

Table S1. Origin and species **distribution diversity** of *Aeromonas* isolates

	Isolate	Source	Species
1	AE1	Effluent water	<i>Aeromonas veronii</i>
2	AE2	Pond sediment	<i>Aeromonas veronii</i>
3	AH3	Skin mucous of apparently healthy guppy	<i>Aeromonas hydrophila</i>
4	AH4	Skin mucous of apparently healthy swordtail fish	<i>Aeromonas veronii</i>
5	AE5	Biofilm	<i>Aeromonas veronii</i>
6	AE6	Biofilm	<i>Aeromonas veronii</i>
7	AE7	Effluent water	<i>Aeromonas veronii</i>
8	AE8	Pond sediment	<i>Aeromonas veronii</i>
9	AH9	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
10	AH10	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
11	AE12	Effluent water	<i>Aeromonas veronii</i>
12	AH15	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
13	AE19	Pond sediment	<i>Aeromonas veronii</i>
14	AH20	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
15	AH21	Skin mucous of apparently healthy guppy	<i>Aeromonas hydrophila</i>
16	AH22	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
17	AH23	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
18	AE26	Effluent water	<i>Aeromonas veronii</i>
19	AE28	Effluent water	<i>Aeromonas veronii</i>
20	AE29	Pond sediment	<i>Aeromonas veronii</i>
21	AH31	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
22	AE32	Effluent water	<i>Aeromonas veronii</i>
23	AE33	Pond sediment	<i>Aeromonas veronii</i>
24	AE34	Pond sediment	<i>Aeromonas veronii</i>
25	AE35	Pond sediment	<i>Aeromonas veronii</i>
26	AH37	Skin mucous of apparently healthy guppy	<i>Aeromonas media</i>
27	AH38	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
28	AE39	Pond sediment	<i>Aeromonas veronii</i>
29	AE40	Pond sediment	<i>Aeromonas veronii</i>
30	AE41	Pond sediment	<i>Aeromonas caviae</i>
31	AE42	Biofilm	<i>Aeromonas veronii</i>
32	AE43	Biofilm	<i>Aeromonas veronii</i>
33	AH44	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
34	AE46	Pond sediment	<i>Aeromonas veronii</i>
35	AH49	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
36	AH50	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
37	AE52	Effluent water	<i>Aeromonas veronii</i>
38	AE53	Pond sediment	<i>Aeromonas veronii</i>
39	AE54	Pond sediment	<i>Aeromonas veronii</i>
40	AE56	Biofilm	<i>Aeromonas caviae</i>
41	AH57	Skin mucous of apparently healthy molly	<i>Aeromonas veronii</i>
42	AH58	Skin mucous of apparently healthy molly	<i>Aeromonas veronii</i>
43	AH59	Skin mucous of apparently healthy platy fish	<i>Aeromonas caviae</i>
44	AE60	Effluent water	<i>Aeromonas veronii</i>
45	AE61	Pond sediment	<i>Aeromonas veronii</i>
46	AE62	Pond sediment	<i>Aeromonas veronii</i>
47	AH63	Skin mucous of apparently healthy platy fish	<i>Aeromonas veronii</i>
48	AE65	Biofilm	<i>Aeromonas veronii</i>

49	AE66	Effluent water	<i>Aeromonas veronii</i>
50	AE67	Effluent water	<i>Aeromonas veronii</i>
51	AE68	Pond sediment	<i>Aeromonas veronii</i>
52	AE70	Pond sediment	<i>Aeromonas veronii</i>
53	AH71	Skin mucous of apparently healthy platy fish	<i>Aeromonas veronii</i>
54	AH72	Skin mucous of apparently healthy swordtail fish	<i>Aeromonas veronii</i>
55	AE73	Biofilm	<i>Aeromonas veronii</i>
56	AE74	Effluent water	<i>Aeromonas veronii</i>
57	AE75	Pond sediment	<i>Aeromonas veronii</i>
58	AE76	Pond sediment	<i>Aeromonas veronii</i>
59	AE77	Biofilm	<i>Aeromonas veronii</i>
60	AE79	Effluent water	<i>Aeromonas veronii</i>
61	AE80	Pond sediment	<i>Aeromonas veronii</i>
62	AE81	Pond sediment	<i>Aeromonas veronii</i>
63	AE82	Pond sediment	<i>Aeromonas veronii</i>
64	AH83	Skin mucous of apparently healthy platy fish	<i>Aeromonas veronii</i>
65	AH84	Skin mucous of apparently healthy platy fish	<i>Aeromonas veronii</i>
66	AE85	Biofilm	<i>Aeromonas veronii</i>
67	AE86	Biofilm	<i>Aeromonas dhakensis</i>
68	AE87	Effluent water	<i>Aeromonas dhakensis</i>
69	AE88	Pond sediment	<i>Aeromonas veronii</i>
70	AH90	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
71	AH91	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
72	AE92	Biofilm	<i>Aeromonas veronii</i>
73	AE93	Effluent water	<i>Aeromonas veronii</i>
74	AE94	Pond sediment	<i>Aeromonas veronii</i>
75	AE95	Pond sediment	<i>Aeromonas caviae</i>
76	AH96	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
77	AE97	Effluent water	<i>Aeromonas veronii</i>
78	AE98	Effluent water	<i>Aeromonas veronii</i>
79	AE99	Pond sediment	<i>Aeromonas veronii</i>
80	AH100	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
81	AH101	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
82	AE102	Biofilm	<i>Aeromonas veronii</i>
83	AE103	Effluent water	<i>Aeromonas veronii</i>
84	AE105	Pond sediment	<i>Aeromonas caviae</i>
85	AH106	Skin mucous of apparently healthy goldfish	<i>Aeromonas veronii</i>
86	AH107	Skin mucous of apparently healthy platy fish	<i>Aeromonas veronii</i>
87	AE108	Biofilm	<i>Aeromonas veronii</i>
88	AE111	Pond sediment	<i>Aeromonas veronii</i>
89	AH112	Skin mucous of apparently healthy goldfish	<i>Aeromonas caviae</i>
90	AH113	Skin mucous of apparently healthy molly	<i>Aeromonas caviae</i>
91	AE115	Biofilm	<i>Aeromonas veronii</i>
92	AE117	Effluent water	<i>Aeromonas veronii</i>
93	AE118	Effluent water	<i>Aeromonas veronii</i>
94	AE119	Pond sediment	<i>Aeromonas veronii</i>
95	AE120	Pond sediment	<i>Aeromonas veronii</i>
96	AH122	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
97	AE123	Biofilm	<i>Aeromonas veronii</i>
98	AE125	Effluent water	<i>Aeromonas veronii</i>
99	AE127	Pond sediment	<i>Aeromonas veronii</i>

100	AE130	Biofilm	<i>Aeromonas veronii</i>
101	AE131	Effluent water	<i>Aeromonas popoffii</i>
102	AE132	Pond sediment	<i>Aeromonas veronii</i>
103	AE133	Pond sediment	<i>Aeromonas veronii</i>
104	AH134	Skin mucous of apparently healthy platy fish	<i>Aeromonas veronii</i>
105	AH135	Skin mucous of apparently healthy guppy	<i>Aeromonas dhakensis</i>
106	AH136	Skin mucous of apparently healthy guppy	<i>Aeromonas dhakensis</i>
107	AE138	Effluent water	<i>Aeromonas veronii</i>
108	AE141	Pond sediment	<i>Aeromonas veronii</i>
109	AE142	Pond sediment	<i>Aeromonas veronii</i>
110	AE144	Pond sediment	<i>Aeromonas veronii</i>
111	AH147	Skin mucous of apparently healthy guppy	<i>Aeromonas jandaei</i>
112	AH149	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
113	AE150	Biofilm	<i>Aeromonas caviae</i>
114	AE151	Effluent water	<i>Aeromonas veronii</i>
115	AE153	Pond sediment	<i>Aeromonas veronii</i>
116	AE154	Pond sediment	<i>Aeromonas veronii</i>
117	AE155	Pond sediment	<i>Aeromonas sobria</i>
118	AH156	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
119	AE157	Biofilm	<i>Aeromonas veronii</i>
120	AE159	Effluent water	<i>Aeromonas veronii</i>
121	AE160	Effluent water	<i>Aeromonas veronii</i>
122	AE163	Pond sediment	<i>Aeromonas veronii</i>
123	AH164	Skin mucous of apparently healthy guppy	<i>Aeromonas veronii</i>
124	AE165	Biofilm	<i>Aeromonas jandaei</i>
125	AE167	Biofilm	<i>Aeromonas veronii</i>
126	AC1	Wound swab of giant gourami	<i>Aeromonas dhakensis</i>
127	AC3	Wound swab of giant gourami	<i>Aeromonas hydrophila</i>
128	AC4	Wound swab of giant gourami	<i>Aeromonas hydrophila</i>
129	AC7	Kidney culture of guppy	<i>Aeromonas jandaei</i>
130	AC8	Kidney culture of guppy	<i>Aeromonas jandaei</i>
131	AC9	Wound swab of giant gourami	<i>Aeromonas hydrophila</i>
132	AC11	Wound swab of platy	<i>Aeromonas hydrophila</i>
133	AC12	Kidney culture of platy	<i>Aeromonas hydrophila</i>
134	AC14	Kidney culture of platy	<i>Aeromonas hydrophila</i>
135	AC15	Kidney culture of platy	<i>Aeromonas hydrophila</i>
136	AC16	Wound swab of giant gourami	<i>Aeromonas veronii</i>
137	AC17	Kidney culture of koi carp	<i>Aeromonas veronii</i>
138	AC18	Kidney culture of koi carp	<i>Aeromonas veronii</i>
139	AC19	Kidney culture of discus	<i>Aeromonas veronii</i>
140	AC21	Wound swab of silver dollar	<i>Aeromonas veronii</i>
141	AC22	Wound swab of silver dollar	<i>Aeromonas veronii</i>
142	AC23	Kidney culture of goldfish	<i>Aeromonas veronii</i>
143	AC25	Kidney culture of platy	<i>Aeromonas veronii</i>
144	AC26	Kidney culture of platy	<i>Aeromonas veronii</i>
145	AC27	Kidney culture of Oscar	<i>Aeromonas hydrophila</i>
146	AC29	Kidney culture of guppy	<i>Aeromonas veronii</i>
147	AC30	Kidney culture of guppy	<i>Aeromonas veronii</i>
148	AC31	Kidney culture of guppy	<i>Aeromonas veronii</i>
149	AC32	Kidney culture of guppy	<i>Aeromonas veronii</i>
150	AC34	Kidney culture of goldfish	<i>Aeromonas veronii</i>

151	AC35	Kidney culture of goldfish	<i>Aeromonas hydrophila</i>
152	AC36	Kidney culture of goldfish	<i>Aeromonas jandaei</i>
153	AC37	Kidney culture of goldfish	<i>Aeromonas veronii</i>
154	AC39	Wound swab of Oscar	<i>Aeromonas hydrophila</i>
155	AC40	Kidney culture of goldfish	<i>Aeromonas jandaei</i>
156	AC42	Kidney culture of guppy	<i>Aeromonas jandaei</i>
157	AC43	Wound swab of giant gourami	<i>Aeromonas hydrophila</i>
158	AC44	Wound swab of goldfish	<i>Aeromonas dhakensis</i>
159	AC45	Kidney culture of guppy	<i>Aeromonas veronii</i>
160	AC46	Wound swab of giant gourami	<i>Aeromonas hydrophila</i>
161	AE168	Effluent water	<i>Aeromonas hydrophila</i>