

G1

0.0 em4me15-265
13.2 EQ1819-150b
16.8 em6me6-205
19.1 EQ1636-250a
20.5 em13me4-290c
22.1 EQ2033-280
23.6 EQ2417-250c
24.6 EQ1989-200b
25.0 em18me11-1600c
25.4 EQ1989-200a
25.8 em14me6-50c
27.9 EQ1600-250a
29.1 em6me8-330c
29.2 DZ38-121c
29.7 EQ1043-150
31.4 EQ073-130
31.7 em7me12-270c
33.8 EQ1820-200a em9me11-150c
34.1 EQ1508-170
36.8 EQ184-251c
38.7 EQ1829-290
38.9 EQ1263-120
41.2 em1me4-1500c
43.1 EQ1735-210a
43.4 DZ159-201c
44.5 EQ489-150a
44.6 em3me9-350
45.5 EQ1813-270a
45.7 DZ165-301c
46.4 EQ1600-250c
46.8 em1me26-2400
48.7 E1M6-245
48.9 EQ94-171a
49.8 em13me4-620
49.8 em2me13-70
50.2 EQ1484-230
50.3 EQ1819-150c
50.4 em13me5-200
51.9 EQ195-205
53.2 EQ2033-300
54.2 EQ1425-320
54.6 em1me26-110
55.2 DZ159-150
56.7 EQ1317-110c
56.9 DZ126-301c
58.0 DZ159-180
58.1 DZ4-141c
58.9 em9me5-300
60.0 EQ1821-250a
60.4 EQ425-400
60.6 em15me10-60
62.0 em11me12-220
62.2 EQ1461-205
62.5 em3me3-320
63.5 E1M2-60
63.7 em5me14-150
64.0 E2M6-204
65.0 em1me6-255
65.1 em9me15-1300
65.8 EQ822-250 DZ159-170
66.6 em5me14-330
67.0 em2me13-200
68.4 UBC808-420
70.6 EQ120-1000 DZ159-320
70.7 em1me6-1600
71.8 em1me4-560
72.5 EQ94-170b
72.9 EQ767-200a
73.9 EQ1815-800
74.2 em3me13-390 DZ158-320
75.0 em4me3-150
75.4 EQ580-180b
75.5 DZ140-341c DZ159-145
76.0 em6me10-480
76.1 em5me4-100
77.0 em2me2-70
77.6 EQ425-500 EQ632-100
78.1 EQ38-125
78.6 em8me11-800
79.6 EQ1425-370b em56me4-50
80.1 em1me14-900
80.1 E3M4-245
82.4 EBM8-125
82.9 em10me6-2000 em11me14-590
83.6 DZ159-280
84.0 DZ158-240
85.1 em1me6-200c
85.6 em4me19-175
86.8 em9me5-310
88.1 em9me10-290c
88.2 EBM8-115
89.7 DZ159-260
90.9 em15me19-290
91.0 em3me15-1100
92.4 em4me7-390 DZ158-270
93.7 EQ2058-180c
93.8 em13me4-390
94.2 em8me26-1300c
96.0 em8me11-120
97.2 em13me4-480c
98.7 em6me14-250c
99.3 em4me11-140c
100.0 em9me15-390
101.1 em11me14-380
101.2 em53me13-320
102.8 em4me9-400c
103.1 em4me3-2350
105.2 em13me4-190c
105.5 EQ958-150b
106.7 em5me8-710c
107.4 em8me11-500
107.7 em1me4-140c
107.7 EQ2178-200
108.7 em4me3-2300
110.5 EQ855-250a
111.4 em4me3-2400
112.8 DZ32-210
114.3 em4me3-1000
116.9 em9me15-650
118.1 GEU219-200a
119.0 em4me4-80
120.4 DZ159-161c
120.5 em25me28-110c
123.1 em4me11-120
123.9 EQ958-150a DZ184-281c
125.5 em2me13-100
127.1 DZ36-180
131.1 DZ36-250
133.0 DZ36-172
133.2 em1me14-2400c em4me11-135
136.0 DZ36-205
136.2 GEU219-200c
140.3 em45me6-620
141.7 em3me9-450c
142.6 DZ64-181c
149.2 DZ36-170
162.9 em12me11-300

G2

0.0 em1me1-950
4.4 em1me20-790
8.7 EQ125-1000 em9me15-550
12.3 em14me3-580
21.9 EQ1178-130
22.4 EQ954-300
23.5 em8me26-370
24.3 em8me11-250
24.9 DZ157-200
25.2 em1me3-290
26.8 em9me9-150
27.4 em3me7-550
28.6 EQ436-250 em18me11-320
29.6 em1me14-170
30.1 EQ265-280
31.1 em24me11-310
32.5 em1me14-110
34.1 em18me11-255
34.8 EQ298-300a
35.5 em25me28-320
36.2 em8me11-190
36.8 em9me11-490 EQ125-2000
37.7 em1me14-2100
38.6 em9me15-120
39.4 em1me10-250
40.0 em1me20-220
42.4 EQ82-300 em14me8-120
43.1 EQ458-175
43.8 em5me14-110
44.1 em13me3-100
44.9 EQ199-800
45.5 em8me10-2280
46.9 em5me22-198
47.4 EQ2155-275
48.1 EQ340-250
48.6 em3me20-100
48.6 em16me13-800
49.6 em16me6-190
50.5 em3me11-140
51.7 em3me26-185
52.2 em6me3-820
53.1 em1me6-80
54.2 em14me8-135
54.6 em1me25-340
54.9 em14me6-130
55.8 em8me10-950
56.4 em5me14-600
57.3 em8me10-2320
58.3 EQ404-200c
59.7 em16me13-100
60.3 em5me14-800
61.1 em16me6-170
61.7 em3me20-180
62.0 em8me10-2410
62.9 em15me13-900
63.4 EQ179-200
64.5 em12me7-170
65.1 em1me20-2000
65.3 em9me15-1200
66.0 em4me15-230
66.8 em3me7-210
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68.0 em1me14-90 EQ291-200b
69.6 UBC873-950
70.0 EQ2089-170
71.1 em12me7-130
73.0 UBC880-460
73.6 em4me13-220
74.3 em63me13-212
76.3 UBC880-630
77.7 em6me3-135 EQ137-200
78.0 em4me15-550
79.3 UBC865-2200
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80.9 em12me7-360
81.9 em12me9-260
83.0 em5me10-860
84.1 em6me3-780
84.2 em4me7-900 EQ137-300
86.0 em16me4-500
87.6 em9me6-227
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93.4 em13me12-470
95.7 em8me10-1500
97.3 em56me4-2100

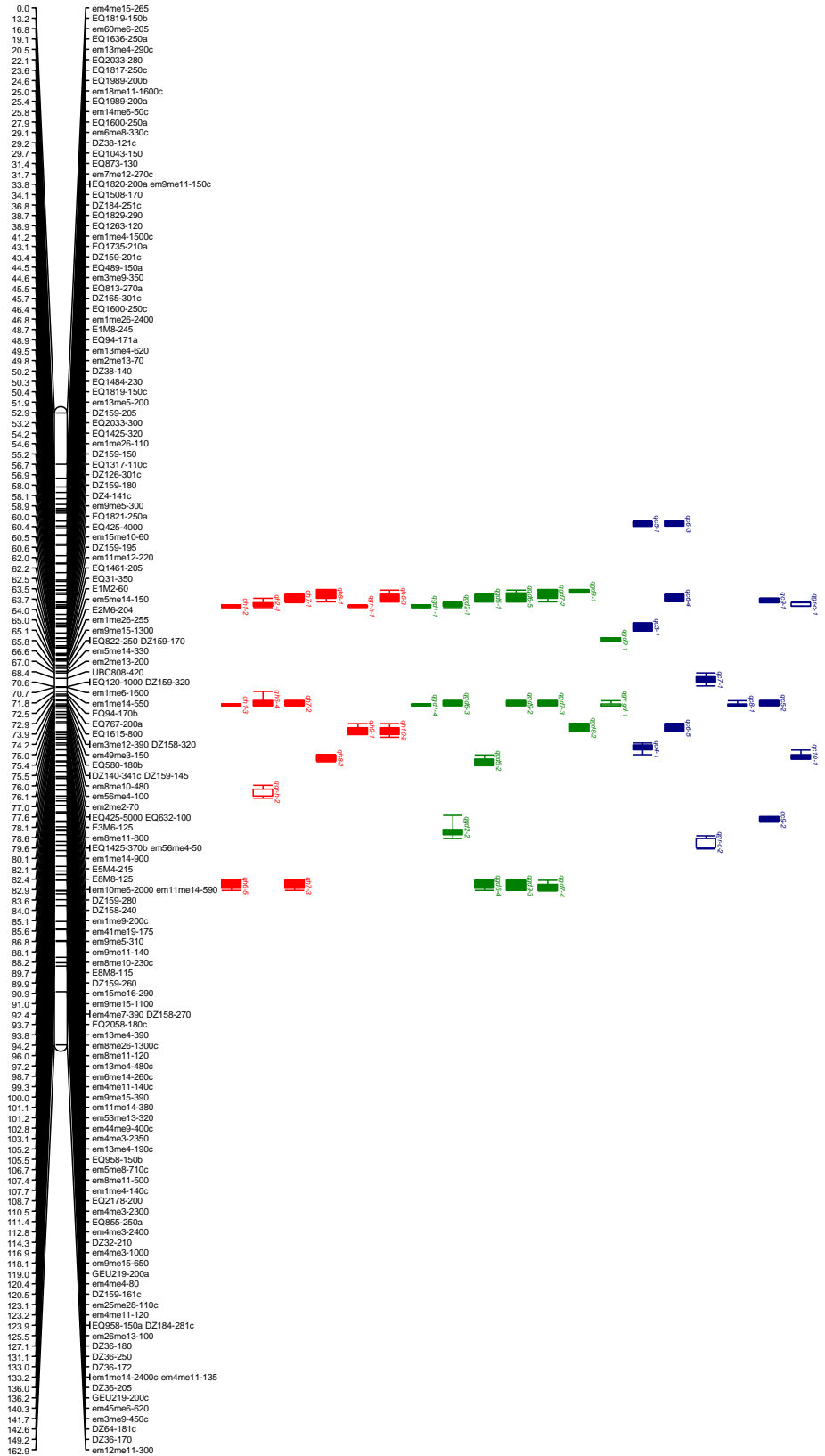
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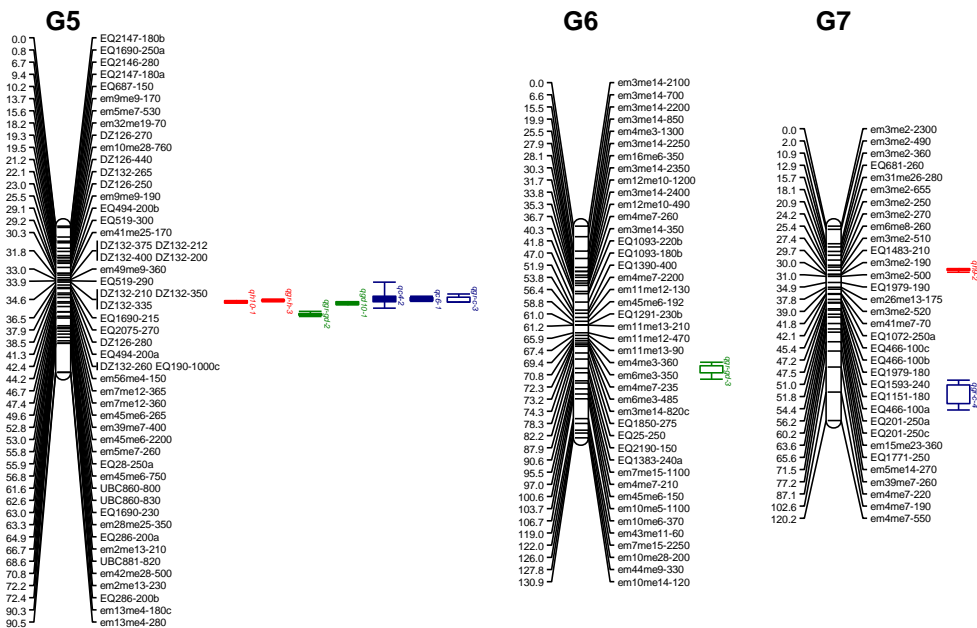
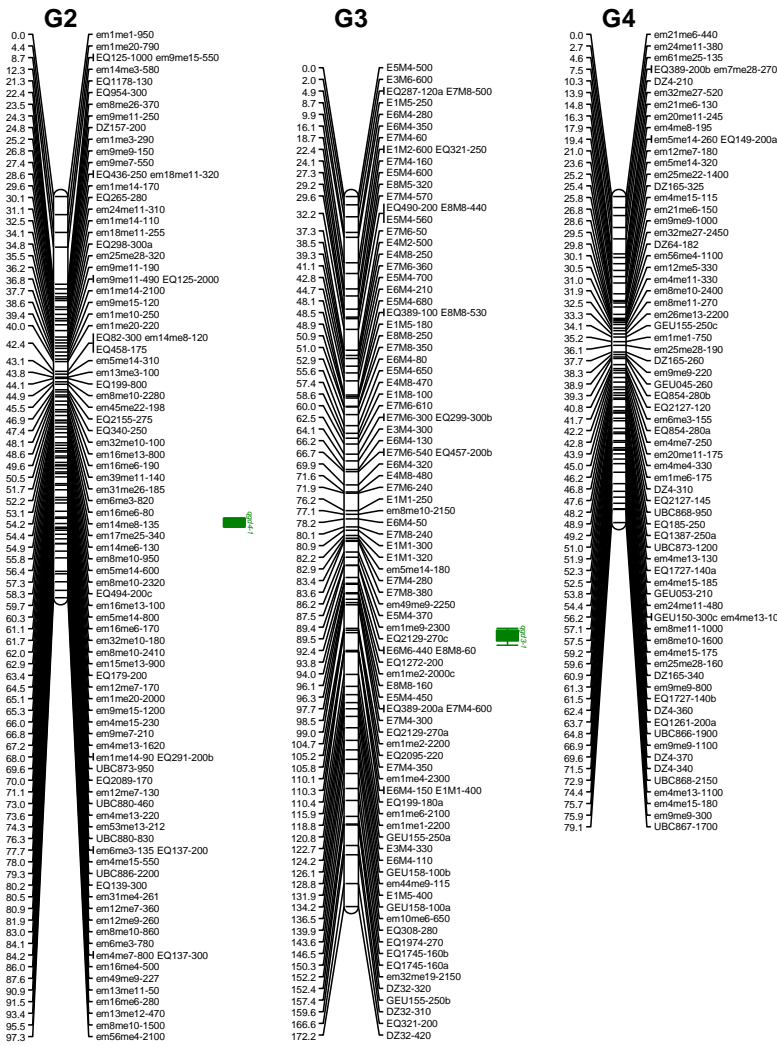
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9.9 E6M4-280
16.1 E6M4-350
18.7 E7M4-60
22.4 E1M2-600 EQ321-250
24.1 E6M4-280
27.3 E5M4-600
29.2 E8M5-320
29.6 E7M4-570
32.2 EQ490-300 E8M8-440
37.3 E7M6-50
38.5 E4M2-500
39.3 E4M6-250
41.1 E7M6-360
42.8 E5M4-700
44.7 E6M4-210
48.1 E5M4-680
48.5 EQ389-100 E8M8-530
48.9 E1M5-180
50.9 E8M8-250
51.0 E7M6-350
52.9 E6M4-80
55.6 E5M4-650
57.4 E4M8-470
58.6 E1M8-100
60.0 E7M6-610
62.5 E7M6-300 EQ299-300b
64.1 E3M4-300
66.2 E6M4-130
66.7 E7M6-540 EQ457-200b
69.9 E6M4-320
71.6 E4M8-480
71.9 E7M6-240
76.2 E1M1-250
77.1 em8me10-2150
78.2 E6M4-50
80.1 E7M4-280
80.9 E1M1-300
82.2 E1M1-320
82.9 em5me14-180
83.4 E7M4-280
83.6 E7M8-380
86.2 em49me9-2250
87.5 E3M4-370
88.4 em1me9-2300
89.5 EQ2129-270c
92.4 E6M6-440 E8M8-60
93.8 EQ1272-200
94.0 em1me2-2000c
96.1 E8M8-160
96.3 E5M4-450
97.7 EQ389-200a E7M4-600
98.5 E7M4-300
99.0 EQ2129-270a
104.7 em1me2-2200
105.2 EQ2095-220
105.8 em1me4-2300
110.1 E6M4-150 E1M1-400
110.4 EQ199-180a
115.9 em1me6-2100
118.8 em1me11-2200
120.8 GEU155-250a
122.7 E3M4-330
124.2 E6M4-110
126.1 GEU158-100b
128.8 em44me9-115
131.9 E1M5-400
134.2 GEU158-100a
136.5 em10me6-650
139.9 EQ308-280
143.6 EQ1974-270
146.5 EQ1745-160b
150.3 EQ1745-160a
152.2 em32me19-2150
152.4 DZ32-320
157.4 GEU155-250b
159.8 DZ32-310
166.6 EQ321-200
172.2 DZ32-420

G4

0.0 em2me6-440
2.7 em24me11-380
4.6 em6me25-135
7.5 EQ389-200b em7me28-270
10.3 DZ4-210
13.9 em32me27-520
14.8 em2me6-130
16.3 em20me11-245
17.9 em4me8-195
19.4 em5me14-260 EQ149-200a
21.0 em12me7-180
23.6 em5me14-320
25.2 em25me22-1400
25.4 DZ165-325
25.8 em4me15-115
26.8 em2me6-150
28.6 em9me9-1000
29.5 em32me27-2450
29.8 DZ64-182
30.1 em56me4-1100
30.5 em12me5-330
31.0 em8me11-330
31.9 em8me10-2400
32.5 em8me11-270
33.3 em26me13-2200
34.1 GEU155-250a
35.2 em1me1-750
36.1 em25me28-190
37.7 DZ165-260
38.3 em9me9-220
38.9 GEU045-260
39.3 EQ854-280b
40.8 EQ2127-120
41.7 em9me9-155
42.2 EQ854-280a
42.8 em4me7-250
43.9 em20me11-175
45.0 em4me4-330
46.2 em1me6-175
46.8 DZ4-310
47.6 EQ2127-145
48.2 UBC869-950
48.5 EQ185-250
49.2 EQ1387-250a
51.0 UBC873-1200
51.9 em4me13-130
52.3 EQ1727-140a
52.5 em4me15-185
53.8 GEU053-210
54.4 em24me11-480
56.2 GEU159-300c em4me13-100
57.1 em8me11-1000
57.5 em8me10-1600
59.2 em4me15-175
59.6 em25me28-160
60.9 DZ165-340
61.3 em9me9-800
61.5 EQ1727-140b
62.4 DZ4-360
63.7 EQ1261-200a
64.8 UBC866-1900
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66.6 DZ4-370
71.5 DZ4-340
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G1





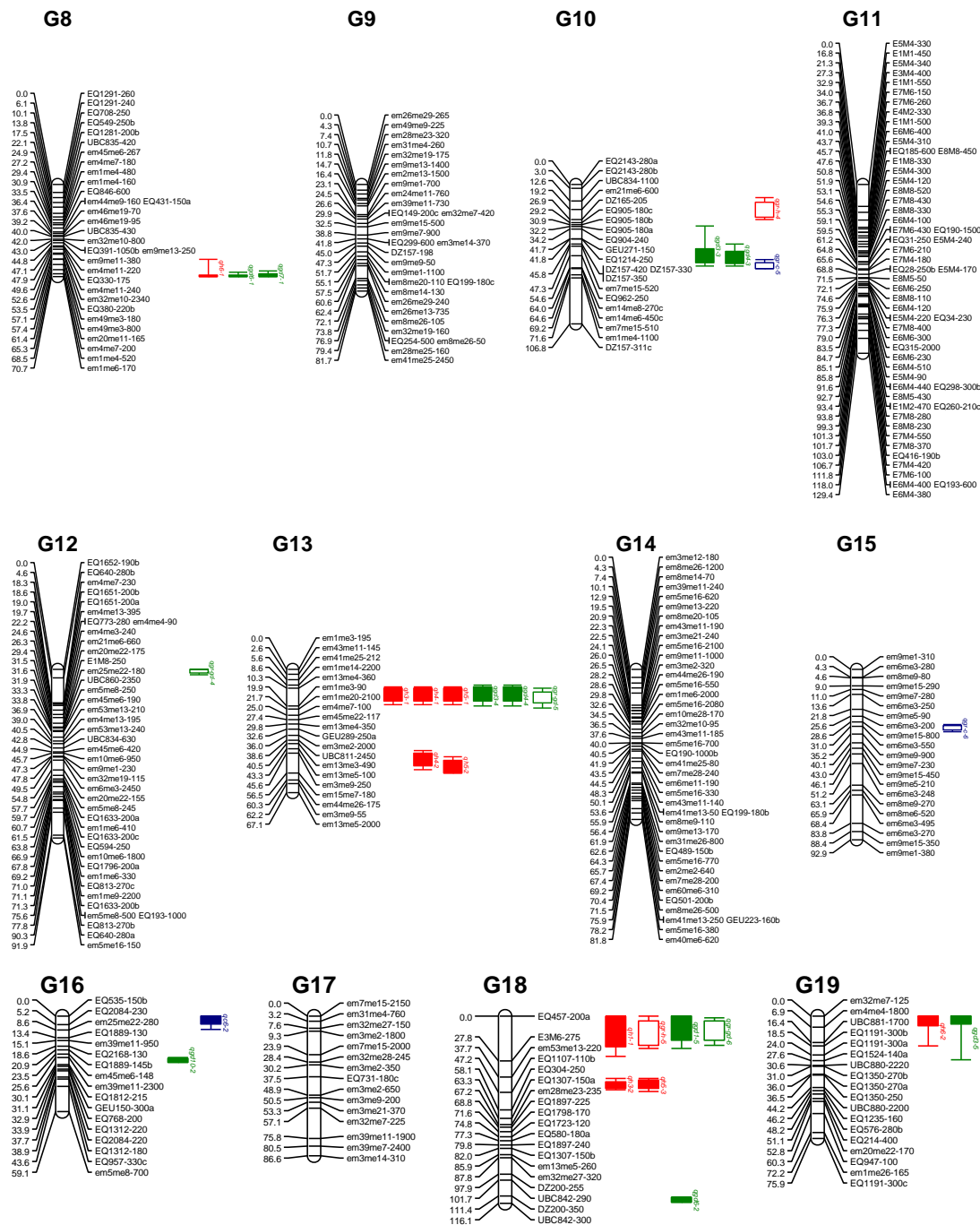


Figure S1-2 The location of growth-related QTLs mapped on 19 linkage groups of *Eucommia ulmoides*.

The marker name were listed on the right and consisted of the primer name and the band size (bp).The location (cM) of markers in the linkage group were listed on the left. Red, green and blue bars represent QTLs for height (H), ground diameter (GD) and crown diameter (C), respectively. The hollow bars represents QTLs for growth rates. Thick bars and thin lines represent 1-LOD and 2-LOD confidence intervals of each QTL, respectively. QTL named using q added an abbreviation of the trait, followed by the year (1 for 2010, 2 for 2011, and so on) and the QTL number.