Tree scale: 1		Desulfocurvibacter africanus NZ AULZ01000001.1 329 1000204.1 20 erans NZ ATHI01000004.1 142 halophilus NZ JIAK01000004.1 206
100	Seep-SRB1g sp. AB 2	QmoB tree 22195 DJGG01000180.1 8 1215 Bin 34 MBW2646685.1 8 sp002421565 DIKC01000166.1 7 101751015 MAXM01000298.1 7
99	Seep-SRB1g sp. Desulfarculus baars Desulfatibacillun	0 CR10073B Ga0402030 bin2 1691 p CR10073A Ga0402010 bin2 1808 sii NC 014365.1 2133 n aliphaticivorans NZ AUCT01000003.1 94 l30 sp002348005 DDYQ01000029.1 1
	Desulfam	-51-40 sp003599015 QZIK01000030.1 6 plus magnetovallimortis NZ LT828559.1 66 pnatronovibrio sp003566455 PXDF01000216.1 21 fonatronospira sp007127015 SLAE01000133.1 3
Thermodes Thermosu QOAM01	sulfatator indicus NC 015681.1 26 sulfatator autotrophicus NZ LSFI0 Ilfurimonas dismutans NZ LWLG0 sp003978075 QOAM01000060.1 microbium thiodismutans NZ AP0	01000050.1 2 01000052.1 1 1. 12
Caldim Therm	nicrobium tilodismutatis N2 AP o nicrobium sp002441555 DJWK01 nodesulfobacterium sp003641645 nodesulfobacterium geofontis NC odesulfobacterium commune NZ	000021.1 6 5 QNAZ01000019.1 6 C 015682.1 175
100	nodesulfobacterium thermophilum	
1 1 1	nauticus submarinus NZ FNIN010	Desulfosudis sp002085115 MZGQ01000066.1 13 ETH-SRB1 sp004193555 RPGP01000040.1 489 000008.1 59
Desulf Desulf	Ifonatronospira sp007125075 SL ionatronospira sp003551155 PUN ifonatronospira sp003563255 PW Ifonatronospira thiodismutans NZ onatronovibrio sp003566455 PXD	MA0100005.1 7 /SL01000135.1 3 ACJN02000002.1 107
☐ Desul Desul	fonatronovibrio sp003366455 PXL Ifonatronovibrio sp003566455 PX ionatronovibrio hydrogenovorans Ifonatronovibrio magnus NZ JYN	KD01000180.1 14 KDF01000114.1 26 NZ JMKT01000008.1 301
Desuling Des	lfonatronovibrio sp003558575 PV fonatronum sp002299865 DBNV(lfonatronum thiosulfatophilum NZ ulfonatronum thioautotrophicum N	VPY01000203.1 3 01000102.1 9 Z FMXO01000003.1 36 NZ JYNO01000001.1 886
ு Desu PDesu PDesu	ulfonatronum sp007127655 SKY) ulfonatronum lacustre NZ Kl9126(ulfonatronum thiodismutans NZ Jl ulfonatronum sp003046795 NZ P IBA6814 sp002452635 DKEU010	08.1 2967 PIK01000013.1 43 ZKN01000001.1 164
98 100	- Fundidesulfovibrio putealis NZ Aminidesulfovibrio sp0023826 - Aminidesulfovibrio aminophilus - Humidesulfovibrio sp0018710	AUBQ01000015.1 38 45 DFYP01000109.1 3 5 NZ AUMA01000009.1 245
100 100 100 100 100 100 100 100 100 100	Humidesulfovibrio mexicanus Humidesulfovibrio sp0017994 Humidesulfovibrio sp00284040	NZ FZOC01000003.1 407 475 MGTN01000112.1 5 5 PHAR01000009.1 120
98	– Paucidesulfovibrio longus NZ A – Paucidesulfovibrio gracilis NZ F – Pseudodesulfovibrio brasiliens	EUYC01000032.1 3 sis NZ BBCB01000076.1 8
10	Pseudodesulfovibrio piezoph Pseudodesulfovibrio profur Pseudodesulfovibrio sp004	ndus NZ LT907975.1 2413 025585 NZ QTZO01000012.1 78
	Pseudodesulfovibrio indicus	rgyri NZ LKAQ01000004.1 643 Ifuricans A NC 016803.1 2643
96 99 100 98	Desulfohalovibrio sp0004222l Desulfohalovibrio alkalitolerar Alteridesulfovibrio inopinatus Solidesulfovibrio fructosivorans	05 NZ ATHV01000004.1 207 ns NZ ATHI01000030.1 98 NZ AUBP01000001.1 410
		5 CM001368.1 1874 IS NZ JNJA01000013.1 39 D magneticus B DLGG01000006.1 9
	Solidesulfovibrio magneticus Solidesulfovibrio sp0019365 Solidesulfovibrio sp0008013 Solidesulfovibrio magneticus	95 NZ MLBG01000033.1 9 35 NZ JSEH01000008.1 183 B DLGG01000171.1 3
98 100	Solidesulfovibrio carbinolicus Solidesulfovibrio magneticus Maridesulfovibrio bastinii NZ A Maridesulfovibrio sp00492319 Maridesulfovibrio sp00234030	NC 012796.1 518 UCX01000010.1 148 I5 NZ RDSB01000026.1 23
10	Maridesulfovibrio zosterae NZ Maridesulfovibrio hydrotherma Maridesulfovibrio frigidus NZ Maridesulfovibrio gilichinskyi	AUDC01000010.1 195 alis NC 020055.1 754 Z JONL01000002.1 366
100	Desulfohalobium retbaense Desulfothermus okinawe Desulfovermiculus halophi	nsis BBBM01000031.1 39 lus NZ JIAK01000007.1 170
100	UBA12183 sp003530935 Desulfomicrobium orale Desulfomicrobium sp00	
98	Desulfomicrobium sp00: Desulfomicrobium sp00: Desulfomicrobium bacu Desulfomicrobium norve	2412965 DHWB01000002.1 86 2841885 PHBE01000005.1 113 Ilatum NC 013173.1 3164 egicum NZ FOTO01000002.1 235
100 97	140 Desulfomicrobium apsh Paradesulfovibrio bizertensis Desulfovibrio Q ferrophilus N Desulfocurvus vexinensis NZ Megalodesulfovibrio gigas	NZ AP017378.1 2047 Z JAEX01000001.1 191
100	MADRE1 sp004796465 QZKZ MADRE1 sp004796465 Q Halodesulfovibrio sp003252 Halodesulfovibrio spirochae	201000125.1 11 02KZ01000115.1 1 2375 QKEJ01000136.1 7 etisodalis NZ JXMS01000003.1 94
[54]	Halodesulfovibrio aestuarii Oleidesulfovibrio alaskens Nitratidesulfovibrio vulgaris Nitratidesulfovibrio sp0002	sis NZ AXWQ01000014.1 31 s NC 002937.3 800 226255 NZ AGFG01000063.1 27
98	Nitratidesulfovibrio vulgari Nitratidesulfovibrio termiti Frigididesulfovibrio litor Frigididesulfovibrio cunea	s A NC 011769.1 2936 dis NZ Kl632512.1 3106 ralis NZ FRDI01000002.1 360 atus NZ AUCY01000045.1 12
93	Desulfovibrio sp002	293605 DBDO01000200.1 6 369295 DFDR01000154.1 71 546145 URBN01000001.1 48 319575 ONPA01000052.1 11 547595 URHE01000043.1 8
	Desulfovibrio piger A Desulfovibrio piger N Desulfovibrio fairfield Desulfovibrio sp9005	NZ LT630450.1 1534
	Desulfovibrio tricl Desulfovibrio legal Desulfovibrio legal	honymphae NZ AP017368.1 454 lii A NZ FNBX01000013.1 50 lii NZ SIXC01000002.1 206 Ifuricans B QKDT01000246.1 4
	Desulfovibrio sp Desulfovibrio sp Jobacca B sp002049795 MUKCO	
B119-G9	sulfobacca acetoxidans NC 0153 SURF-52 sp003599195 QZIZ010 0-14-0-80-60-11 sp002779455 Pl sp003646715 QMLL01000009.1 -60 sp001304365 LJNA01000119	000004.1 13 EWM01000219.1 5 6
DC 100 DC 100 DC 100 NA	G156 DesulfofervidalesDG60 GN G-60 sp001304365 LJNA0100010 G155 Desulfofervidaceae OLHCE 091.008 bin6 HotSeep1 GLOGJF	08.1 5 EBFO 01579
100 HC	HotSeep1 E37 CAD7781666.1 btSeep1 B50 IEOPGEAI 00311 btSeep1 AMM41970.1 btSeep1 E50 CAD7780400.1 btSeep1 E37 CAD7781670.1	
S CG2	Desulfomonile tiedjei NC 018025 eep-SRB2 sp. 8 str. Meg22 1416 2-30-49-12 sp001873675 MNZP0 8A8473 sp003599365 QZJR0100 A8473 sp002782605 PFIF010000	Bin 56 MBW1933770.1 1000099.1 4 0086.1 5
[98]	RBG-13-61-14 sp001797815 MG - UBA2156 sp002328165 DCWS Desulfomonile tiedjei NC 018025. RBG-13-43-22 sp001797675 MG	GQK01000113.1 24 01000039.1 8 1 3838
100	JdFR-95 sp002011835	egensis NZ AZAC01000017.1 110 MTPE01000394.1 7 is NZ LBMP01000002.1 230
91 100 100	— B111-G9 sp003646865 QMLS B111-G9 sp003646995 QMLZ0 B111-G9 sp003646865 QMLS0 — Desulfatiglans anilini NZ AUL	001000298.1 1 1000082.1 3 10000164.1 1 M01000022.1 43
	— NaphS2 sp000179315 NZ AD: — B17-G16 sp003646975 QMLY _ UBA5623 sp900258555 LT96 _ UBA5623 sp002424495 DIK — BM002 sp002899795 PPDG0	01000051.1 10 84854.1 1208 H01000112.1 6
700 P.	Thermodesulforhabdus norveg SbD1 sp900290365 NZ OMO Syntrophobacter fumaroxida Desulforhabdus sp0072443	E01000154.1 12 ans NC 008554.1 1074 85 SCVX01000003.1 53
99	CG2-30-61-12 sp001873	Z OMOE01000154.1 11 705 MNZR01000265.1 11 ens NZ CP040098.1 1881
	Desulfacinum infernum N2 Desulfacinum hydrotherm	Z FQVB01000022.1 10 ale NZ FWXF01000010.1 63 gica NZ FOUU01000002.1 390
100 100	Desulfacinum infernum NZ F Desulfacinum hydrothermale Desulfoglaeba alkanexedens CG2-30-61-12 sp00187370 CG2-30-61-12 sp0018737	NZ FWXF01000001.1 258 S NZ CP040098.1 650 S MNZR01000110.1 4
100	9729 Bin6 NaphS2-related JJ — Desulforhabdus sp00724438 — SLCH01 sp007125915 Sl — Syntrophobacter fumaroxid	85 SCVX01000002.1 35 LCH01000114.1 3 lans NC 008554.1 1307
	Delta-01 sp001603845 L SbD1 sp900290365 NZ SbD1 sp003165235 PLS L sp007280345 QYQD01000190. 003060 sp001751085 OEU81098	OMOE01000164.1 7 V01000248.1 9 1 44
JAE	G16 sp003647275 RLB81756.1 3XJX01 sp013375375 NVL90447 XJW01 sp013375395 NVM21728 ————————————————————————————————————	
34	UBA5754 sp002419025 DIFG010 Dissulfuribacter thermophilus NZ QOAL01 sp003978135 QOAL01 - Dissulfurirhabdus thermomarina Seep-SRB2 sp. 1 str. G37 PXF54	MAGO01000007.1 32 .000180.1 3 .ASM1297923v1 WP 163299017.1
180 140 84	Seep-SRB2 sp. 1 str. Meg22 121 Seep-SRB2 sp. 1 str. Meg22 101 – Seep-SRB2 sp. 7 str. ML8 D OF Seep-SRB2 sp. 4 str. E20 PXF5	4 Bin 80 MBW1967486.1 2 Bin 255 MBW2098883.1 PL13568.1
	Seep-SRB2 sp. 3 str. 002367355 - Seep-SRB2 sp. 5 str. 00364560 Seep-SRB2 sp. 8 str. Meg22 46 Seep-SRB2 sp. 8 str. Meg22 12 Seep-SRB2 sp. 8 str. Meg22 16	5 RKX59982.1 Bin 87 MBW1671608.1 14 Bin 60 MBW1964572.1
	*Seep-SRB2 sp. 8 str. Meg22 81 KYD12-FULL-50-9 sp001799225 YD12-FULL-57-12 sp001799275 · BM004 sp002868955 PKTW010	0 Bin 10 MBW1718938.1 MGTA01000055.1 17 MGTE01000057.1 33
84	CG2-30-60-27 sp001873115 DB1 sp001914235 MQUF0 SURF-16 sp003605035 Q SURF-16 sp003249165 Q UBA2262 sp003517965 DO	1000014.1 238 IZKJ01000033.1 3 IZKJV01000011.1 11
	UBA2262 sp002841785 PH	AW01000124.1 8 WZ01000016.1 137 6645 NZ SWCM01000011.1 52
	Desulfurivibrio sp0035575 Desulfurivibrio sp0035575 Desulfurivibrio alkaliphilus UBA10518 sp003604995 Q UBA10518 sp003508005 D	65 PWOG01000045.1 1 NC 014216.1 1479 pZJD01000015.1 3
90	BMS3Abin13 sp00289761 Electrothrix marina MTKS Electrothrix aarhusiensis I	5 BDTX01000006.1 178 01000173.1 3 MTKO01000102.1 15
	Electronema sp00241335 Desulfobulbus oralis NZ Desulfobulbus propionicus Desulfobulbus elongatus N Desulfobulbus A japonicus	2 CP021255.1 2167 s CP002364.1 766 NZ JHZB01000023.1 52
	Desulfobulbus A mediterra Desulfobulbus A propionic Desulfobulbus A propioni	
	Desulfocapsa sulfexigens UBA2270 sp002327225 D UBA2270 sp002424635 D UBA2270 sp002347085 D MADRE3 sp004796425 QZ	CUN01000155.1 3 DIKT01000021.1 68 DWW01000014.1 9
ai L	Desulfotalea psychrophila Desulfotalea psychrophila Desulfotalea aestuarii NZ F	Z FQXS01000010.1 119 DNTE01000086.1 2 a NC 006138.1 1108 RFE01000003.1 255
	Desulfopila sp005116675 Desulfopila sp005116655 UBA8130 sp003509305 SZUA-575 sp003249645 Tol-SR sp000769715 JR	5 NZ SWCL01000019.1 45 5 DOMU01000041.1 2 5 QKIH01000151.1 3
	UBA2775 sp002352445 DE UBA2775 sp001750925 M UBA2775 sp002352445 DE	EIL01000295.1 15 IAXH01000218.1 10
	Desulforhopalus sp00273 Desulforhopalus singapor Desulforhopalus sp005110	747825 PDQQ01000005.1 3 33995 NVXR01000020.1 14 rensis NZ FNJI01000014.1 39 6645 NZ SWCM01000020.1 41 99365 MGTI01000047.1 20
97 See	Desulforhopalus sp0009 ep-SRB1g sp. AB 1215 Bin 34 ME ep-SRB1g sp CR10073B Ga0402 ep-SRB1g sp CR10073A Ga0402	61725 LADS01000053.1 43 BW2645534.1 2030 bin2 2122 2010 bin2 2522
TSec	ep-SRB1g str. S7142MS4 MBT94	448256.1 —— UBA5616 sp002423615 DIKO01000002.1 59 ———— Maridesulfovibrio salexigens NC 012881.1 2339 — Caldimicrobium thiodismutans A PNIE01000005.1 29 Thermodesulfobacterium hydrogeniphilum NZ JQKW01000008.1 39
	97	BM506 sp002868945 PKTX01000003.1 36 ———————————————————————————————————
	YH01 sp012961955 HID57785.1 'D0425bin51 sp002753225 PDZ PRI01 sp003818505 RPRI01000:	S01000008.1 106 ————————————————————————————————————
94	Desulfatibacilium aliphaticivora	NZ FQZU01000007.1 101 ans NZ AUCT01000001.1 227
93	- RAAP-1 sp001443525 LKPX01 - UBA4064 sp002382065 DFZE0 - Desulfatirhabdium butyrativora - UBA2174 sp002327445 DCW	01000217.1 19 ans NZ AUCU01000009.1 127 ————————————————————————————————————
	— SURF-3 sp003599885 QZKW — SURF-33 sp003597945 QZJS — B1SED10-16 sp007127175 S — B1SED10-16 sp007135799 — B1SED10-16 sp007131845	01000089.1 18 SKZX01000131.1 4 5 SLIE01000254.1 6
	B1SED10-16 sp003551985 — SURF-7 sp003599865 QZKS0 — Desulfosudis oleovorans NC — YD0425bin50 sp00275310	01000056.1 39 009943.1 1009 5 PDZT01000049.1 5
96	Desulfobotulus sp006175	
	4572-130 sp002084425 N Desulfobacterium A vacuol Desulfamplus magnetovalli Desulfobacula sp0017993	BLN0100004.1 54 atum NZ FWXY01000003.1 224 imortis NZ LT828541.1 222 95 MGTJ01000078.1 1
	Desulfobacula toluolica NC Desulfobacula sp0036473 NBML01 sp002085465 NE MADRE2 sp004796375 Q Desulfospira joergensenii	385 QMMT01000409.1 3 BML01000010.1 20
	Desulfotignum phosphito Desulfotignum balticum I Desulfobacter sp0035388 Desulfobacter postgatei	oxidans NZ APJX01000007.1 58 NZ ATWO01000001.1 3216 335 DPRB01000133.1 13 i A PDTI01000013.1 24
	Desulfobacter hydroger Desulfobacter postgate Desulfobacter postgate Desulfobacter curvatus	nophilus NZ CP036313.1 1020 si NZ CM001488.1 725 si B QKDP01000256.1 4
ed e	— SURF-15 sp003599475 QZK — SKZT01 sp007127235 SKZ — UBA5616 sp002423615 DIKC — CR-1 sp900659855 CAACVI	K01000212.1 7 T01000326.1 5 001000113.1 20 010000001.1 315
	SG8-13 sp001303025 LJNI Desulfococcus multivorans N Desulfosarcina cetonica N2 Desulfosarcina sp002352609	K01000029.1 31 NZ CP015381.1 3064 Z BBCC01000004.1 37
	UBA2230 sp002348005 DD Desulfatitalea sp003599575 Desulfatitalea sp000961655 Desulfatitalea tepidiphila NZ	YQ01000073.1 8 5 QZKV01000110.1 6 5 LADR01000049.1 62 BCAG01000001.1 178
	Desulfatitalea sp002402905 — RBG-13-49-15 sp001797695 — SG8-13 sp001303025 LJNK — B30-G6 sp003647375 QMMS — QNYZ01 sp003973265 QNY	DHGT01000124.1 21 5 MGQD01000107.1 4 01000089.1 2 01000058.1 11
	4572-123 sp002084545 NBL — BuS5 sp000472805 NZ AXAN Eth-SRB1 sp019313565 MBW JACNLL01 sp014381545 MBC	J01000067.1 30 M0100009.1 66 V2567942.1 C8198703.1
9\$	JACNLL01 sp013202725 NQ Eth-SRB1 sp004193555 RZI UBA11574 sp002868985 PKTV S5133MH16 sp004193595 RF	0T10538.1 B29620.1 V01000009.1 4 PGQ01000075.1 59
96		AXL01000514.1 2)2055 MBA3017077.1
٦	FWG171 EthSRB1 DHEMDE Seep-SRB1a sp. 8 str. AB 03 FWG172 EthSRB1 EOKBJD	B Bin 172 MBW2740938.1 CF 01067
7	FWG171 EthSRB1 DHEMDE	3 Bin 172 MBW2740938.1 CF 01067 2MS3 MBT9439085.1 4 SRB HOAHELHK 00813 6a0402080 bin2 2882 3 SRB LCGKHOPJ 01472