammaproteobacteria	Pseudomonadales	Pseudomonadaceae	-
Proteobacteria	Gammaproteobacteria	Thiotrichales	-	-
Proteobacteria	Gammaproteobacteria	[Marinicellales]	[Marinicellaceae]	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Aurantimonadaceae	-
Proteobacteria	Alphaproteobacteria	Rhizobiales	Bartonellaceae	-
Proteobacteria	Alphaproteobacteria	Rickettsiales	mitochondria	-

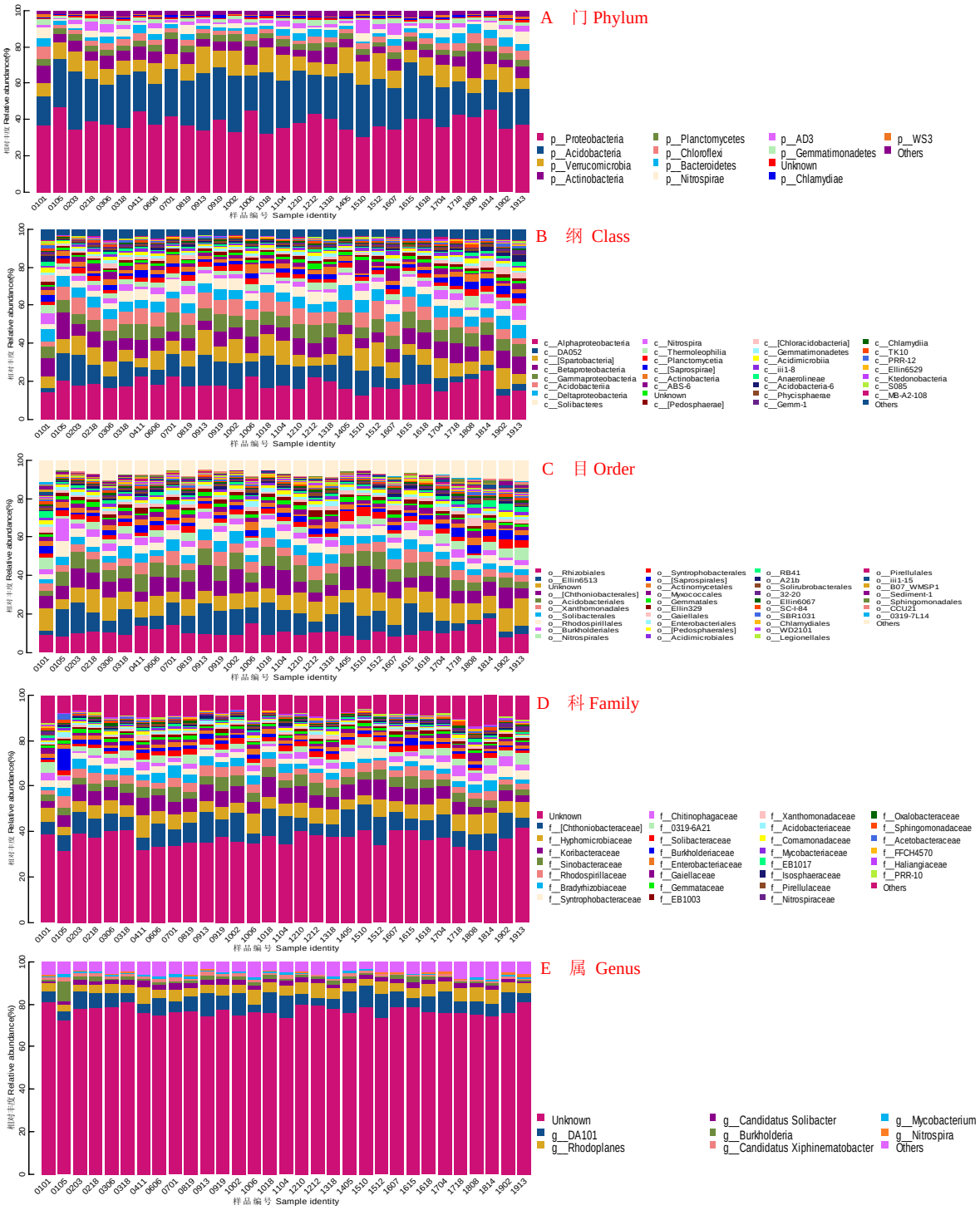
门 Phylum	纲 Class	目 Order	科 Family	属 Genus
Proteobacteria	Deltaproteobacteria	GMD14H09	-	-
Proteobacteria	Deltaproteobacteria	NKB15	-	-
Proteobacteria	Zetaproteobacteria	Mariprofundales	Mariprofundaceae	-
SBR1093	-	-	-	-
Spirochaetes	Spirochaetes	Spirochaetales	Spirochaetaceae	-
Spirochaetes	[Brevinematae]	[Brevinematales]	-	-
Spirochaetes	GN05	-	-	-
Tenericutes	Mollicutes	-	-	-
TM6	SJA-4	-	-	-
TM6	SBRH58	-	-	-
TM6	SJA-4	S1198	-	-
TM7	TM7-1	-	-	-
TM7	SC3	-	-	-
TM7	TM7-3	-	-	-
TM7	TM7-3	EW055	-	-
TM7	-	-	-	-
TM7	MJK10	-	-	-
TM7	TM7-3	I025	-	-
TM7	TM7-3	Blgi18	-	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	Ellin515	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	-	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	auto67_4W	-
Verrucomicrobia	[Methylacidiphilae]	S-BQ2-57	-	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	Ellin517	-
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	[Chthoniobacteraceae]	-
Verrucomicrobia	[Methylacidiphilae]	Methylacidiphilales	-	-
Verrucomicrobia	Verrucomicrobiae	Verrucomicrobiales	Verrucomicrobiaceae	-
Verrucomicrobia	Opitutae	Opitutales	Opitutaceae	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	R4-41B	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	OPB35	-
Verrucomicrobia	[Pedosphaerae]	[Pedosphaerales]	[Pedosphaeraceae]	-
Verrucomicrobia	-	-	-	-
Verrucomicrobia	Verruco-5	LD1-PB3	-	-
Verrucomicrobia	Opitutae	[Cerasicoccales]	[Cerasicoccaceae]	-
Verrucomicrobia	Verruco-5	WCHB1-41	-	-
Verrucomicrobia	Opitutae	-	-	-
Verrucomicrobia	[Methylacidiphilae]	Methylacidiphilales	LD19	-
Verrucomicrobia	[Spartobacteria]	[Chthoniobacterales]	01D2Z36	-
WPS-2	-	-	-	-
WS2	SHA-109	-	-	-
WS2	Kazan-3B-09	-	-	-

门 Phylum	纲 Class	目 Order	科 Family	属 Genus
WS3	PRR-12	Sediment-1	PRR-10	-
WS3	PRR-12	Sediment-1	-	-
WS3	PRR-12	LD1-PA13	-	-
WS3	PRR-12	-	-	-
WS3	PRR-12	Sediment-1	CV106	-
WS3	PRR-12	wb1_H11	-	-
WS4	-	-	-	-
ZB3	BS119	-	-	-

闫满玉，杜晓军，赵爱花，彭明春．河南宝天曼落叶阔叶林木本植物单物种－面积关系．生物多样性，2015，23(5)：630-640.
http://www.biodiversity-science.net/CN/10.17520/biods.2015031

附录2　宝天曼森林动态监测样地31个土壤样品中检测到的不同分类水平上细菌优势类群及其相对丰度。其中Unknown代表未鉴定出的类群; Others代表丰度低于1%的类群;[ ]代表分类信息有争议。

Appendix 2　Relative abundances of the dominant bacteria at different taxonomic levels in the 31 soil samples in the Baotianman Forest Dynamics Plot. Unknown means the taxa that can not be identified; Others represent the taxa whose relative abundances are less than 1%; [ ] means with controversial names..



闫满玉, 杜晓军, 赵爱花, 彭明春. 河南宝天曼落叶阔叶林木本植物单物种－面积关系. 生物多样性, 2015, 23(5): 630-640.
http://www.biodiversity-science.net/CN/article/downloadArticleFile.do?attachType=PDF&id=10060

附录3　宝天曼1 ha森林样地单物种小树个体对邻域全部树、大树和小树植物多样性的影响

Appendix 3　The influences of young individuals of different species on neighbor diversity of all, adult and young tree at different scales in the 1 ha Baotianman Forest Dynamics Plot

物种 Species	尺度 Scale (m)									
	1	2	3	4	5	6	7	8	9	10
臭常山 *Orixa japonica*	r-r-r	r-r-r	r-n-r	r-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
大叶朴 *Celtis koraiensis*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	a-n-n	n-n-n	n-n-n
四照花 *Cornus kousa* subsp. *chinensis*	n-n-n	n-a-n	a-n-a	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
杈叶枫 *Acer ceriferum*	n-a-n	n-a-a	n-a-a	n-a-a	n-a-a	n-n-a	n-n-n	n-n-n	n-n-n	n-n-n
元宝枫 *Acer truncatum*	n-a-n	n-a-n	n-a-a	n-n-a	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
葛罗枫 *Acer davidii* subsp. *grosseri*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
多毛樱桃 *Cerasus polytricha*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
白檀 *Symplocos paniculata*	n-n-n	n-n-n	n-n-n	a-n-a	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
水榆花楸 *Sorbus alnifolia*	n-n-n	n-n-a	n-a-n	n-a-n	n-n-n	n-a-n	n-n-n	n-n-n	n-n-n	n-n-n
连翘 *Forsythia suspensa*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
三桠乌药 *Lindera obtusiloba*	n-n-n	n-a-a	n-n-a	n-a-a	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
桦叶荚蒾 *Viburnum betulifolium*	n-a-a	a-a-a	n-a-a	n-a-a	n-a-a	n-n-a	n-n-n	n-n-n	n-n-n	n-n-n
铁木 *Ostrya japonica*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-a	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
山梅花 *Philadelphus incanus*	n-n-a	n-n-n	n-a-a	n-a-a	n-n-a	n-a-a	n-n-n	n-n-n	n-n-n	n-n-n
秦岭木姜子 *Litsea tsinlingensis*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	r-n-n	n-n-n	n-n-n
细花泡花树 *Meliosma parviflora*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
海州常山 *Clerodendrum trichotomum*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
毛梾 *Cornus walteri*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
卫矛 *Euonymus alatus*	n-a-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n
千金榆 *Carpinus cordata*	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n	n-n-n