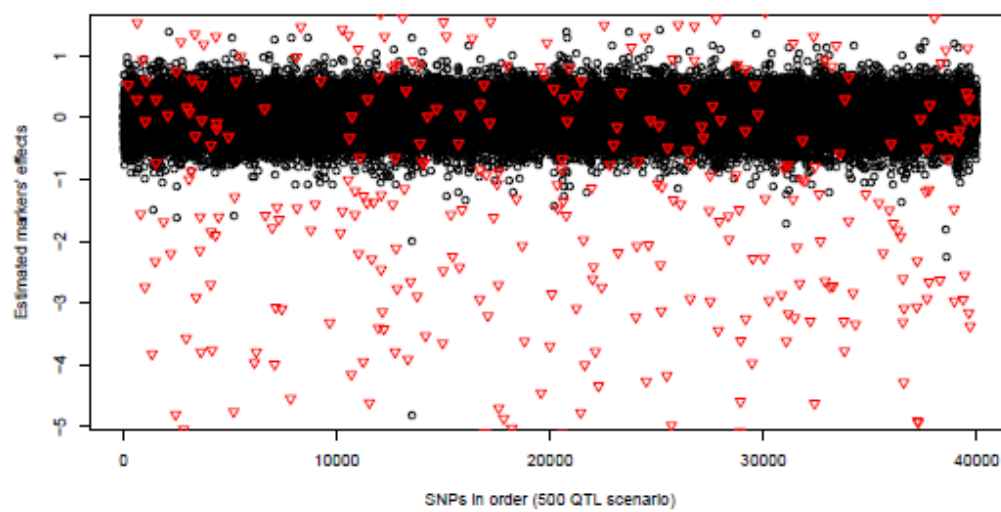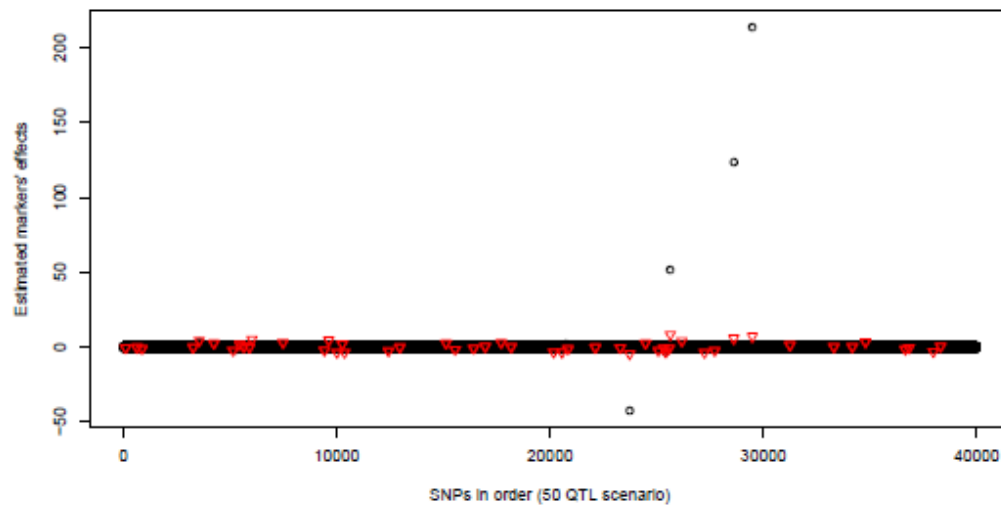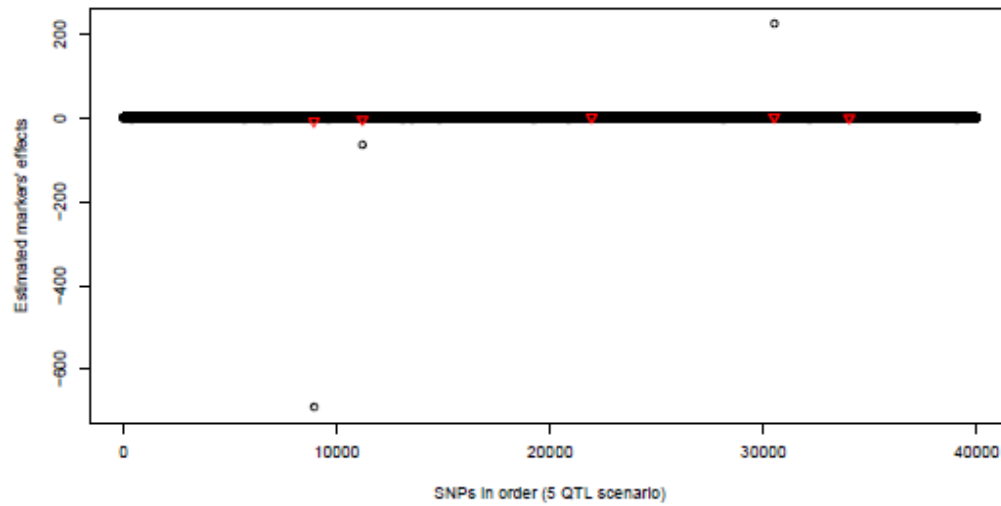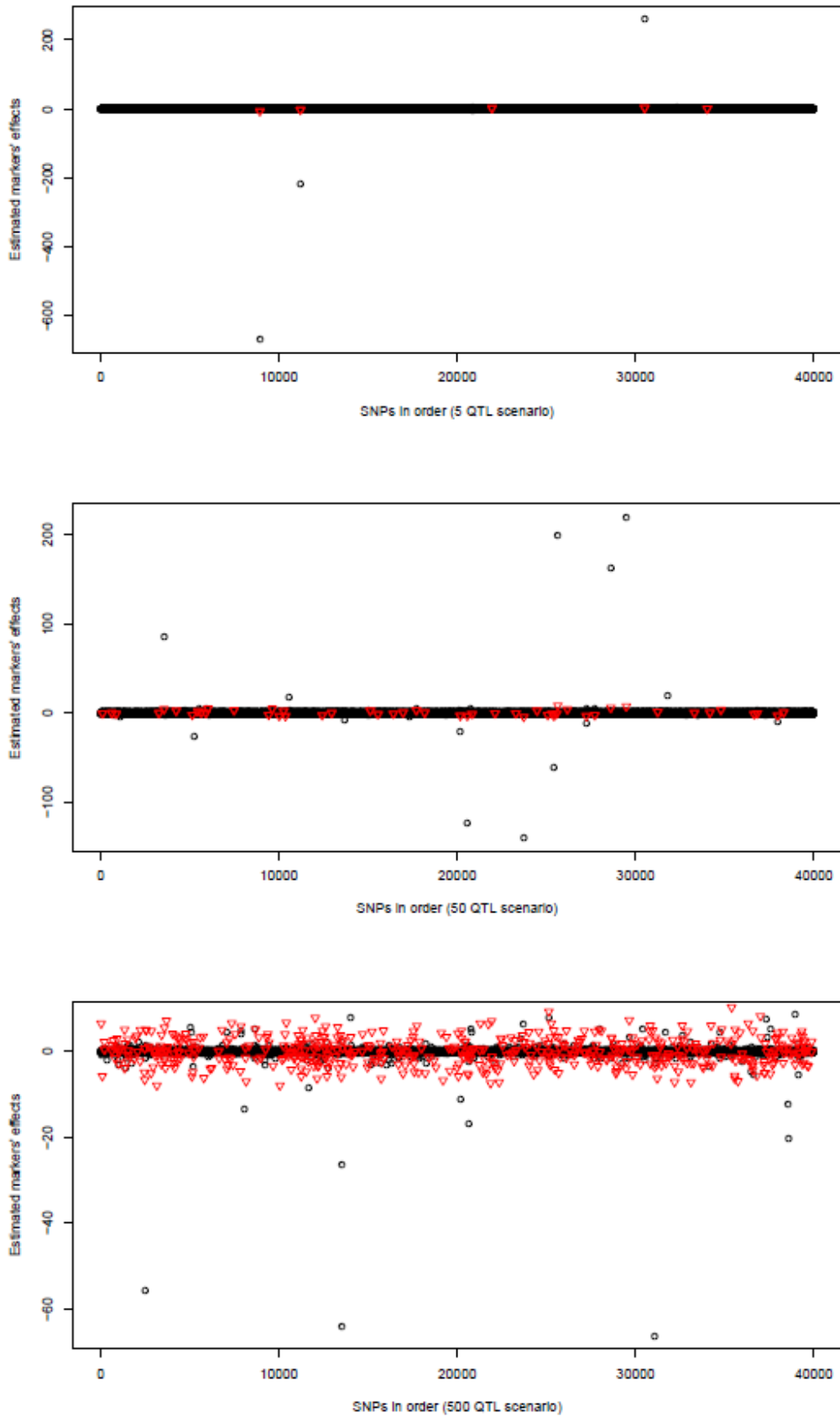1

Figure A1. Plots of estimated markers' effects of SS-BLUP for one replicate of 5 (top), 50 (middle)
and 500 (bottom) QTL scenarios. The red triangles (x-axis is QTL position, y-axis is QTL effects)
are the true QTL in the simulation.

Figure A2. Plots of estimated markers' effects of SS-BayesA for one replicate of 5 (top), 50 (middle) and 500 (bottom) QTL scenarios. The red triangles (x-axis is QTL position, y-axis is QTL effects) are the true QTL in the simulation.

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Figure A3. Plots of estimated markers' effects of SS-BayesB for one replicate of 5 (top), 50 (middle) and 500 (bottom) QTL scenarios. The red triangles (x-axis is QTL position, y-axis is QTL effects) are the true QTL in the simulation.
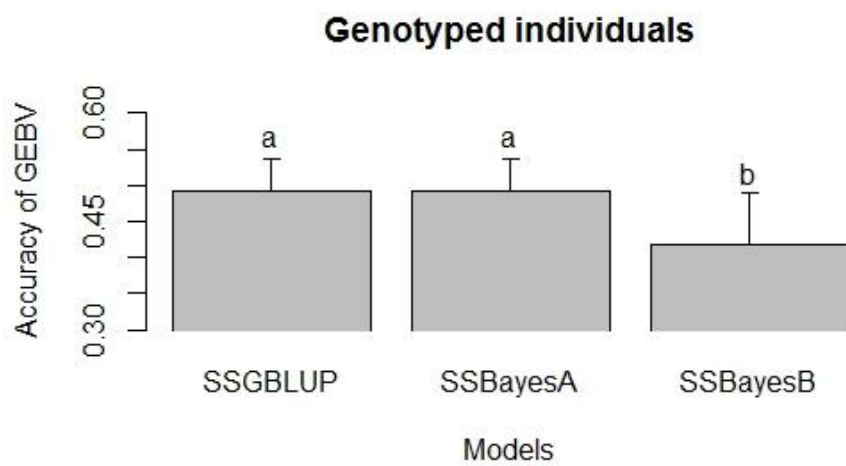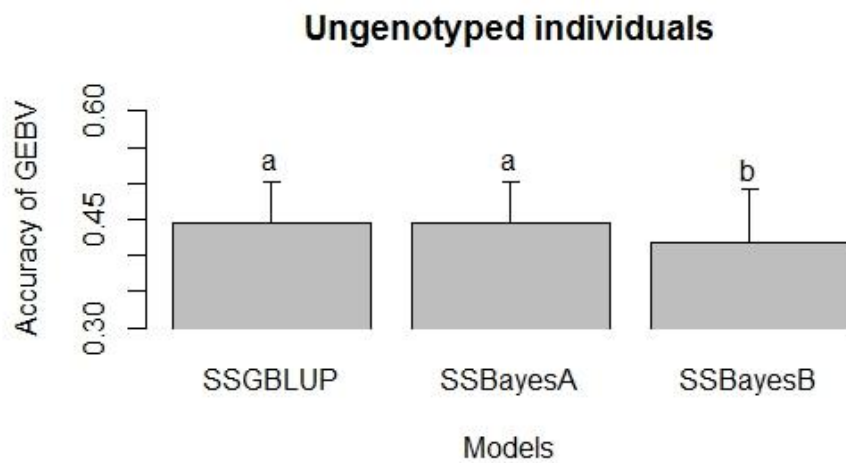
Ungenotyped individuals

Genotyped individuals

Figure A4. Accuracy of GEBV with different single-step models at the scenario of 5000 QTL for the validation population using generation 5003. Different letters indicated different at P-value of 0.05.