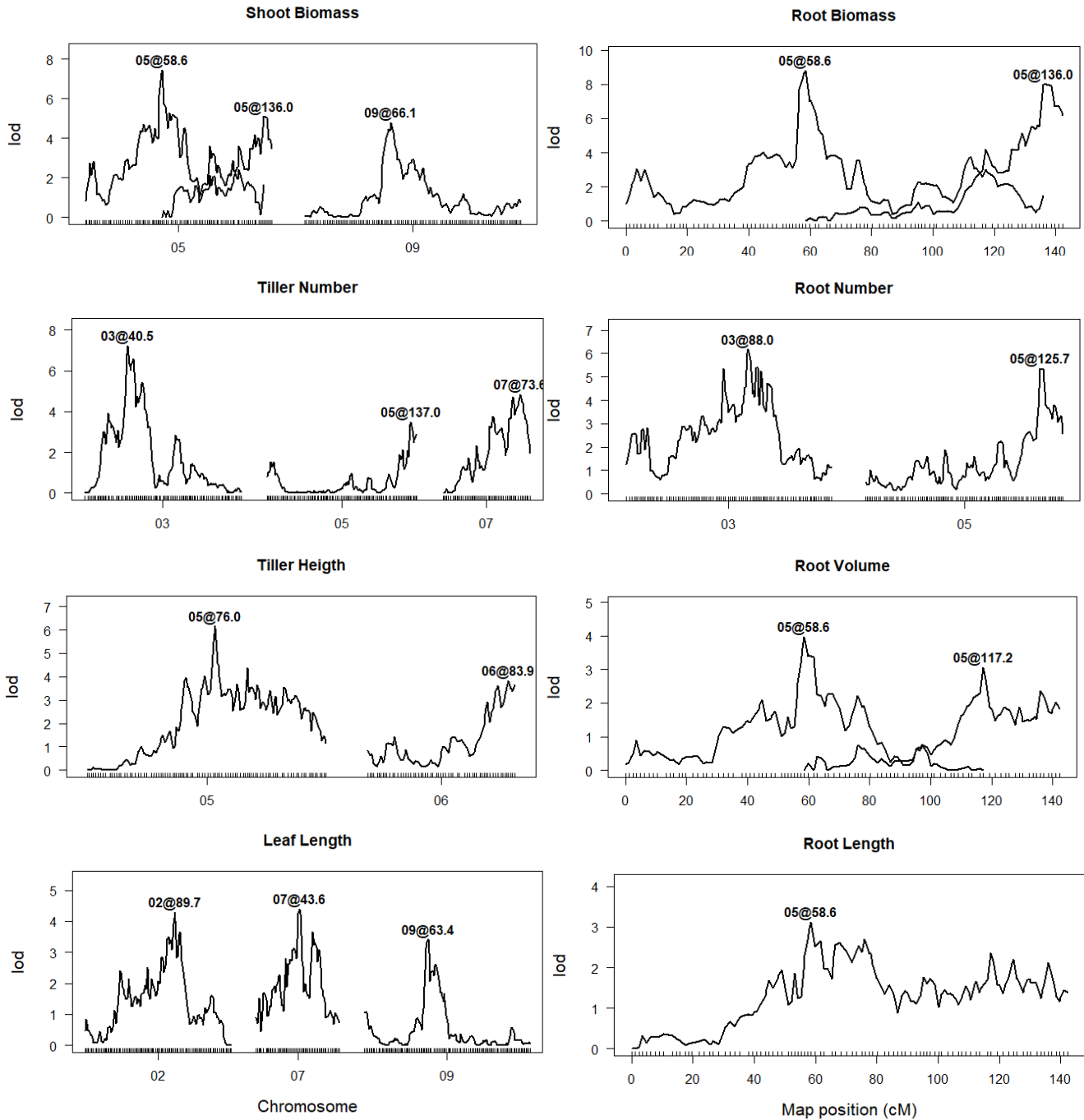
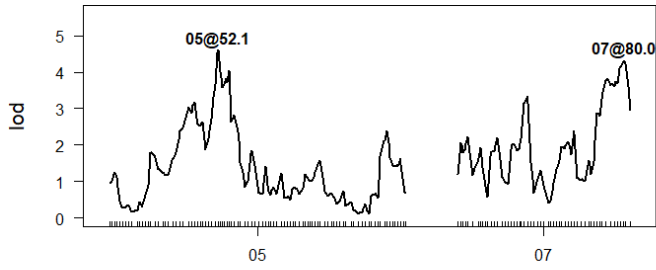


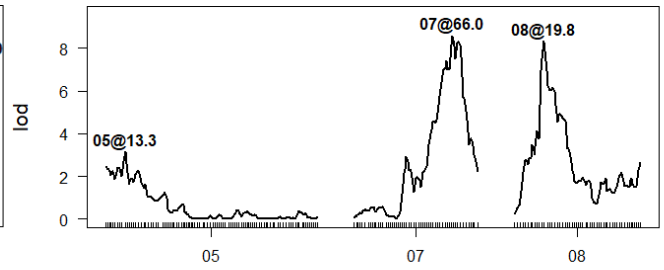
**Supplementary Figure 2** Conditional LOD profile plots of detected QTL for shoot and root traits and first three principle components of a *P. hallii* RIL mapping population resulting from the final model of stepwise QTL mapping.



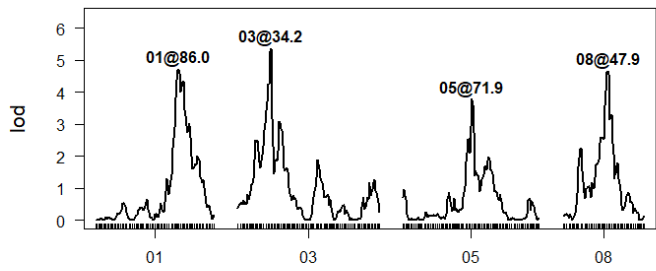
**Panicle Emergence**



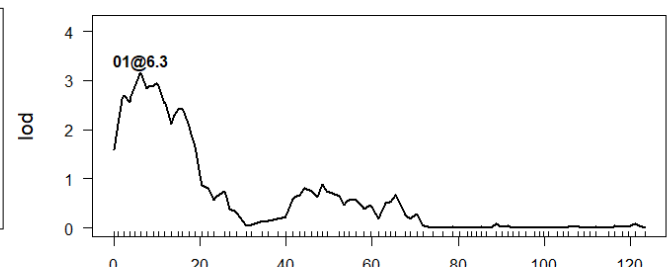
**Specific Leaf Area**



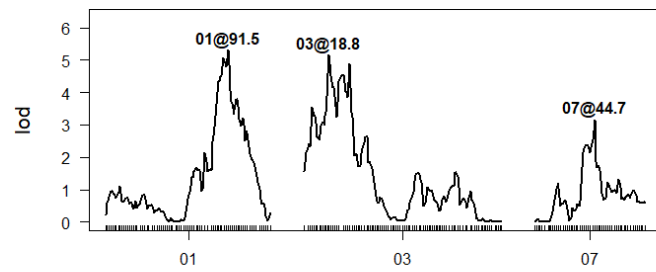
**Root Diameter**



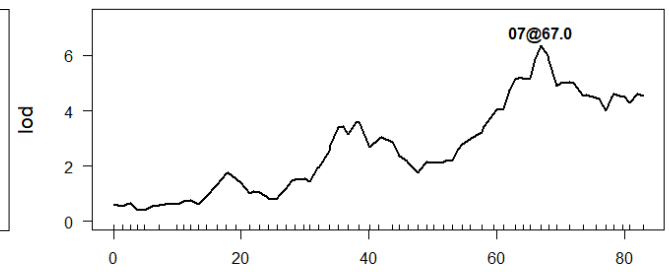
**Root Tissue Density**



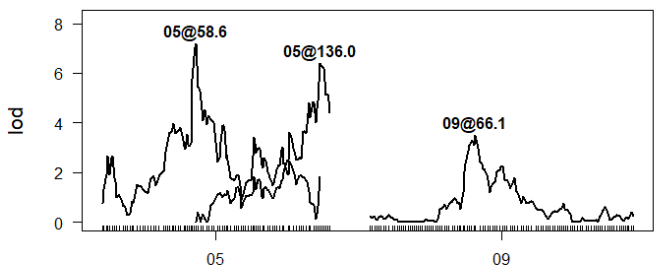
**Specific Root Length**



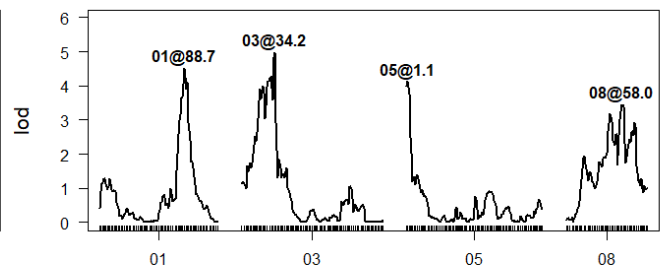
**Root Mass Ratio**



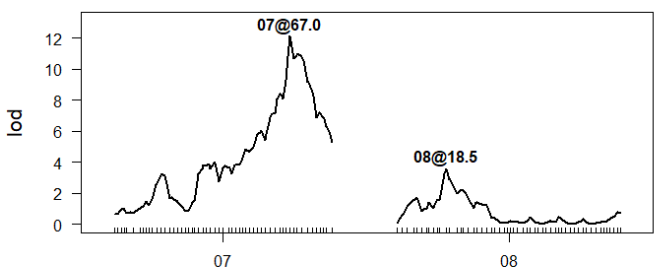
**PC1**



**PC2**



**PC3**



**Chromosome**