

Supporting information

Supplementary Table S1. Phylogenetic affiliations of 16S rRNA gene clones

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>1</u>	6	CYO-1					<i>Cellvibrio mixtus</i> subsp. <i>mixtus</i> strain ACM 2601 (AF448515)	94	<i>Proteobacteria</i> (Gamma)	553
2	1	CYO-2					<i>Flavobacterium segetis</i> strain AT1048 ^T (AY581115)	96	<i>Bacteroidetes</i>	591
3	1	CYO-3					<i>Leptothrix discophora</i> strain SP-6 (L33974)	97	<i>Proteobacteria</i> (Beta)	646
4	2	CYO-4			13	CKW-13	<i>Limnohabitans curvus</i> strain MWH-C5 (AJ938026)	97	<i>Proteobacteria</i> (Beta)	514
5	2	CYO-5					<i>Roseateles aquatilis</i> strain CCUG48205 ^T (AM501446)	97	<i>Proteobacteria</i> (Beta)	568
6	1	CYO-6					<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	97	<i>Proteobacteria</i> (Beta)	523
7	2	CYO-7					<i>Leptothrix cholodnii</i> strain CCM 1827 (X97070)	97	<i>Proteobacteria</i> (Beta)	620
8	1	CYO-8					<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	98	<i>Proteobacteria</i> (Beta)	607
9	1	CYO-9					<i>Rhodoferrax ferrireducens</i> strain T118 ^T (CP000267)	98	<i>Proteobacteria</i> (Beta)	579
10	4	CYO-10					<i>Azohydromonas lata</i> strain IAM 12665 (AB201626)	97	<i>Proteobacteria</i> (Beta)	581
11	1	CYO-11					<i>Rhodoferrax antarcticus</i> strain Fryx1 (AY609198)	98	<i>Proteobacteria</i> (Beta)	567
12	1	CYO-12			2	CKW-28	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	98	<i>Proteobacteria</i> (Beta)	604
<u>13</u>	1	CYO-13					<i>Prostheco bacter debontii</i> strain DSM 14044 (AJ966882)	82	<i>Verrucomicrobia</i>	536
14	1	CYO-14					<i>Spirochaeta aurantia</i> strain J1 (M57740)	97	<i>Spirochaetes</i>	591

Supplementary Table S1. (continued)

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
15	1	CYO-15					<i>Ideonella dechloratans</i> (X72724)	98	<i>Proteobacteria</i> (Beta)	569
16	1	CYO-17					<i>Owenweeksia hongkongensis</i> strain UST20020801 (AB125062)	88	<i>Bacteroidetes</i>	530
17	1	CYO-18					<i>Pedobacter terricola</i> strain DS-45 (EF446147)	82	<i>Bacteroidetes</i>	571
18	1	CYO-19					<i>Lewinella agarilytica</i> strain SST-19 (AM286229)	86	<i>Bacteroidetes</i>	566
19	1	CYO-20					<i>Methylobacter tundripaludum</i> strain SV96 ^T (AJ414655)	91	<i>Proteobacteria</i> (Gamma)	525
20	3	CYO-22					<i>Rhodobacter blasticus</i> strain ATCC 33485 ^T (DQ342322)	98	<i>Proteobacteria</i> (Alpha)	585
21	1	CYO-23	2	CMI-5	1	CKW-12	<i>Sediminibacterium salmoneum</i> strain NJ-44 (EF407879)	97	<i>Bacteroidetes</i>	598
22	1	CYO-25			1	CKW-25	<i>Labrys miyagiensis</i> strain G24116 (AB236171)	92	<i>Proteobacteria</i> (Alpha)	556
23	1	CYO-26					<i>Blastochloris sulfoviridis</i> strain DSM729 (D86514)	87	<i>Proteobacteria</i> (Alpha)	357
24	1	CYO-27					<i>Asticcacaulis biprosthecium</i> strain DSM 4723 ^T	95	<i>Proteobacteria</i> (Alpha)	306
25	1	CYO-28					<i>Azonexus fungiphilus</i> strain BS5-8 (AF011350)	97	<i>Proteobacteria</i> (Beta)	539
26	1	CYO-29					<i>Ehrlichia muris</i> strain AS145 (U15527; <i>Proteobacteria</i>)	75	Unclassified	611
27	1	CYO-30					<i>Emticicia oligotropha</i> strain GPTSA100-15 (AY904352)	94	<i>Bacteroidetes</i>	649
28	1	CYO-31					<i>Emticicia oligotropha</i> strain GPTSA100-15 (AY904352)	94	<i>Bacteroidetes</i>	519
29	1	CYO-32					<i>Ochrobactrum anthropi</i> strain ATCC 49188 (CP000759)	90	<i>Proteobacteria</i> (Alpha)	598
30	1	CYO-36					<i>Azospirillum amazonense</i> strain DSM 2787 (Z29616)	92	<i>Proteobacteria</i> (Alpha)	640

Supplementary Table S1. (continued)

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
31	1	CYO-37					<i>Rubrivivax gelatinosus</i> strain ATCC17011 (D16213)	98	<i>Proteobacteria</i> (Beta)	528
32	1	CYO-38					<i>Pseudodevosia insulae</i> strain DS-56 (EF012357)	98	<i>Proteobacteria</i> (Alpha)	556
33	1	CYO-40					<i>Sphingomonas xenophaga</i> strain BN6 (X94098)	96	<i>Proteobacteria</i> (Alpha)	574
34	1	CYO-41					<i>Dechloromonas hortensis</i> strain MA-1 (AY277621)	98	<i>Proteobacteria</i> (Beta)	574
35	1	CYO-42					<i>Persephonella guaymasensis</i> strain H2 (AF385630; Aquificales)	76	Unclassified	568
36	4	CYO-43					<i>Fluviicola taffensis</i> strain RW262 (AF493694)	94	<i>Bacteroidetes</i>	812
37	1	CYO-44					<i>Phenylobacterium koreense</i> strain Slu-01 (AB166881)	89	<i>Proteobacteria</i> (Alpha)	573
38	3	CYO-45					<i>Denitratisoma oestradiolicum</i> strain AcBE2-1 (AY879297)	95	<i>Proteobacteria</i> (Beta)	565
39	1	CYO-48					<i>Undibacterium pigrum</i> strain CCUG 49009 (AM397630)	98	<i>Proteobacteria</i> (Beta)	532
40	2	CYO-49					<i>Rubrivivax gelatinosus</i> strain ATCC17011 (D16213)	98	<i>Proteobacteria</i> (Beta)	533
41	1	CYO-50					<i>Methylobacter tundripaludum</i> strain SV96 ^T (AJ414655)	93	<i>Proteobacteria</i> (Gamma)	596
42	1	CYO-51					<i>Nitrospira moscoviensis</i> (X82558)	98	<i>Nitrospirae</i>	571
43	1	CYO-52					<i>Rhodobium orientis</i> strain MB312 (D30792)	87	<i>Proteobacteria</i> (Alpha)	603
44	1	CYO-53					<i>Flexibacter ruber</i> strain IFO 16675 (AB078064)	85	<i>Bacteroidetes</i>	620
45	1	CYO-54					<i>Bdellovibrio bacteriovorus</i> strain DSM 50705 (AJ278145)	92	<i>Proteobacteria</i> (Delta)	463
46	1	CYO-55					<i>Terrimonas lutea</i> strain 14990Y (AB192292)	93	<i>Bacteroidetes</i>	646
47	1	CYO-56					<i>Opitutus terrae</i> strain ACB90 (AJ229246)	91	<i>Verrucomicrobia</i>	642

Supplementary Table S1. (continued)

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>48</u>	1	CYO-57					<i>Byssophaga cruenta</i> strain DSM 14553 ^T (AJ833647)	95	<i>Proteobacteria</i> (Delta)	646
<u>49</u>	1	CYO-58					<i>Opitutus terrae</i> strain ACB90 (AJ229246)	92	<i>Verrucomicrobia</i>	596
<u>50</u>	1	CYO-59					<i>Thermosulfidibacter takaii</i> strain ABI70S6 (AB282756; <i>Aquificales</i>)	78	Candidate phylum GN1	619
<u>51</u>	1	CYO-60					<i>Acidithiobacillus ferrooxidans</i> strain DSM 2392 (AJ459800)	86	<i>Proteobacteria</i> (Gamma)	647
<u>52</u>	1	CYO-62	1	CMI-18			<i>Haliscomenobacter hydrossis</i> strain DSM 1100 (EF554367)	86	<i>Bacteroidetes</i>	620
<u>53</u>	1	CYO-63					<i>Cystobacter violaceus</i> strain Cb vi29 (AJ233905)	99	<i>Proteobacteria</i> (Delta)	523
<u>54</u>	1	CYO-64					<i>Opitutus terrae</i> strain ACB90 (AJ229246)	92	<i>Verrucomicrobia</i>	640
<u>55</u>	1	CYO-65					<i>Chondromyces lanuginosus</i> strain Sy t2 (AJ233939)	91	<i>Proteobacteria</i> (Delta)	645
<u>56</u>	1	CYO-66					<i>Paracoccus aminovorans</i> strain JCM 7685 (D32240)	97	<i>Proteobacteria</i> (Alpha)	610
<u>57</u>	1	CYO-68					<i>Polyangium thaxteri</i> strain Pl t3 (AJ233943)	91	<i>Proteobacteria</i> (Delta)	814
<u>58</u>	1	CYO-69					<i>Chondromyces apiculatus</i> strain Cm a14 (AJ233938)	92	<i>Proteobacteria</i> (Delta)	694
<u>59</u>	1	CYO-71					<i>Dechloromonas hortensis</i> strain MA-1 (AY277621)	98	<i>Proteobacteria</i> (Beta)	804
<u>60</u>	1	CYO-73					<i>Trojanella thessalonices</i> strain L13 (AF069496)	89	<i>Proteobacteria</i> (Alpha)	799
<u>61</u>	1	CYO-74					<i>Gemmata obscuriglobus</i> strain ACM 2246	85	<i>Planctomycetes</i>	780
<u>62</u>	1	CYO-76					<i>Curtobacterium ammoniigenes</i> strain NBRC 101789 (AB266600; <i>Actinobacteria</i>)	79	Candidate phylum OP10	807

Supplementary Table S1. (continued)

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>63</u>	1	CYO-77			8	CKW-22	<i>Flavobacterium terrae</i> strain R2A1-13 ^T (EF117329)	94	<i>Bacteroidetes</i>	640
<u>64</u>	1	CYO-78					<i>Polyangium thaxteri</i> strain Pl t3 (AJ233943)	91	<i>Proteobacteria</i> (Delta)	735
<u>65</u>	1	CYO-79					<i>Fluviicola taffensis</i> strain RW262 (AF493694)	94	<i>Proteobacteria</i> (Delta)	803
<u>66</u>	1	CYO-80					<i>Dechloromonas hortensis</i> strain MA-1 (AY277621)	95	<i>Proteobacteria</i> (Beta)	817
<u>67</u>			1	CMI-1			<i>Methylophilus methylotrophus</i> strain NCIMB 10515 (AB193724)	95	<i>Proteobacteria</i> (Beta)	619
<u>68</u>			1	CMI-2			<i>Methylophilus methylotrophus</i> strain NCIMB 10515 (AB193724)	97	<i>Proteobacteria</i> (Beta)	656
<u>69</u>			1	CMI-3			<i>Beijerinckia mobilis</i> strain DSM 2326 (AJ563932)	93	<i>Proteobacteria</i> (Alpha)	659
<u>70</u>			2	CMI-4			<i>Bacteroides capillosus</i> strain ATCC 29799 (AY136666; <i>Bacteroidetes</i>)	84	Unclassified	625
<u>71</u>			2	CMI-6			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	93	<i>Proteobacteria</i> (Gamma)	539
<u>72</u>			1	CMI-7			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	94	<i>Proteobacteria</i> (Gamma)	582
<u>73</u>			1	CMI-8			<i>Clostridium putrefaciens</i> strain DSM 1291 (AF127024; <i>Firmicutes</i>)	83	<i>Acidobacteria</i>	640
<u>74</u>			1	CMI-9			<i>Flavisolibacter ginsengisoli</i> strain Gsoil 643 (AB267477)	94	<i>Bacteroidetes</i>	651
<u>75</u>			1	CMI-10	9	CKW-3	<i>Haematobacter massiliensis</i> strain CCUG 47968 (DQ342309)	98	<i>Proteobacteria</i> (Alpha)	557
<u>76</u>			1	CMI-11			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	93	<i>Proteobacteria</i> (Gamma)	600
<u>77</u>			1	CMI-12			<i>Lachnobacterium bovis</i> strain LRC 5436 (AF298665; <i>Firmicutes</i>)	80	<i>Acidobacteria</i>	625
<u>78</u>			2	CMI-13			<i>Bacteroides capillosus</i> strain ATCC 29799 (AY136666; <i>Bacteroidetes</i>)	84	Unclassified	640

Supplementary Table S1. (continued)

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	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>79</u>			1	CMI-14			<i>Haliscomenobacter hydrossis</i> strain DSM 1100 (AJ784892; <i>Bacteroidetes</i>)	85	<i>Bacteroidetes</i>	590
<u>80</u>			2	CMI-15			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	92	<i>Proteobacteria</i> (<i>Gamma</i>)	556
<u>81</u>			1	CMI-16			<i>Clostridium aminophilum</i> strain F (L04165; <i>Firmicutes</i>)	82	<i>Acidobacteria</i>	630
<u>82</u>			2	CMI-19			<i>Azohydromonas lata</i> strain IAM 12665 (AB201626)	98	<i>Proteobacteria</i> (<i>Beta</i>)	578
<u>83</u>			1	CMI-20			<i>Rhodoferax ferrireducens</i> strain T118 (AF435948)	98	<i>Proteobacteria</i> (<i>Beta</i>)	591
<u>84</u>			1	CMI-21			<i>Clostridium aminophilum</i> strain F (L04165; <i>Firmicutes</i>)	82	<i>Acidobacteria</i>	520
<u>85</u>			1	CMI-22			<i>Clostridium aminophilum</i> strain F (L04165; <i>Firmicutes</i>)	83	<i>Acidobacteria</i>	640
<u>86</u>			1	CMI-23			<i>Prostheco bacter debontii</i> strain DSM 14044 (AJ966882)	84	<i>Verrucomicrobia</i>	633
<u>87</u>			2	CMI-24			<i>Aquincola tertiaricarbonis</i> strain L10 (DQ656489)	95	<i>Proteobacteria</i> (<i>Beta</i>)	653
<u>88</u>			1	CMI-25			<i>Aquaspirillum itersonii</i> subsp. <i>nipponicum</i> strain LMG 7370 (EF612766)	88	<i>Proteobacteria</i> (<i>Alpha</i>)	558
<u>89</u>			1	CMI-29			<i>Hyphomicrobium sulfonivorans</i> strain ATCC BAA-113 (AF235089)	96	<i>Proteobacteria</i> (<i>Alpha</i>)	571
<u>90</u>			1	CMI-30			<i>Pelobacter propionicus</i> strain DSM 2379 (CP000482)	83	<i>Proteobacteria</i> (<i>Delta</i>)	549
<u>91</u>			1	CMI-31			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	93	<i>Proteobacteria</i> (<i>Gamma</i>)	646
<u>92</u>			1	CMI-32			<i>Novosphingobium nitrogenifigens</i> strain Y88 (DQ448852)	97	<i>Proteobacteria</i> (<i>Alpha</i>)	520

Supplementary Table S1. (continued)

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	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>93</u>			1	CMI-33			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	93	<i>Proteobacteria</i> (Gamma)	519
<u>94</u>			1	CMI-34			<i>Planctomyces limnophilus</i> strain IFAM 1008 (X62911)	92	<i>Planctomycetes</i>	600
<u>95</u>			2	CMI-35			<i>Novosphingobium</i> <i>pentaromativorans</i> strain US6-1 (AF502400)	98	<i>Proteobacteria</i> (Alpha)	580
<u>96</u>			1	CMI-37			<i>Novosphingobium aromaticivorans</i> strain DSM 12444 (CP000248)	96	<i>Proteobacteria</i> (Alpha)	626
<u>97</u>			1	CMI-38			<i>Lewinella agarilytica</i> strain SST-19 (AM286229)	85	<i>Bacteroidetes</i>	649
<u>98</u>			1	CMI-39			<i>Methylophilus leisingeri</i> strain DSM 6813 (AB193725)	95	<i>Proteobacteria</i> (Beta)	652
<u>99</u>			1	CMI-40			<i>Methylophilus leisingeri</i> strain DSM 6813 (AB193725)	96	<i>Proteobacteria</i> (Beta)	653
<u>100</u>			1	CMI-41			<i>Sporichthya polymorpha</i> strain DSM 46113 (X72377)	87	<i>Actinobacteria</i>	656
<u>101</u>			1	CMI-42			<i>Pseudomonas fluorescens</i> strain ATCC13525 (DQ207731)	88	<i>Proteobacteria</i> (Gamma)	657
<u>102</u>			1	CMI-43			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	88	<i>Proteobacteria</i> (Gamma)	660
<u>103</u>			1	CMI-44			<i>Methylocella silvestris</i> strain BL2 (AJ491847)	96	<i>Proteobacteria</i> (Alpha)	514
<u>104</u>			1	CMI-45			<i>Devosia subaequoris</i> strain HST3-14 ^T (AM293857)	92	<i>Proteobacteria</i> (Alpha)	610
<u>105</u>			1	CMI-47			<i>Streptomyces hiroshimensis</i> strain NBRC 14693 (AB249979; <i>Actinobacteria</i>)	84	<i>Acidobacteria</i>	608
<u>106</u>			1	CMI-48			<i>Ralstonia insidiosa</i> strain CCUG 46388 (AJ539233)	93	<i>Proteobacteria</i> (Beta)	522
<u>107</u>			1	CMI-49			<i>Owenweeksia hongkongensis</i> strain UST20020801 (AB125062)	86	<i>Bacteroidetes</i>	399

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	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>108</u>			1	CMI-50			<i>Niastella jeongjuensis</i> strain GR20-13 (DQ244076)	93	<i>Bacteroidetes</i>	565
<u>109</u>			1	CMI-51			<i>Persephonella guaymasensis</i> strain H2 (AF385630; <i>Aquificales</i>)	78	<i>Planctomycetes</i>	647
<u>110</u>			1	CMI-53			<i>Desulfomonile limimaris</i> (AF230531; <i>Proteobacteria</i>)	79	<i>Acidobacteria</i>	532
<u>111</u>			1	CMI-54			<i>Polyangium vitellinum</i> strain P1 vt1 (AJ233944)	89	<i>Proteobacteria</i> (<i>Delta</i>)	630
<u>112</u>			2	CMI-55			<i>Planctomyces maris</i> strain DSM 8797 ^T (AJ231184)	85	<i>Planctomycetes</i>	653
<u>113</u>			1	CMI-56			<i>Devosia subaequoris</i> strain HST3-14 ^T (AM293857)	93	<i>Proteobacteria</i> (<i>Alpha</i>)	640
<u>114</u>			2	CMI-57			<i>Devosia subaequoris</i> strain HST3-14 ^T (AM293857)	93	<i>Proteobacteria</i> (<i>Alpha</i>)	599
<u>115</u>			2	CMI-59			<i>Hyphomicrobium zavarzinii</i> strain ZV-622 (Y14305)	93	<i>Proteobacteria</i> (<i>Alpha</i>)	598
<u>116</u>			1	CMI-60			<i>Hyphomicrobium vulgare</i> strain ATCC 27500 (Y14302)	94	<i>Proteobacteria</i> (<i>Alpha</i>)	547
117			1	CMI-61			<i>Methylocapsa acidiphila</i> strain B2 ^T (AJ278726)	97	<i>Proteobacteria</i> (<i>Alpha</i>)	650
<u>118</u>			1	CMI-62			<i>Haliscomenobacter hydrossis</i> strain DSM 1100 (AJ784892)	85	<i>Bacteroidetes</i>	542
119			1	CMI-63			<i>Bradyrhizobium elkanii</i> strain strain USDA 76 (U35000)	100	<i>Proteobacteria</i> (<i>Alpha</i>)	567
120			1	CMI-64			<i>Porphyrobacter neustonensis</i> strain DSM 9434 ^T (AF465838)	98	<i>Proteobacteria</i> (<i>Alpha</i>)	429
<u>121</u>			1	CMI-66			<i>Solirubrobacter soli</i> strain Gsoil 355 (AB245334)	88	<i>Actinobacteria</i>	548
122			1	CMI-67			<i>Sphingopyxis flavimaris</i> strain SW-151 (AY554010)	96	<i>Proteobacteria</i> (<i>Alpha</i>)	632
<u>123</u>			1	CMI-68			<i>Clostridium putrefaciens</i> strain DSM 1291 (AF127024; <i>Firmicutes</i>)	83	<i>Acidobacteria</i>	624

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Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
<u>124</u>			1	CMI-69			<i>Steroidobacter denitrificans</i> strain FS (EF605262)	94	<i>Proteobacteria</i> (Gamma)	540
<u>125</u>			1	CMI-70			<i>Phenylobacterium koreense</i> strain Slu-01 (AB166881)	98	<i>Proteobacteria</i> (Alpha)	648
<u>126</u>			1	CMI-71			<i>Rhodobacter sphaeroides</i> strain ATCC 17023 ^T (DQ342321)	97	<i>Proteobacteria</i> (Alpha)	576
<u>127</u>			1	CMI-72			<i>Hespellia porcina</i> strain PPC80 (AF445239; <i>Firmicutes</i>)	82	Candidate phylum OP10	572
<u>128</u>			1	CMI-73			<i>Desulfonatronum cooperativum</i> strain Z-7999 (AY725424; <i>Proteobacteria</i>)	82	<i>Acidobacteria</i>	592
<u>129</u>			1	CMI-74			<i>Planctomyces brasiliensis</i> strain DSM 5305 ^T (AJ231190)	85	<i>Planctomycetes</i>	558
<u>130</u>			1	CMI-75			<i>Flavobacterium ferrugineum</i> strain DSM 30193 ^T (AM230484)	94	<i>Bacteroidetes</i>	609
<u>131</u>			1	CMI-77			<i>Desulfovibrio intestinalis</i> strain KMS2 (Y12254; <i>Proteobacteria</i>)	78	Unclassified	524
<u>132</u>			1	CMI-78			<i>Spirulina laxissima</i> strain SAG B256.80 (Y18798; <i>Cyanobacteria</i>)	74	<i>Planctomycetes</i>	604
<u>133</u>			1	CMI-79			<i>Pirellula staleyi</i> strain ATCC 35122 (AF399914)	87	<i>Planctomycetes</i>	638
<u>134</u>			1	CMI-80			<i>Geopsychrobacter electrophilus</i> strain A2 (AY187304; <i>Proteobacteria</i>)	82	Unclassified	545
<u>135</u>			1	CMI-81			<i>Flavisolibacter ginsengisoli</i> strain Gsoil 643 (AB267477)	94	<i>Bacteroidetes</i>	631
<u>136</u>			1	CMI-82			<i>Hyphomicrobium zavarzinii</i> strain ZV-622 (Y14305)	88	<i>Proteobacteria</i> (Alpha)	666
<u>137</u>			1	CMI-83			<i>Nitrincola lacisaponensis</i> strain 4CA (AY567473)	86	<i>Proteobacteria</i> (Gamma)	649
<u>138</u>			1	CMI-85			<i>Sorangium cellulosum</i> strain DSM14627 (EU240497)	85	<i>Proteobacteria</i> (Delta)	797

Supplementary Table S1. (continued)

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
139					1	CKW-1	<i>Polynucleobacter necessarius</i> strain STIR1 (CP001010)	99	<i>Proteobacteria</i> (Beta)	462
140					1	CKW-2	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	96	<i>Proteobacteria</i> (Beta)	580
141					2	CKW-3	<i>Streptacidiphilus jiangxiensis</i> strain 22202 (AY389139)	91	<i>Actinobacteria</i>	580
142					1	CKW-4	<i>Leifsonia poae</i> strain DSM 15202 (AM410682)	95	<i>Actinobacteria</i>	438
143					1	CKW-5	<i>Leifsonia aquatica</i> strain JCM 1368 (D45057)	95	<i>Actinobacteria</i>	567
144					3	CKW-6	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	97	<i>Proteobacteria</i> (Beta)	534
145					1	CKW-7	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	96	<i>Proteobacteria</i> (Beta)	574
146					1	CKW-8	<i>Acidovorax facilis</i> strain LMG 2193 (EU024133)	96	<i>Proteobacteria</i> (Beta)	583
147					2	CKW-16	<i>Acidovorax facilis</i> strain LMG 2193 (EU024133)	96	<i>Proteobacteria</i> (Beta)	583
148					3	CKW-17	<i>Acidovorax facilis</i> strain LMG 2193 (EU024133)	98	<i>Proteobacteria</i> (Beta)	582
149					2	CKW-18	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	98	<i>Proteobacteria</i> (Beta)	550
150					6	CKW-19	<i>Tetrasphaera vanveenii</i> strain Ben 70 (DQ007320)	91	<i>Actinobacteria</i>	570
151					3	CKW-20	<i>Cetobacterium somerae</i> strain WAL 14325 (AJ438155)	99	<i>Fusobacteria</i>	593
152					6	CKW-29	<i>Arcocella aquatica</i> strain NO-502 ^T (AJ535729)	90	<i>Bacteroidetes</i>	501
153					3	CKW-30	<i>Emticicia oligotropha</i> strain GPTSA100-15 (AY904352)	97	<i>Bacteroidetes</i>	583
154					1	CKW-31	<i>Emticicia oligotropha</i> strain GPTSA100-15 (AY904352)	98	<i>Bacteroidetes</i>	602

Supplementary Table S1. (continued)

Clone- phylogroup No. ^a	Reed		Japanese loosestrife		Pond water		Authentic species (Accession No.)	Identity (%)	Phylum (Class)	Length (bp)
	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone	Total no. of clone	Name of representative clone				
155					1	CKW-35	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	98	<i>Proteobacteria</i> (Beta)	602
<u>156</u>					1	CKW-38	<i>Owenweeksia hongkongensis</i> strain UST20020801 (AB125062)	89	<i>Bacteroidetes</i>	590
<u>157</u>					1	CKW-46	<i>Flexibacter canadensis</i> strain IFO 15130 (AB078046)	86	<i>Bacteroidetes</i>	456
<u>158</u>					1	CKW-47	<i>Legionella taurinensis</i> strain ATCC 700508 (DQ667196)	93	<i>Proteobacteria</i> (Gamma)	480
159					1	CKW-59	<i>Emticicia oligotropha</i> strain GPTSA100-15 (AY904352)	97	<i>Bacteroidetes</i>	580
<u>160</u>					1	CKW-60	<i>Limnobacter thiooxidans</i> strain CS-K2 (AJ289885)	94	<i>Proteobacteria</i> (Beta)	521
<u>161</u>					1	CKW-62	<i>Methylophilus methylotrophus</i> strain NCIMB 10515 (AB193724)	95	<i>Proteobacteria</i> (Beta)	627
<u>162</u>					1	CKW-71	<i>Niastella jeongjuensis</i> strain GR20-13 (DQ244076)	93	<i>Bacteroidetes</i>	572
163					1	CKW-72	<i>Acidovorax konjaci</i> strain ICMP 7733 (AF137507)	98	<i>Proteobacteria</i> (Beta)	562
<u>164</u>					1	CKW-75	<i>Fluviicola taffensis</i> strain RW262 (AF493694)	92	<i>Bacteroidetes</i>	572
<u>165</u>					1	CKW-76	<i>Fluviicola taffensis</i> strain RW262 (AF493694)	93	<i>Bacteroidetes</i>	558
166					1	CKW-77	<i>Rhodoferax ferrireducens</i> strain T118 ¹ (CP000267)	98	<i>Proteobacteria</i> (Beta)	538
167					1	CKW-82	<i>Aquaspirillum delicatum</i> strain LMG 4328 (AF078756)	96	<i>Proteobacteria</i> (Beta)	522
<u>168</u>					1	CKW-83	<i>Cytophaga fermentans</i> strain ATCC 19072 (M58766)	87	<i>Bacteroidetes</i>	602
Total	85		85		85					
Novel microbes ^b	50 (40)		65 (57)		34 (16)					

^a The clonal phylotypes whose sequences indicated less than 95% identity with those from authentic species are underlined.

^b The number of phylotypes showing phylogenetic novelty was provided in parentheses.