Table S6   QTL effects of candidate QTL

(Starts on next page) QTL effect was considered 'parallel' when either the best model of the QTL effect was 'same effect', or when the best model of QTL effect was 'different effect' but the direction of additive effects were 'same'. QTL effect was considered only in a 'single lake' when the best model of the QTL effect was either 'effect in Paxton only' or 'effect in Priest only'. QTL effect was considered 'opposite' when the best model of QTL effect was 'different effect' and the direction of additive effects were 'opposite'. The second best model of QTL effect and the delta AICc between it and the best model is also shown. When the delta AICc was less than two and the 2nd best model called for a different QTL effect category than the best model did, we dropped the QTL from any analysis in which QTL effect category was a variable study (indicated by 'NA' in the ''QTL effect' based on AICc model selection' column). PVE for each QTL in each lake was determined using 'single QTL, single lake linear models'. The 'Priest Entropy' and 'Paxton Entropy' columns show the entropy values (an index of genotype information content, where lower values indicate greater information content), in each lake's cross at the QTL's peak marker.

Trait	Scan QTL was detected in	Linkage group	Peak Marker Position (cM)	Direction of additive effects	'QTL Effect' based on AICc model selection	Best model of QTL effect	2nd best model of QTL effect	Delta AICc	PVE in Priest	PVE in Paxton	Priest entropy	Paxton entropy
plate count	combined	2	24	same	Parallel	same effect	different effect	2.21	4.9	1.32	0.28	0.27
plate count	combined	7	33.93	same	Parallel	different effect	same effect	0.94	9.1	12.09	0.04	0.03
plate count	combined	16	9.98	opposite	Opposite	different effect	effect in Priest only	2.03	6.06	0.73	0.06	0.17
long gill raker count	combined	7	35.12	same	Parallel	same effect	different effect	2.26	6.51	6.3	0.01	0.08
long gill raker count	combined	3	36	same	NA	effect in Paxton only	different effect	1.12	1.08	5	0.14	0.14
short gill raker count	combined	1	21.16	same	Parallel	same effect	different effect	2.72	4.13	4.32	0.07	0.17
short gill raker count	combined	7	34.99	same	Parallel	same effect	different effect	0.68	1.67	3.97	0	0.08
y1	combined	8	18	same	Single lake	effect in Paxton only	same effect	4.14	1.58	4.18	0.09	0.12
x2	combined	4	23.78	same	Parallel	same effect	different effect	2.99	1.48	1.13	0.08	0.21
x2	Paxton	7	0	same	NA	effect in Paxton only	same effect	0.58	0.07	2.39	0.71	0.05
x2	Priest	14	38.82	opposite	NA	effect in Priest only	different effect	0.39	1.92	0.37	0.08	0.16
y3	combined	4	71.36	opposite	NA	different effect	effect in Priest only	1.38	5.29	0.9	0.06	0.88
y3	combined	7	6	opposite	Single lake	effect in Paxton only	different effect	2.49	0.13	8.86	0.5	0.13
y4	combined	7	34.99	same	Parallel	same effect	different effect	2	1.56	4.08	0	0.08
y5	combined	7	35.45	same	Parallel	same effect	different effect	2.42	4.34	2.51	0	0.12
y5	Paxton	19	2	same	Parallel	same effect	different effect	0.42	0.21	3.63	0.19	0.05
x6	combined	7	34.21	opposite	NA	different effect	effect in Paxton only	0.92	0.68	3.4	0.02	0.05
x6	Priest	4	20.84	same	Parallel	same effect	different effect	1.81	3.09	0.7	0.05	0.2
x6	Priest	13	27.7	same	Single lake	effect in Priest only	same effect	7.08	3.15	0.08	0.1	0.2
y7	combined	7	35.45	same	NA	effect in Priest only	different effect	0.94	5.9	0.52	0	0.12
y7	combined	2	33.63	opposite	Opposite	different effect	effect in Paxton only	5.61	2.41	3.14	0.03	0.04
y7	Priest	9	10	same	Single lake	effect in Priest only	same effect	3.44	4.61	0.59	0.35	0.34
y10	combined	1	19.11	opposite	Opposite	different effect	effect in Priest only	9.03	2.77	1.63	0	0.01
y10	combined	14	12	same	Parallel	same effect	different effect	0.31	1.23	4.22	0.06	0.2
y10	Paxton	4	58	opposite	Single lake	effect in Paxton only	different effect	2.57	0.09	3.76	0.03	0.74
y11	combined	11	28	same	NA	effect in Priest only	different effect	0.57	2.45	0.37	0.13	0.12
y11	combined	1	21.16	opposite	Single lake	effect in Paxton only	different effect	5.1	0.35	3.49	0.07	0.17
y11	combined	4	30	same	Single lake	effect in Paxton only	different effect	2.4	0.38	4.13	0.01	0.24
y12	combined	19	0	same	Single lake	effect in Priest only	different effect	13.99	2.03	3.11	0.22	0.03
y12	combined	13	27.7	same	Parallel	same effect	different effect	3.01	1.96	1.58	0.1	0.2
y12	Paxton	4	28.15	same	Single lake	effect in Paxton only	different effect	2.77	0.55	2.81	0.06	0.19
x13	combined	7	28	opposite	NA	same effect	different effect	0.23	2.3	1.91	0.09	0.22

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Trait	Scan QTL was detected in	Linkage group	Peak Marker Position (cM)	Direction of additive effects	'QTL Effect' based on AICc model selection	Best model of QTL effect	2nd best model of QTL effect	Delta AICc	PVE in Priest	PVE in Paxton	Priest entropy	Paxton entropy
x13	combined	1	18.11	same	Parallel	same effect	different effect	0.31	0.57	3.71	0.08	0.17
x16	combined	1	21.75	same	Parallel	same effect	different effect	2.97	6.19	3.32	0.11	0.2
x16	combined	12	5.22	same	Parallel	different effect	same effect	0.87	5.45	1.36	0.06	0.16
x16	Paxton	13	20.04	same	Parallel	different effect	same effect	1.02	0.98	3.39	0.05	0.07
y16	combined	13	28.79	opposite	NA	different effect	same effect	0.83	3.55	2.08	0.16	0.26
y16	Priest	21	42.82	same	NA	same effect	effect in Priest only	0.34	4.22	0.54	0.01	0.87
x17	combined	12	6.42	opposite	Single lake	effect in Priest only	different effect	3.69	6.84	0.01	0.16	0.22
x17	Priest	14	34.83	same	Single lake	effect in Priest only	different effect	2.58	4.52	0.29	0	0.22
x18	combined	7	32.22	opposite	Single lake	effect in Paxton only	different effect	4.02	2.06	3.84	0.06	0.11
y18	combined	11	34	same	Parallel	same effect	different effect	1.45	2.71	1.27	0.03	0.03
y18	Paxton	4	36	opposite	Single lake	effect in Paxton only	different effect	9.02	0.16	2.85	0.02	0.04
x20	combined	4	20	opposite	Single lake	effect in Priest only	effect in Paxton only	3.16	3.58	2.15	0.04	0.19
x20	Paxton	1	25.31	same	NA	different effect	effect in Paxton only	1.62	1.18	3.32	0.13	0.15
x20	Priest	12	4.39	opposite	NA	different effect	effect in Priest only	1.21	4.34	0.75	0.05	0.17
x21	Paxton	1	20	same	Single lake	effect in Paxton only	same effect	2.57	0.25	2.51	0.01	0.01
x22	Paxton	7	33.93	same	NA	different effect	effect in Paxton only	0.06	0.73	3.94	0.04	0.03
y25	combined	12	13.24	same	Parallel	same effect	different effect	2.88	4.71	5.64	0.02	0.04
y26	combined	1	21.75	opposite	Single lake	effect in Priest only	different effect	2.66	4.71	0.07	0.11	0.2
y26	combined	12	13.24	same	Parallel	same effect	different effect	2.36	3.17	2.57	0.02	0.04
y26	combined	19	0.55	same	Parallel	different effect	effect in Priest only	5.04	1.18	2.79	0.19	0.04
y26	Priest	14	36.5	opposite	Single lake	effect in Priest only	different effect	6.62	2.83	0.05	0.07	0.18
y27	combined	12	13.24	same	Parallel	same effect	different effect	2.55	4.16	2.91	0.02	0.04
y27	combined	17	21.65	opposite	Opposite	different effect	effect in Priest only	10.7	4.81	2.95	0.11	0.1
y27	combined	8	19.01	same	Single lake	effect in Paxton only	effect in Priest only	1.4	2.76	2.53	0.01	0.1
centroid	combined	1	24.57	same	NA	effect in Priest only	different effect	1.14	6.4	0.91	0.07	0.13
centroid	Paxton	19	0.1	opposite	NA	effect in Priest only	same effect	1.28	1.24	2.96	0.21	0.02