



Tree scale: 0.1

Highlighted: Taxonomy

- Gammaproteobacteria
- Zetaproteobacteria
- Betaproteobacteria
- Alphaproteobacteria
- Acidithiobacillia
- Pseudomonadota
- Planctomycetota

Azorhizobium australianum (WP_02899766)
 Derxia gummosa (WP_02830992)
 Rhodoflexus ferritolerans (WP_011466381)
 Rubrivivax gelatinosus (WP_132649459.1)
 Rubrivivax gelatinosus (WP_014249392.1)
 Rubrivivax gelatinosus (WP_15688993.1)
 Alcaligenes hydrogenophilus (AAB49364)
 Cupriavidus necator (WP_01153946)
 Burkholderia cepacia complex (WP_011880080)
 Pseudomonas veronii (WP_017845586)
 Pseudomonas extremaustralis (WP_010563032)
 Pseudomonas putida (WP_274105777.1)
 Pseudomonas nitroreducens (WP_024762399)
 Pseudomonas aeruginosa (WP_023105857)
 Curvibacter delicatus (WP_066709488.1)
 Acidoovorax (WP_026438955)
 Polaromonas sp. (M342425746.1)
 Curvibacter gracilis (WP_027474516)
 Curvibacter lanceolatus (WP_019574255)
 Methylothermus thermophilus (WP_013412518)
 Methylothermus discipulorum (WP_020162849)
 Methylobacterium sp. 12-65-5 (OYW33845.1)
 Ideonella azotifigens (WP_231012358.1)
 Methylobium petrophilum (WP_011830389)
 Polaromonas naphthalenivorans (WP_011801344)
 Variovorax paradoxus (WP_307641902.1)
 Variovorax sp. OV700 (WP_093014270.1)
 Variovorax paradoxus (WP_018904285.1)
 Variovorax paradoxus (WP_026949483.1)
 Azospirillum halophilum (WP_02909282)
 Azospirillum sp. BS10 (WP_0129767476)
 Acetobacter okinawensis (WP_025825893)
 Beijerinckia indica (WP_012384146)
 Azorhizobium doebereineriae (WP_029004859)
 Azorhizobium caulinodans (WP_012169127)
 Borea sp. 117 (WP_029356684)
 Anycobacter sp. FA202 (WP_018391446)
 Xanthobacter autotrophicus (WP_011996000)
 Xanthobacter sp. 91 (WP_029556474)
 Xanthobacter sp. 126 (WP_024812611)
 Alpha carboxylivorans (WP_013913765)
 Roseovarius sp. TMO35 (WP_01825213)
 Sappinia stellata (NPR_005853651)
 Rubellimicrobium arenae (WP_246849412.1)
 Salipiger mucosus (WP_020043467)
 Salipiger sp. PIR002 (WP_164178928.1)
 Citreicella sp. 357 (WP_009505605)
 Citreicella sp. SE45 (WP_008886444)
 Salipiger bermudensis (WP_007796497)
 Rhodobacter sp. CACIA14H1 (WP_023664196)
 Paracoccaceae bacterium (MBE2278303.1)
 Frigidibacter mobilis (WP_066811899.1)
 Paracoccaceae bacterium (MBL905282.1)
 Tabrizicola sp. SV72 (WP_134245471.1)
 Tabrizicola sp. SV72 (NTT04821.1)
 Rhodobacter sp. AKP1 (WP_00956015)
 Cereibacter sphaeroides (WP_002720656)
 Paracoccaceae bacterium (MBS3370962.1)
 Roseibaca ekhonensis (WP_121094750.1)
 Rhodobacter capsulatus (WP_023918084)
 Rhodobacter sp. SW2 (WP_008030826)
 Paracoccus yeei (WP_028717756)
 Paracoccus (WP_028714014)
 Paracoccus (WP_024844879)
 Paracoccus (WP_011749363)
 Rhodospirillum bacterium (MBH4967639.1)
 Rhodospirillum bacterium (MC7166023.1)
 Magnetospirillum pygmyvaldensis (WP_024080410)
 Magnetospirillum magnetum (WP_011384345)
 Magnetospirillum caucaseum (WP_008622301)
 Imrinharia thermophilis (WP_123401459.1)
 UBA1541, USA, Crystal Geyser near Green River, Utah (GCA_002323185.1)
 Proteobacteria bacterium CG1_02_64_396 (OIO59741.1)
 GEM_3300014060_32, USA, Crystal Geyser near Green River, Utah
 CG_4_10_14_0_2_um_filler_63_37, USA, Crystal Geyser near Green River, Utah (GCA_002793495.1)
 CG1_02_64_396, USA, Crystal Geyser near Green River, Utah (GCA_001872725.1)
 Oharaebacter diazotrophicus (WP_126536823.1)
 Coerobacter selenitireducens (WP_028738831)
 Methylococcus sp. SC2 (WP_014891618)
 Rhodovulum sp. RH10 (WP_005868656)
 Methylosinus (WP_003612204)
 Methylosinus sp. PW1 (WP_036294194.1)
 Methylosinus sp. LW4 (WP_018266917)
 Methylosinus sporiun (WP_108917018.1)
 Methylosinus (WP_142863849.1)
 Methylosinus sp. RM1 (WP_166142159.1)
 Methylosinus sp. C49 (WP_161911907.1)
 Methylosinus sp. R-45379 (WP_064032001.1)
 Methylosinus sp. LW3 (WP_024878510)
 Methylosinus sp. sav-2 (WP_026600034.1)
 Rhodopseudomonas sp. (WP_296513390.1)
 Xanthobacteraceae bacterium (MBC234512.1)
 Rhodopseudomonas sp. B29 (WP_022723662)
 Bradyrhizobium japonicum (WP_028135604)
 Bradyrhizobium diazoefficiens (WP_011089681)
 Bradyrhizobium sp. STM 3809 (WP_008961368.1)
 Bradyrhizobium oligotrophicum (WP_015668919)
 Bradyrhizobium sp. SZCCHNR20481 (WP_316161538.1)
 Bradyrhizobium sp. SZCCHNR13043 (WP_315796207.1)
 Bradyrhizobium sp. SZCCHNS3052 (WP_316226174.1)
 unclassified Bradyrhizobium (WP_315713500.1)
 Bradyrhizobium sp. SZCCHNR1073 (WP_316174286.1)
 Bradyrhizobium sp. SZCCHNR2028 (WP_315811228.1)
 unclassified Bradyrhizobium (WP_315712497.1)
 Rhodopseudomonas rhodococcus (WP_184257005.1)
 Rhodopseudomonas palustris (WP_011626668)
 Rhodopseudomonas pseudopalustris (WP_092681952.1)
 Rhodopseudomonas palustris (MBB1091630.1)
 Rhodopseudomonas palustris BisB5 (ABE38399.1)
 Rhodopseudomonas infernalis (WP_238735913.1)
 Rhodopseudomonas palustris (WP_254984642.1)
 Rhodopseudomonas sp. AAP120 (WP_054164078.1)
 Rhodopseudomonas palustris (MBI5132789.1)
 Rhodopseudomonas palustris (WP_110787333.1)
 Rhodopseudomonas sp. BROM22 (WP_164605148.1)
 Rubrivivax sp. JAJ024 (M309415093)
 Rhodopseudomonas palustris (WP_142838964.1)
 Rhodopseudomonas sp. WA56 (WP_164623298.1)
 Rhodopseudomonas palustris (WP_047308164.1)
 Rhodopseudomonas palustris (WP_104512006.1)
 Rhodopseudomonas palustris (WP_012494709.1)
 Rhodopseudomonas palustris (WP_119019262.1)
 Rhodopseudomonas palustris (WP_271101856.1)
 Rhodopseudomonas sp. LYO49957.1)
 Rhodopseudomonas sp. BROG17 (WP_164636538.1)
 Rhodopseudomonas palustris (WP_107343136.1)
 Rhodopseudomonas palustris (WP_264054386.1)
 Rhodopseudomonas palustris (WP_264075030.1)
 Rhodopseudomonas palustris (WP_10725381.1)
 Rhodopseudomonas palustris (WP_263990700.1)
 Gallionellaceae bacterium (MDD526848.1)
 Gallionellaceae bacterium (MDD5367036.1)
 Gallionellaceae bacterium (MDD4881720.1)
 Thiobacillus sp. (MCP5277414.1)
 Betaproteobacteria bacterium (MBM4179995.1)
 Gallionellaceae bacterium (MDD5390251.1)
 Pseudomonadota bacterium (MDO9227067.1)
 Rhodocyclaceae bacterium (MBW7901397.1)
 Azovibrio restrictus (WP_026885912)
 Dechloromonas agitata (WP_027457239)
 Betaproteobacteria bacterium (MBK8919220.1)
 unclassified Azonexus sp. (WP_285845601.1)
 Azonexus hydrophilus (WP_281881648.1)
 Azonexus hydrophilus (WP_028936698.1)
 Dechloromonas sp. (MBS4018535.1)
 Azoaroc sp. KH32C (WP_015437371)
 Azoaroc olearius (WP_01767530)
 Thioalkalibrio sp. AL.Sr1 (WP_019642787)
 Alkalimicrobium ehrlichii (WP_011629746)
 Pelomicrobium methylotrophicum (WP_147792921.1)
 Rhodocyclales bacterium (MBK7134663.1)
 Betaproteobacteria bacterium (MBM3392104.1)
 Oceanospirillum bejerinckii (WP_028302096)
 Oceanobacter kneri (WP_028303252)
 Marinobacterium litoreale (WP_027854288)
 Amphibia (WP_215951015.1)
 Marinobacterium jannaschii (WP_027856391.1)
 Gammaproteobacteria (WP_020745474)
 Pontibacterium sinense (WP_193952885.1)
 Magnetococcus marinus (WP_011714112)
 Terasakiella pusilla (WP_028877931)
 Cohaesibacter gelatinilyticus (WP_097155817.1)
 Paracoccaceae bacterium (MCF6232794.1)
 Paracoccaceae bacterium (PCJ73676.1)
 Paracoccaceae bacterium (HIP4366.1)
 Hyphomicrobiales bacterium (MCB1518951.1)
 Neomagnetomys sp. (MC456456.1)
 Nitratireductor sp. (MCB1461557.1)
 Mesorhizobium camelformi (WP_165032842.1)
 Mesorhizobium sp. (WP_295469409.1)
 Mesorhizobium sp. WSM4906 (WP_278204788.1)
 Mesorhizobium sp. (WP_292360674.1)
 Mesorhizobium sp. (WP_292037557.1)
 Mesorhizobium sp. M.I.E.F.Ca.ET.045.02.1.1 (WP_126095574.1)
 Roseibium sediminis (WP_150524516.1)
 Novosphingobium nitrogenifigens (WP_008068222)
 Nitrospirillum amazonense (WP_004274639)
 Roseibium aggregatum (WP_190290145.1)
 Alphaproteobacteria bacterium (MBU2485467.1)
 Athrensia sp. (MA217763.1)
 Rhodococcus ruber (WP_193176683.1)
 Oncomicrobium vannieli (WP_013418661)
 Hyphomicrobium denitrificans (WP_015597392)
 Hyphomicrobium sp. (WP_290999617.1)
 Hyphomicrobium sp. (MCZ7590583.1)
 Thiothrix nivea (WP_002705876)
 Solimonas aquatica (WP_09282307.1)
 Acidithiobacillus sp. (MDA8152878.1)
 Acidithiobacillus ferrooxidans (WP_215894818.1)
 Acidithiobacillus ferrooxidans (WP_257246234.1)
 Lamprocyclus purpureus (WP_026050242)
 Thiorhodococcus drevili (WP_017014829)
 Thiorhodococcus mammitiphagus (WP_164651938.1)
 Thiorhodococcus minor (WP_164451802.1)
 Thiocapsa roseopersicina (WP_093035117.1)
 Thiocapsa sp. (WP_296809455.1)
 Thiocapsa rosea (WP_120799524.1)
 Thiocapsa sp. KS1 (WP_093184251.1)
 Thiocapsa roseopersicina (AA404740)
 Thiocapsa bogorovi (WP_232409135.1)
 Thiocapsa marina 5811 (EGV17127.1)
 Thiocapsa marina (WP_007194465)
 Thiocapsa marina (WP_040323444)
 Thiocapsa maritima (WP_013124603)
 Chromatiales bacterium (MBO2618996.1)
 Chromatiales bacterium (WP_020394871)
 Coclelmonas flava (WP_131904095.1)
 Coclelmonas sp. (MCF6190795.1)
 Methylophaga sp. (MBL1321478.1)
 Gammaproteobacteria bacterium (RKZ81462.1)
 Methylophaga sp. (PHS70725.1)
 Gammaproteobacteria bacterium (MDQ7074168.1)
 Gammaproteobacteria bacterium (MCB1802526.1)
 Gammaproteobacteria bacterium (MCB1791747.1)
 Gammaproteobacteria bacterium (MCB1925270.1)
 Gammaproteobacteria bacterium (MCA1073479.1)
 Gammaproteobacteria bacterium (MCG34995.1)
 Gammaproteobacteria bacterium (HH76087.1)
 Exilbacterium triclecarpae (WP_142905185.1)
 Porticoccus sp. (MBO0807001.1)
 Thiopilula sp. (WP_293644134.1)
 Thiopilula sp. (WP_294040991.1)
 Planctomycetia bacterium (NIA02619.1)
 Thiotrichales bacterium (HHO59817.1)
 Chromatiales bacterium (HIP68886.1)
 Gammaproteobacteria bacterium (RKZ70234.1)
 Gammaproteobacteria bacterium (MCO363534.1)
 Gammaproteobacteria bacterium (MCP4070198.1)
 Gammaproteobacteria bacterium (MBT3205993.1)
 Gammaproteobacteria bacterium (MBC209771.1)
 Aeromonadales bacterium (HFB6586.1)
 Gammaproteobacteria bacterium (MCP4876273.1)
 Gammaproteobacteria bacterium (MCP4981172.1)
 Gammaproteobacteria bacterium (MCP4982216.1)
 Gammaproteobacteria bacterium (MCP3688224.1)
 Gammaproteobacteria bacterium (MCP4487935.1)
 Gammaproteobacteria bacterium (MCP4286157.1)
 Chromatiales bacterium (MCP5406173.1)
 Gammaproteobacteria bacterium (MCB1869145.1)
 Chromatiales bacterium (MCP528920.1)
 Chromatiales bacterium (MCP544715.1)
 Gammaproteobacteria bacterium (MCB1872387.1)
 Gammaproteobacteria bacterium (MCB1830211.1)
 Sedimenticola sp. (MCW8906669.1)
 Sedimenticola sp. (MCW8891111.1)
 Sedimenticola thiotaurini (TVT53039.1)
 Sedimenticola sp. (MDF1529681.1)
 Sedimenticola selenitireducens (WP_144359039.1)
 Sedimenticola selenitireducens (WP_029134515.1)
 Sedimenticola selenitireducens (WP_273440606.1)
 Sedimenticola thiotaurini (WP_046857975.1)
 Sedimenticola hydrogeniphilum (WP_275100229.1)
 Sedimenticola thiotaurini (WP_260291230.1)
 Candidatus Sedimenticola endophagocides (OQX35815.1)
 Candidatus Sedimenticola endophagocides (OQX30434.1)
 Sulfolobus sp. (MCP388214.1)
 Haliaea sp. SAOS-164 (WP_135443180.1)
 Gammaproteobacteria bacterium (HEB54958.1)
 Gammaproteobacteria bacterium (HEB86858.1)
 Pseudomonadota bacterium (MCP4010412.1)
 Gammaproteobacteria bacterium (MCP4127129.1)
 Gammaproteobacteria bacterium (MCP3670581.1)
 Gammaproteobacteria bacterium (MCP3849211.1)
 Gammaproteobacteria bacterium (MCW8928835.1)
 Gammaproteobacteria bacterium (MCZ4929.1)
 Gammaproteobacteria bacterium (RKZ6043.1)
 Mariprofundus ferrooxydans (MBN4076964.1)
 Mariprofundus sp. HC21_M0139, Aurora vent field, Arctic Mid-Ocean Ridges
 Mariprofundus sp. HC21_M0722, Aurora vent field, Arctic Mid-Ocean Ridges
 Mariprofundus sp. (MDQ6970963.1)
 Mariprofundus sp. AMOR20_M1284, Fåvne vent field, Arctic Mid-Ocean Ridges
 Ghiorsea sp. RB_MAG_00008, Rimicaris excolitata
 Ghiorsea sp. HC21_M0961, Aurora vent field, Arctic Mid-Ocean Ridges
 Mariprofundus sp. GCA_026982535.1, Atlantic Ocean, Mid Atlantic Ridge
 Mariprofundus sp. (HIP06356.1)
 Ghiorsea sp. SZUA_1372, Pacific Ocean: Mid Cayman Rise (GCA_015663235.1)
 Ghiorsea sp. LWMA-0224, Atlantic Ocean-Mid Cayman Rise (GCA_012962225.1)
 Ghiorsea sp. MC-14, Pacific Ocean deep sea mooring chain biofilm (GCA_027127125.1)
 Ghiorsea sp. GCA_027080505.1, Pacific Ocean: Lau Basin
 Ghiorsea sp. GCA_027035925.1, Pacific Ocean: Lau Basin
 Ghiorsea sp. (MDQ7005441.1)
 Ghiorsea sp. Faavne_M6_B18, Fåvne vent field, Arctic Mid-Ocean Ridges
 Ghiorsea sp. (MDQ7002447.1)
 Ghiorsea sp. AMOR20_M1304, Fåvne vent field, Arctic Mid-Ocean Ridges
 Ghiorsea sp. (MDQ7057549.1)
 Ghiorsea bivora (WP_038246822.1)
 Ghiorsea bivora TAG-1, Mid-Atlantic Ridge: Mid Cayman Rise (GCA_000744415.1)
 Pseudomonadota bacterium (PCI45360.1)
 NCRP111, Atlantic Ocean North Pond (GCA_002401635.1)
 Mariprofundus ferrooxydans (MBN405931.1)
 Zetaproteobacteria bacterium (PCIO0242.1)
 Xanthomonadales bacterium (MDJ0654100.1)
 Xanthomonadales bacterium (MDJ0654100.1)
 Gammaproteobacteria bacterium (MCF6209613.1)
 Gammaproteobacteria bacterium (MCF631907.1)
 Gammaproteobacteria bacterium (MCF6217645.1)
 Gammaproteobacteria bacterium (MCF623021.1)
 HC21_M0295, Aurora vent field, Arctic Mid-Ocean Ridges
 Candidatus Thiodiazotropha sp. (ex Moniliifera ramsayi) (MCU7854006.1)
 Candidatus Thiodiazotropha sp. (ex Mytilus sp. 'scaly one' (KFT14869) (MCU7830347.1)
 Candidatus Thiodiazotropha sp. (ex Cluveria cf. vestita) (MCU7849537.1)
 Candidatus Thiodiazotropha sp. (ex Mytilus sp. 'sp.1' (MCU7791772.1)
 Candidatus Thiodiazotropha sp. CDECUI1 (WP_316366478.1)
 gamma proteobacterium symbiont of Clava orbicularis (PVB05939.1)
 Candidatus Thiodiazotropha sp. (ex Codakia orbicularis) (MBW2095085.1)
 Candidatus Thiodiazotropha tayori (MBT3045754.1)
 Candidatus Thiodiazotropha tayori (MBT2990295.1)
 Candidatus Thiodiazotropha tayori (MBT2971564.1)
 Candidatus Thiodiazotropha tayori (MBT3028373.1)
 Candidatus Thiodiazotropha sp. (ex Cardiolucina cf. quadrata) (MCU7944435.1)
 Candidatus Thiodiazotropha sp. (ex Luciniscia nassula) (MBW9258599.1)
 gamma proteobacterium symbiont of Clava orbicularis (PUB85465.1)
 Candidatus Thiodiazotropha tayori (MBT3010019.1)
 Candidatus Thiodiazotropha sp. (ex Ustilicina fernigines) (MCU7893129.1)
 Candidatus Thiodiazotropha sp. (ex Lucinoma borealis) (MCU787194.1)
 Candidatus Thiodiazotropha sp. (ex Lucinoma annulata) (MCU7886770.1)
 Candidatus Thiodiazotropha sp. (ex Troendleina siluensis) (MCU7839054.1)
 Candidatus Thiodiazotropha sp. (ex Lucinoma borealis) (MCU7803871.1)
 Candidatus Thiodiazotropha sp. (ex Lucinoma borealis) (MCU7854314.1)
 Candidatus Thiodiazotropha sp. (ex Lucinoma borealis) (MCU7873854.1)
 Candidatus Thiodiazotropha sp. (MCG8854467.1)
 Candidatus Thiodiazotropha tayori (MCG7994509.1)
 gamma proteobacterium symbiont of Stewaria floridana (RLW52397.1)
 Candidatus Thiodiazotropha tayori (MCG795704.1)
 Candidatus Thiodiazotropha tayori (MCG8084653.1)
 Candidatus Thiodiazotropha tayori (MCG7915566.1)
 Candidatus Thiodiazotropha tayori (MCG8072943.1)
 Candidatus Thiodiazotropha tayori (MCG8039404.1)
 Candidatus Thiodiazotropha tayori (MCG8070115.1)
 Candidatus Thiodiazotropha tayori (MCG7894617.1)
 Candidatus Thiodiazotropha tayori (MCG7911183.1)
 Candidatus Thiodiazotropha tayori (MCG7960244.1)
 Candidatus Thiodiazotropha tayori (MCG7927104.1)
 gamma proteobacterium symbiont of Stewaria floridana (RLW68902.1)
 gamma proteobacterium symbiont of Stewaria floridana (RLW65671.1)
 Candidatus Thiodiazotropha tayori (MCG7953297.1)
 Candidatus Thiodiazotropha tayori (MCG7953297.1)
 Candidatus Thiodiazotropha tayori (MCG7953297.1)
 Candidatus Thiodiazotropha tayori (MCG7953297.1)
 Candidatus Thiodiazotropha sp. 'RUGA' (MCG8018240.1)
 Candidatus Thiodiazotropha sp. (MBV2090327.1)
 Candidatus Thiodiazotropha sp. (ex Luciniscia nassula) (MBW9258357.1)
 Candidatus Thiodiazotropha sp. (ex Luciniscia nassula) (MBW9271038.1)
 Candidatus Thiodiazotropha sp. (ex Luciniscia nassula) (MBW9262960.1)
 gamma proteobacterium symbiont of Stewaria floridana (RLW64641.1)
 gamma proteobacterium symbiont of Stewaria floridana (RLW61822.1)
 Chromatiales bacterium (MCG8489321.1)
 Candidatus Thiodiazotropha lotii (MCG7953297.1)
 Candidatus Thiodiazotropha endolipnes (WP_069006769.1)
 Candidatus Thiodiazotropha lotii (MCG7932485.1)
 Candidatus Thiodiazotropha lotii (MCG794096.1)
 Candidatus Thiodiazotropha lotii (MCG7873959.1)
 Candidatus Thiodiazotropha lotii (MCG7923413.1)
 Candidatus Thiodiazotropha lotii (MCG8010997.1)
 Candidatus Thiodiazotropha lotii (MCG7988108.1)